



Kagawa Education Institute of Nutrition  
**Japan Nutrition University**

# Syllabus

Graduate School of Japan Nutrition University

Year 2026

|                                    |
|------------------------------------|
| Nutrition Sciences Degree Programs |
|------------------------------------|

Subjects Name, Credit Number, and The Prof. in charge

| Subjects Name                                                      | Credit Number          |                   | Prof. in charge          | Classes<br>incorporatein<br>g English | Page |
|--------------------------------------------------------------------|------------------------|-------------------|--------------------------|---------------------------------------|------|
|                                                                    | Compulsor<br>y Subject | Elective Subject  |                          |                                       |      |
| I Basic Nutrition Science                                          |                        |                   |                          |                                       |      |
| Advanced Lectures on Mother and Child Nutrition                    |                        | Not be offierd in | Prof. Akira Nakamura     |                                       | 1    |
| Advanced Lectures on Human Growth and Development Studies          |                        | 1                 | Prof. Shigeho Tanaka     | ✓                                     | 2    |
| Advanced Lectures on Nutrition for the Elderly                     |                        | 1                 |                          |                                       |      |
| Advanced Lectures on Sports Nutrition                              |                        | 1                 | Prof. Jun Iwamoto        | ✓                                     | 3    |
| Advanced Lectures on Basic Nutrition                               |                        | 1                 | Prof. Terue Kawabata     | ✓                                     | 4    |
| Advanced Lectures on Nutritional Physiology                        |                        | 1                 | Prof. Kazuhiro Uenishi   | ✓                                     | 5    |
| Advanced Lectures on Nutrition in Pediatric Care                   |                        | 1                 |                          |                                       |      |
| (Sat) Advanced Lectures on Clinical Nutrition                      |                        | 1                 | Prof. Kazuyo Tsushita    | ✓                                     | 6    |
| II Applied Nutrition Science                                       |                        |                   |                          |                                       |      |
| Advanced Lectures on Clinical Nutrition Management                 |                        | 1                 | Prof. Yoko Hasegawa      | ✓                                     | 7    |
| Advanced Lectures on Medicine Nutrition                            |                        | 1                 |                          |                                       |      |
| Advanced Lectures on Nutritional Epidemiology                      |                        | 1                 | Prof. Satoshi Sasaki     | ✓                                     | 8    |
| (Sat) Advanced Lectures on Dietary Reference Intake                |                        | 1                 | Prof. Kazuhiro Uenishi   | ✓                                     | 9    |
| (Sat)                                                              |                        | 1                 |                          | ✓                                     | 10   |
| Advanced Lectures on Food Service Management                       |                        | 1                 | Prof. Hiromi Ishida      | ✓                                     | 11   |
| Advanced Lectures on Nutrition Education                           |                        | 1                 | Prof. Fumi Hayashi       | ✓                                     | 12   |
| (Sat) Advanced Lectures on Community Nutrition                     |                        | 1                 | Prof. Yukari Takemi      | ✓                                     | 13   |
| Advanced Lectures on Children's Dietary Management                 |                        | 1                 | Prof. Akemi Nakanishi    | ✓                                     | 14   |
| Advanced Lectures on Nutritional Care for Children with Disability |                        | 1                 | Prof. Kazuhiro Shimokawa |                                       | 15   |
| III Biological Sciences                                            |                        |                   |                          |                                       |      |
| Advanced Lectures on Chrono-Nutrition                              |                        | 1                 | Prof. Masaki Takahashi   | ✓                                     | 16   |
| Advanced Lectures on Molecular Nutrition                           |                        | 1                 | Prof. Akiko Fukushima    | ✓                                     | 17   |
| Advanced Lectures on Biochemistry                                  |                        | 1                 | Prof. Hisanori Kato      | ✓                                     | 18   |
| Advanced Lectures on Physiology                                    |                        | 1                 | Prof. Yukiko Kurihara    | ✓                                     | 19   |
| IV Food Science and Culture                                        |                        |                   |                          |                                       |      |
| Advanced Lectures on Food Cultural Anthropology                    |                        | 1                 | A/Prof. Akiko Moria      | ✓                                     | 20   |
| Advanced Lectures on Eating Psychology                             |                        | Not be offierd in | Prof. Tomoko Hasegawa    |                                       | 21   |
| Advanced Lectures on Global Nutrition                              |                        | 1                 | Prof. Chizuru Nishida    | ✓                                     | 22   |
| Advanced Lectures on Food Communication                            |                        | 1                 | Prof. Kumi Eto           | ✓                                     | 23   |
| Advanced Lectures on Human Life Education                          |                        | 1                 | Prof. Rie Imoto          | ✓                                     | 24   |
| Advanced Lectures on Environmental Education                       |                        | 1                 | Prof. Rie Imoto          | ✓                                     | 25   |
| V Food Science                                                     |                        |                   |                          |                                       |      |
| Advanced Lectures on Food Analysis                                 |                        | 1                 | Prof. Teruyuki Usui      | ✓                                     | 26   |
| Advanced Lectures on Food Material Development                     |                        | 1                 | Prof. Masataka Saito     | ✓                                     | 27   |
| Advanced Lectures on Quality Management                            |                        | 1                 | Prof. Hideki Tsuda       | ✓                                     | 28   |
| Advanced Lectures on Food Hygiene                                  |                        | 1                 |                          |                                       |      |

|                    |                                                                                                           |    |                                                 |                                                                     |   |    |
|--------------------|-----------------------------------------------------------------------------------------------------------|----|-------------------------------------------------|---------------------------------------------------------------------|---|----|
| (Sat)              | #REF!                                                                                                     |    | 1                                               | Prof. Yasuhiro Nakajima                                             | ✓ | 29 |
|                    | Advanced Lectures on Food Preparation Science                                                             |    | 1                                               | Prof. Keiko Shibata                                                 | ✓ | 30 |
|                    | Advanced Lectures on Cookery & Dietary Life                                                               |    | 1                                               |                                                                     |   |    |
|                    | Advanced Lectures on Nutrition Education for Food Preparation                                             |    | 1                                               | Prof. Sachie Yanagisawa                                             |   | 31 |
| VI Teaching        |                                                                                                           |    |                                                 |                                                                     |   |    |
|                    | Advanced Lectures on Development Support Studies                                                          |    | 1                                               | Prof. Mika Ooishi                                                   |   | 32 |
|                    | Advanced Lectures on School Management                                                                    |    | 1                                               | Prof. Takahide Kato                                                 |   | 33 |
|                    | Advanced Lectures on Shokuiku at School                                                                   |    | 1                                               | Prof. Rie Imoto・Prof. Akemi Nakanishi                               |   | 34 |
| VII Common Subject |                                                                                                           |    |                                                 |                                                                     |   |    |
| (Sat)              | Research Methodology in Nutrition I (Research Planning)                                                   |    | 1                                               | Prof. Hisanori Kato                                                 | ✓ | 35 |
|                    | Research Methodology in Nutrition II                                                                      |    | 1                                               | Prof. Tetsuji Yokoyama                                              | ✓ | 36 |
|                    |                                                                                                           |    | 2                                               |                                                                     | ✓ | 37 |
|                    | Research Methodology in Nutrition IV (Diet and Food Environment Surveying)                                |    | 2                                               | Prof. Yukari Takemi                                                 | ✓ | 38 |
|                    | Special Common Course on Nutrition I                                                                      |    | 1                                               | Prof. Hirohisa Kato, Chief of the Nutrition Sciences Degree Program | ✓ | 39 |
|                    | Special Common Course on Nutrition II                                                                     |    | 1                                               |                                                                     |   |    |
|                    | Special Common Course on Nutrition III                                                                    |    | 1                                               |                                                                     |   |    |
|                    | Special Common Course on Nutrition IV                                                                     |    | 1                                               |                                                                     |   |    |
|                    | Introduction to Research Methodology (Literature Review, Preparation of Presentation, Ethics in Research) |    | 1                                               | Prof. Fumi Hayashi・Prof. Shigeho Tanaka                             | ✓ | 40 |
|                    | Comprehensive Lectures on Nutrition                                                                       |    | 3                                               | Prof. Hisanori Kato, Chief of the Nutrition Sciences Degree Program | ✓ | 41 |
|                    | Comprehensive Seminars on Nutrition (A,B,C type seminars)                                                 | 2  |                                                 | Prof. Hisanori Kato/Prof. Yumi Ishida                               | ✓ | 42 |
|                    | Specialized Seminars on Nutrition                                                                         | 2  | (Thesis Development)                            | Each student's supervisor                                           | ✓ |    |
|                    | Specialized Experiments and Practicums on Nutrition                                                       | 12 | (Thesis Development)                            | Each student's supervisor                                           |   |    |
|                    | Compulsory Crests                                                                                         | 16 | Total necessary number of credit for graduation |                                                                     |   | 30 |
|                    | Elective Subject                                                                                          | 14 |                                                 |                                                                     |   |    |

\*Classes incorporating English means that lecture materials such as presentation slides and side-materials are in English and/or in-class/after class explanations would be made in English if needed.

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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Advanced Lectures on Mother and Child Nutrition | Prof. Akira Nakamura | Compulsory                                                   | <input checked="" type="checkbox"/> Selective                                                                                              | 1 credit |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                 |                      |                                                              |                                                                                                                                            |          |
| The goal of this course is to enable students to understand and explain the concept and importance of maternal and child nutrition from the perinatal period through lactation and neonatal period. In addition, based on the viewpoint that "nutrition education begins in the fetal period," the objective is to learn in depth the scientific basis for providing appropriate dietary guidance to mothers and children from a broad perspective of nutrition and health science, and to acquire the technical foundation necessary for practice. As stated in the Diploma Policy, the objective of this course is to acquire in-depth knowledge from a broad perspective of nutritional science.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                 |                      |                                                              |                                                                                                                                            |          |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                 |                      |                                                              |                                                                                                                                            |          |
| <div>Not be offierd in 2026</div> <p>In the 1980s, David Barker, who was a professor of the Faculty of Medicine, University of Southampton in UK, developed a hypothesis that the nutritional conditions of the mother during pregnancy are an important determining factor of the child's health and disease risks later in life. This very important hypothesis that originated in the 20th century became widely accepted in the 21st century as a new concept known as the Developmental Origins of Health and Disease (DOHaD) through the works of Gluckman and Hanson. DOHaD means, in simple terms, that "a child's susceptibility to certain diseases are largely affected by the fetal and early postnatal environment." In Japan too, this concept is very popular. The status of the mother and child, as it is thought to be deeply related to the onset of lifestyle-related diseases later in life. The concept of DOHaD is one of preemptive medicine because the mother-child nutritional status plays an important role in the child's health and disease conditions over the entire life course. Today, DOHaD has become an interdisciplinary research field that experts of various fields need to acquire knowledge of. This course aims to explore the basic concepts of DOHaD related to mother-child nutritional status through discussions with students referring to a wide range of topics from fundamental to clinical research.</p> |                                                 |                      |                                                              |                                                                                                                                            |          |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                 |                      |                                                              |                                                                                                                                            |          |
| <div><div><div>1. The significance and actual situation of maternal and child nutrition in Japan: Wasting women and low birthrate infants</div><div>2. The historical background and concept of DOHaD: Large-scale birth cohort study</div><div>3. The growth of infants and fetal period in DOHaD: Malnutrition and overnutrition</div></div><div><div>4. Basic research on the molecular mechanism of DOHaD: From animal experiments to epigenomes</div><div>5. DOHaD and illness (1): Lifestyle-related diseases, allergy diseases</div><div>6. DOHaD and illness (2): Allergic Diseases and Intestinal Microflora</div><div>7. Fetal programming editing and designer babies</div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                 |                      |                                                              |                                                                                                                                            |          |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                 |                      |                                                              |                                                                                                                                            |          |
| Materials related to the topics to be covered in each lecture will be provided prior to the first lecture. Please read the materials carefully and be prepared for lively discussions in the lectures. Students are expected to spend approximately 3-4 hours per week on individual study.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                 |                      |                                                              |                                                                                                                                            |          |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                 |                      | Textbooks                                                    | References                                                                                                                                 |          |
| <div><div><div>In-class performance (30%)</div><div>Reports (70%)</div></div><div>Feedback on the submitted reports will be given at the beginning of the next class.</div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                 |                      | Necessary textbooks will be distributed in class.            | References will be introduced as needed.                                                                                                   |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                 |                      | Materials                                                    | Remarks                                                                                                                                    |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                 |                      | Handouts will be distributed at the beginning of each class. | I would like to give lectures in a format that allows students to firmly express their own ideas and engage in discussion with each other. |          |

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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------|
| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Advanced Lectures on Human Growth and Development Studies | Prof. Shigeho Tanaka                                          | Compulsory                                                                                                                                                                                                  | <input checked="" type="checkbox"/> Selective | 1 credit |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                           |                                                               |                                                                                                                                                                                                             |                                               |          |
| The thematic focus of this course is to understand, in a scientific manner, the methods of evaluation and the importance of lifestyle and nutritional status (obesity, under-weight, etc.), especially during the growth period, and to increase problem awareness and to enable individuals to find their own solutions. As stated in the Diploma Policy, the objective of this course is to acquire diverse and in-depth knowledge based on a broad perspective of nutritional science.                                |                                                           |                                                               |                                                                                                                                                                                                             |                                               |          |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                           |                                                               |                                                                                                                                                                                                             |                                               |          |
| While the lifestyle habits such as diet, physical activity, sedentary behaviors and sleep are important for children, it is difficult to understand the evidence. The same is true for energy requirements, and there are challenges unique to children. The course will explore issues and solutions related to lifestyle and energy requirements of mainly children including elderly, based on the collection and interpretation of scientific knowledge, understanding of evaluation methods and experimental plans. |                                                           |                                                               |                                                                                                                                                                                                             |                                               |          |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                           |                                                               |                                                                                                                                                                                                             |                                               |          |
| 1. Introduction: The Importance of Scientific Evidence in the Discrepancy between "Common Sense" and "Scientific Knowledge" of Energy<br>2. Energy requirements for adults, including the elderly<br>3. Evaluation methods and current status for nutritional status (obesity, thinness, etc.)<br>4. Evaluation methods and current status for growth                                                                                                                                                                    |                                                           |                                                               | 5. Evaluation methods and current status for physical activity and sedentary behavior<br>6. Evaluation methods and current status for overall life habits including sleeping<br>7. Summary and Presentation |                                               |          |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                           |                                                               |                                                                                                                                                                                                             |                                               |          |
| Students are required to get in the habit of organizing interesting information acquired in the class or through media and investigating it themselves. Furthermore, students are expected to prepare reports on issues raised in class (e.g., review of papers) before attending the next class. Students are also required to have presentation in each class. This self-study will take about twice as much time as class time.                                                                                       |                                                           |                                                               |                                                                                                                                                                                                             |                                               |          |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                           | Textbooks                                                     |                                                                                                                                                                                                             | References                                    |          |
| In-class performance (50 %)<br>In-class presentations (50%)                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                           | None                                                          |                                                                                                                                                                                                             | None                                          |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                           | Materials                                                     |                                                                                                                                                                                                             | Other                                         |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                           | Materials will be prepared on a case-by-case basis as needed. |                                                                                                                                                                                                             | None                                          |          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                              |                        |            |                                               |          |                                                                                                                                                                                                                     |                                                                                                                                                              |
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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Advanced Lectures on Sports Nutrition                                                                                                                        | Prof. Jun Iwamoto      | Compulsory | <input checked="" type="checkbox"/> Selective | 1 credit |                                                                                                                                                                                                                     |                                                                                                                                                              |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                              |                        |            |                                               |          |                                                                                                                                                                                                                     |                                                                                                                                                              |
| The team healthcare approach involving medical doctors, trainers, and registered dietitians is required to help athletes get in shape and prevent injuries and disabilities caused by sports. This course aims to ensure that registered dietitians can actually provide appropriate nutritional guidance to help athletes get in shape and prevent sports injuries. This lecture is related to the acquisition of in-depth knowledge based on a broad perspective of nutritional science in the Diploma Policy.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                              |                        |            |                                               |          |                                                                                                                                                                                                                     |                                                                                                                                                              |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                              |                        |            |                                               |          |                                                                                                                                                                                                                     |                                                                                                                                                              |
| There are gender differences in sports injuries. Men are likely to have external injuries caused by intense movements, such as fractures, while women often have sprains and ligament damages because fat accumulated around joints is involved in joint fragility and sex hormones increase joint motility. Furthermore, female athletes tend to think that building a slim figure is beneficial to improving performance. As a result, there are many female athletes with low born mass related to vitamin D deficiency and menstrual abnormality. So it is also required to take into account the prevention of osteoporosis. In the components of the Female Athlete Triad (low energy availability, amenorrhea, and bone density reduction), the bone mass issue is especially important. The course will highlight gender differences in sports injuries and problems faced by female athletes, and consider measures to prevent female fractures due to osteoporosis from the perspectives of exercise and nutrition, focusing on each age stage—growth, pre-menopause, post-menopause, and elderly. |                                                                                                                                                              |                        |            |                                               |          |                                                                                                                                                                                                                     |                                                                                                                                                              |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                              |                        |            |                                               |          |                                                                                                                                                                                                                     |                                                                                                                                                              |
| <table><tr><td>1. About locomotor disorders<br/>2. What is osteoporosis? Why do bones break?<br/>3. Nutrition to prevent osteoporosis and medical treatment (importance of Vitamin D<br/>4. Osteoporosis and physical exercise/sports</td><td>5. Sports injuries (physical injuries and disabilities)<br/>6. Osteoporosis in female athletes<br/>7. Summary and free discussion (sports medicine in general)</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                              |                        |            |                                               |          | 1. About locomotor disorders<br>2. What is osteoporosis? Why do bones break?<br>3. Nutrition to prevent osteoporosis and medical treatment (importance of Vitamin D<br>4. Osteoporosis and physical exercise/sports | 5. Sports injuries (physical injuries and disabilities)<br>6. Osteoporosis in female athletes<br>7. Summary and free discussion (sports medicine in general) |
| 1. About locomotor disorders<br>2. What is osteoporosis? Why do bones break?<br>3. Nutrition to prevent osteoporosis and medical treatment (importance of Vitamin D<br>4. Osteoporosis and physical exercise/sports                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5. Sports injuries (physical injuries and disabilities)<br>6. Osteoporosis in female athletes<br>7. Summary and free discussion (sports medicine in general) |                        |            |                                               |          |                                                                                                                                                                                                                     |                                                                                                                                                              |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                              |                        |            |                                               |          |                                                                                                                                                                                                                     |                                                                                                                                                              |
| Students are required to do preparatory study with materials distributed prior to class.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                              |                        |            |                                               |          |                                                                                                                                                                                                                     |                                                                                                                                                              |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                              | Textbooks              | References |                                               |          |                                                                                                                                                                                                                     |                                                                                                                                                              |
| • In-class performance and responses to questions (20 %)<br>• Reports (80%)<br>Reports are written about a topic selected by the student regarding an issue brought up in class, using the latest academic papers (in English) as references.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                              | None                   | None       |                                               |          |                                                                                                                                                                                                                     |                                                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                              | Materials              | Remarks    |                                               |          |                                                                                                                                                                                                                     |                                                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                              | Distributed as needed. | None       |                                               |          |                                                                                                                                                                                                                     |                                                                                                                                                              |

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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Advanced Lectures on Basic Nutrition | Prof. Terue Kawabata                   | Compulsory                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <input checked="" type="checkbox"/> Selective | 1 credit |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                      |                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                               |          |
| The thematic focus of this course is to learn how diet affects health in terms of body metabolism (digestion and absorption, body dynamics, physiological actions, and effects on disease, etc.). Upon completing this course, students will deepen their understanding of dietary quality—particularly regarding lipid and fatty acid nutrition—while taking genetic background into account, and will be able to explain appropriate nutrition at each life stage, including the prenatal environment. This course is related to the acquisition of in-depth knowledge based on a broad perspective of nutritional science in the Diploma Policy. |                                      |                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                               |          |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                      |                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                               |          |
| In addition to learning how to evaluate the quality of a diet, students will gain a better understanding of fatty acids, which make up lipids, and also learn about the relationship between diet and the metabolism of nutrients in the body. This course aims to ensure that students understand the linkage between fatty acids and diseases and the nutritional importance of fatty acids at each life stage.                                                                                                                                                                                                                                   |                                      |                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                               |          |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                      |                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                               |          |
| ①Methods of Meal Quality Assessment (1) What is food scoring and how to assess meal quality<br>②How to evaluate diet quality (2) Relationship between diet quality and healthLipid nutrition and health<br>③ Lipid intake, n-3 and n-6 fatty acids and health, relationship with genetic polymorphism                                                                                                                                                                                                                                                                                                                                               |                                      |                                        | ④Lipid Nutrition and Health (2) Concept of saturated fatty acids, What are odd-chain fatty acids?<br>⑤Nutritional epidemiology and lipid nutrition (1) Nutritional environment from embryo to infant, epigenetics<br>⑥Nutritional epidemiology and lipid nutrition (2) Lipid and fatty acid nutrition from embryo to infant<br>⑦Fats and oils in the diet Edible fats and oils are fats and oils that are good for health and fats and oils that are bad for health |                                               |          |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                      |                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                               |          |
| Students are required to read materials distributed in class at home. (60 minutes) Students are required to prepare for the related content with textbooks or other materials based on the material distributed the following week. (30 minutes)                                                                                                                                                                                                                                                                                                                                                                                                    |                                      |                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                               |          |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                      | Textbooks                              | References                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                               |          |
| In-class performance (50%)<br>Reports (50%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                      | None                                   | 脂質栄養学「日本人の健康と脂質の理解を求めて」/Michihiro Kanno, 2016                                                                                                                                                                                                                                                                                                                                                                                                                       |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                      | Materials                              | Remarks                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                      | Handouts will be distributed in class. | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |          |

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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Advanced Lectures on Nutritional Physiology                                                                                                                                                                                                                  | Prof. Kazuhiro Uenishi | Compulsory                                            | <input checked="" type="checkbox"/> | Selective                                                                                                                                                                           | 1 credit |                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                              |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                              |                        |                                                       |                                     |                                                                                                                                                                                     |          |                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                              |
| The thematic focus of this course is to understand the linkage between human body function and nutrition based on physiological indicators and discuss a nutritional and physiological approach to addressing health issues related to obesity and osteoporosis. Students aim to be able to explain the causes and pathological conditions of obesity and osteoporosis. They also aim to be able to explain the methodology for the prevention and treatment of obesity and osteoporosis. It is related to the acquisition of research skills in the major field of study from a broad perspective of nutrition as stated in the Diploma Policy. |                                                                                                                                                                                                                                                              |                        |                                                       |                                     |                                                                                                                                                                                     |          |                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                              |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                              |                        |                                                       |                                     |                                                                                                                                                                                     |          |                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                              |
| Students will learn the causality between energy balance and body fat accumulation as well as the relationship between lifestyle, including diet and fitness habit, and bone density.                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                              |                        |                                                       |                                     |                                                                                                                                                                                     |          |                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                              |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                              |                        |                                                       |                                     |                                                                                                                                                                                     |          |                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                              |
| <table><tr><td>1. Think about energy balance in nutrition.<br/>2. What is metabolism? What is a cause of metabolism?<br/>3. Consider how to improve metabolism effectively through a nutritional physiological approach.<br/>4. Think about how to find the required amount of nutrients, in the context of calcium.</td><td>5. Explain the medical condition of osteoporosis and its cause.<br/>6. Consider bone mass, age-related bone density, and prevention of osteoporosis.<br/>7. Summary. Consider the themes learnt in the class so far in the context of the students themselves.</td></tr></table>                                    |                                                                                                                                                                                                                                                              |                        |                                                       |                                     |                                                                                                                                                                                     |          | 1. Think about energy balance in nutrition.<br>2. What is metabolism? What is a cause of metabolism?<br>3. Consider how to improve metabolism effectively through a nutritional physiological approach.<br>4. Think about how to find the required amount of nutrients, in the context of calcium. | 5. Explain the medical condition of osteoporosis and its cause.<br>6. Consider bone mass, age-related bone density, and prevention of osteoporosis.<br>7. Summary. Consider the themes learnt in the class so far in the context of the students themselves. |
| 1. Think about energy balance in nutrition.<br>2. What is metabolism? What is a cause of metabolism?<br>3. Consider how to improve metabolism effectively through a nutritional physiological approach.<br>4. Think about how to find the required amount of nutrients, in the context of calcium.                                                                                                                                                                                                                                                                                                                                               | 5. Explain the medical condition of osteoporosis and its cause.<br>6. Consider bone mass, age-related bone density, and prevention of osteoporosis.<br>7. Summary. Consider the themes learnt in the class so far in the context of the students themselves. |                        |                                                       |                                     |                                                                                                                                                                                     |          |                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                              |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                              |                        |                                                       |                                     |                                                                                                                                                                                     |          |                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                              |
| Students are required to read papers related to the course, summarize the contents in a report, and submit the report in class. Students are required to devote twice as much time to self-study as they do to class time (100 minutes per class).                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                              |                        |                                                       |                                     |                                                                                                                                                                                     |          |                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                              |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                              |                        | Textbooks                                             |                                     | References                                                                                                                                                                          |          |                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                              |
| In-class performance (50%)<br>Reports (50%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                              |                        | None                                                  |                                     | Dietary Reference Intakes for Japanese, Prevention and Treatment Guideline for Osteoporosis. (2025)<br>Treatment Guideline for Osteoporosis, Creation Committee Edition (tentative) |          |                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                              |                        | Materials                                             |                                     | Remarks                                                                                                                                                                             |          |                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                              |                        | Materials will be introduced or distributed as needed |                                     | It is recommended that students take "Research Methodology in Nutrition III (Nutritional Assessment and Diet Evaluation)" concurrently with this class.                             |          |                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                              |

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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Advanced Lectures on Clinical Nutrition                                                                                                                                                                                                                                                                                                                                                                                                               | Prof. Kazuyo Tsushita | Compulsory                    | <input checked="" type="checkbox"/> | Selective                                                                                                                                                                                                                                                                                                                                                                 | 1 credit |                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                       |                               |                                     |                                                                                                                                                                                                                                                                                                                                                                           |          |                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| In Japan, various health guidance systems, including specific health guidance, and medical treatment guidance in insurance treatment are provided to protect the health of the people. This course aims to provide students with the knowledge and skills necessary for health guidance and medical treatment guidance, based on the aims of each system, the goals of the implementing entities, and the guidelines of the national government and various academic societies. The course also aims to develop the practical skills of the students. This course aims to enhance the professional capabilities of personnel in the fields of health, medical care, and welfare, as outlined in the Diploma Policy, with a foundation in nutrition. It seeks to contribute to the maintenance and promotion of public health and the realization of a happy society by improving nutrition and dietary habits and preventing the onset and progression of lifestyle-related diseases. |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                       |                               |                                     |                                                                                                                                                                                                                                                                                                                                                                           |          |                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                       |                               |                                     |                                                                                                                                                                                                                                                                                                                                                                           |          |                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Outcome evaluation is emphasized in specific health guidance (phase 4) utilizing the concept of metabolic syndrome. The government has also updated programs and guidelines for the prevention of severe diabetic nephropathy and health services for the elderly. In addition, in insurance treatment, guidance on medical treatment such as diabetes and dialysis prevention and guidance based on lifestyle-related disease treatment plans are being strengthened. In light of these circumstances, this course aims to foster applied skills through explanations and case studies, including guidelines (GL), on the key points of understanding pathological conditions and health and medical care guidance, guidance on nutrition and exercise using behavioral science methods, evaluation of health guidance, and other topics.                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                       |                               |                                     |                                                                                                                                                                                                                                                                                                                                                                           |          |                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                       |                               |                                     |                                                                                                                                                                                                                                                                                                                                                                           |          |                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <table><tr><td>1) Japan's health checkup and health guidance system, guidance on lifestyle-related diseases, and program evaluation<br/>2) Health and medical care guidance for metabolic syndrome and lifestyle-related diseases<br/>(GL: Guidelines of the Japanese Society for Lifestyle Prevention) 3) Specific health guidance (GL: Standard Health Checkup and Health Guidance Program), case studies</td><td>4) Health and medical care guidance in prevention of severe diabetic nephropathy and dialysis (program for prevention of severe diabetic nephropathy)<br/>5) Case studies, medical examination recommendation and health guidance for high-risk patients<br/>6) Health guidance for elderly diabetic patients (GL: Guideline for Health Guidance Tailored to the Characteristics of Elderly Patients)<br/>7) Case studies and summary of health guidance</td></tr></table>                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                       |                               |                                     |                                                                                                                                                                                                                                                                                                                                                                           |          | 1) Japan's health checkup and health guidance system, guidance on lifestyle-related diseases, and program evaluation<br>2) Health and medical care guidance for metabolic syndrome and lifestyle-related diseases<br>(GL: Guidelines of the Japanese Society for Lifestyle Prevention) 3) Specific health guidance (GL: Standard Health Checkup and Health Guidance Program), case studies | 4) Health and medical care guidance in prevention of severe diabetic nephropathy and dialysis (program for prevention of severe diabetic nephropathy)<br>5) Case studies, medical examination recommendation and health guidance for high-risk patients<br>6) Health guidance for elderly diabetic patients (GL: Guideline for Health Guidance Tailored to the Characteristics of Elderly Patients)<br>7) Case studies and summary of health guidance |
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| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                       |                               |                                     |                                                                                                                                                                                                                                                                                                                                                                           |          |                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Students are required to read materials in advance, review case studies, and preparing instructional records. Through review, students will consider how to apply what they have learned to their own research and professional practice.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                       |                               |                                     |                                                                                                                                                                                                                                                                                                                                                                           |          |                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                       | Textbooks                     |                                     | References                                                                                                                                                                                                                                                                                                                                                                |          |                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| •Preparation before taking the class (20%)<br>•Active preparation for Q&A session and the discussion (50%)<br>•Post-Class Report (50%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                       | None                          |                                     | <a href="https://www.mhlw.go.jp/content/10900000/001231390.pdf">https://www.mhlw.go.jp/content/10900000/001231390.pdf</a><br><br><a href="https://www.mhlw.go.jp/content/12400000/001226129.pdf">https://www.mhlw.go.jp/content/12400000/001226129.pdf</a><br><br><a href="https://www.mhlw.go.jp/content/001240315.pdf">https://www.mhlw.go.jp/content/001240315.pdf</a> |          |                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                       | Materials                     |                                     | Remarks                                                                                                                                                                                                                                                                                                                                                                   |          |                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                       | Handouts will be distributed. |                                     | This course is also a graduate BP course and is offered online using Teams.                                                                                                                                                                                                                                                                                               |          |                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Advanced Lectures on Clinical Nutrition Management                                                                                               | Prof. Yoko Hasegawa | Compulsory                    | <input checked="" type="checkbox"/> | Selective                                                               | 1 credit |                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                  |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                  |                     |                               |                                     |                                                                         |          |                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                  |
| This course focuses on nutritional management tailored to specific diseases, pathological conditions, and treatment processes. The learning objectives are to deepen understanding of the significance of nutritional management in clinical practice and of nutritional management through multidisciplinary collaboration, while also acquiring the logical thinking skills necessary for the entire process—from planning to evaluation—of nutritional management tailored to the treatment course of specific diseases. The goals of this course align with the Diploma Policy, which aims to provide students with in-depth knowledge of nutrition from a broad perspective and to equip them with the skills necessary to become professionals possessing advanced expertise in clinical nutritional management. |                                                                                                                                                  |                     |                               |                                     |                                                                         |          |                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                  |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                  |                     |                               |                                     |                                                                         |          |                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                  |
| Through classes and discussions, students will deepen their understanding of the fundamentals and organizational structure of clinical nutrition management. By applying their knowledge of the nutrition care process, clinical practice guidelines for various diseases, and nutritional therapy to develop nutrition management plans for presented case studies and engage in discussions, students will gain a practical understanding of the characteristics and key considerations of nutrition management tailored to specific diseases and treatment processes. Additionally, lectures and discussions will cover the evaluation of nutrition management outcomes.                                                                                                                                            |                                                                                                                                                  |                     |                               |                                     |                                                                         |          |                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                  |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                  |                     |                               |                                     |                                                                         |          |                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                  |
| <table><tr><td>1) Overview of clinical nutrition management and its system, and comparison with other countries<br/>2) Clinical nutrition management and nutrition care process in multidisciplinary collaboration (PES statement, ADIME)<br/>3) Medical guidelines and nutritional diet therapy for diseases<br/>4) Case Study 1: Cancer</td><td>5) Case Study 2: Decubitus Ulcer<br/>6) Case Study 3: Heart Failure<br/>7) Outcome management in clinical nutrition management, general discussion</td></tr></table>                                                                                                                                                                                                                                                                                                 |                                                                                                                                                  |                     |                               |                                     |                                                                         |          | 1) Overview of clinical nutrition management and its system, and comparison with other countries<br>2) Clinical nutrition management and nutrition care process in multidisciplinary collaboration (PES statement, ADIME)<br>3) Medical guidelines and nutritional diet therapy for diseases<br>4) Case Study 1: Cancer | 5) Case Study 2: Decubitus Ulcer<br>6) Case Study 3: Heart Failure<br>7) Outcome management in clinical nutrition management, general discussion |
| 1) Overview of clinical nutrition management and its system, and comparison with other countries<br>2) Clinical nutrition management and nutrition care process in multidisciplinary collaboration (PES statement, ADIME)<br>3) Medical guidelines and nutritional diet therapy for diseases<br>4) Case Study 1: Cancer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 5) Case Study 2: Decubitus Ulcer<br>6) Case Study 3: Heart Failure<br>7) Outcome management in clinical nutrition management, general discussion |                     |                               |                                     |                                                                         |          |                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                  |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                  |                     |                               |                                     |                                                                         |          |                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                  |
| Each participant is responsible for collecting information and preparing materials for case studies. (More than 60 minutes)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                  |                     |                               |                                     |                                                                         |          |                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                  |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                  |                     | Textbooks                     |                                     | References                                                              |          |                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                  |
| In-class performance (50%)<br>Reports (50%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                  |                     | Handouts will be distributed. |                                     | 各医学会等の編集による診療ガイドライン<br>新臨床栄養学 第5版<br>栄養ケアマネジメント.<br>本田佳子編, 医歯薬出版, 2023. |          |                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                  |                     | Materials                     |                                     | Remarks                                                                 |          |                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                  |                     | None                          |                                     | None                                                                    |          |                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                  |

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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Advanced Lectures on Nutritional Epidemiology                                                                                 | Prof. Satoshi Sasaki | Compulsory                                        | <input checked="" type="checkbox"/> | Selective                                                                                                                           | 1 credit |                                                                                                                                                                                                                                       |                                                                                                                               |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                               |                      |                                                   |                                     |                                                                                                                                     |          |                                                                                                                                                                                                                                       |                                                                                                                               |
| The course intends to have students learn 1) the academic concept of nutritional epidemiology, 2) nutritional epidemiological research methodology, and 3) application of nutritional epidemiology to real cases. Students will be able to develop the capacity to understand, plan, conduct, and analyze nutritional epidemiological research. This course is a prerequisite for students who study human-related fields and pursue careers in those fields. This subject will be based on acquiring the abilities stipulated in the Diploma Policy, the acquisition of in-depth knowledge from a broad perspective of nutritional science and research skills in nutrition, and skills necessary for a highly specialized profession, which will be necessary regardless of which field of dietetics you wish to pursue in the future. |                                                                                                                               |                      |                                                   |                                     |                                                                                                                                     |          |                                                                                                                                                                                                                                       |                                                                                                                               |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                               |                      |                                                   |                                     |                                                                                                                                     |          |                                                                                                                                                                                                                                       |                                                                                                                               |
| Focusing mainly on dietary assessment, this course will offer lectures on how to develop a monitoring plan, treat and analyze data, and interpret and use nutrition/health information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                               |                      |                                                   |                                     |                                                                                                                                     |          |                                                                                                                                                                                                                                       |                                                                                                                               |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                               |                      |                                                   |                                     |                                                                                                                                     |          |                                                                                                                                                                                                                                       |                                                                                                                               |
| <table><tr><td>1. Nutritional epidemiology and history<br/>2. Measuring theory in nutritional epidemiology<br/>3. Theory of descriptive epidemiology and facts<br/>4. Theory of observation study and facts<br/>5. Theory of intervention exam and facts</td><td>6. Systematic review and meta-analysis<br/>7. Methodology of searching and reading research papers in nutritional epidemiology</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                               |                      |                                                   |                                     |                                                                                                                                     |          | 1. Nutritional epidemiology and history<br>2. Measuring theory in nutritional epidemiology<br>3. Theory of descriptive epidemiology and facts<br>4. Theory of observation study and facts<br>5. Theory of intervention exam and facts | 6. Systematic review and meta-analysis<br>7. Methodology of searching and reading research papers in nutritional epidemiology |
| 1. Nutritional epidemiology and history<br>2. Measuring theory in nutritional epidemiology<br>3. Theory of descriptive epidemiology and facts<br>4. Theory of observation study and facts<br>5. Theory of intervention exam and facts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 6. Systematic review and meta-analysis<br>7. Methodology of searching and reading research papers in nutritional epidemiology |                      |                                                   |                                     |                                                                                                                                     |          |                                                                                                                                                                                                                                       |                                                                                                                               |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                               |                      |                                                   |                                     |                                                                                                                                     |          |                                                                                                                                                                                                                                       |                                                                                                                               |
| Students are required to read the relevant sections of textbooks thoroughly prior to class. Students are advised to read the textbook with the aim of utilizing it in their research. The food assessment practicum is also considered to be work outside of class.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                               |                      |                                                   |                                     |                                                                                                                                     |          |                                                                                                                                                                                                                                       |                                                                                                                               |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                               |                      | Textbooks                                         |                                     | References                                                                                                                          |          |                                                                                                                                                                                                                                       |                                                                                                                               |
| • Questions and answers during class (50%)<br>• Reports (50%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                               |                      | 行動栄養学とはなにか！<br>女子栄養大学出版部、2023。2,700円＋税            |                                     | ・わかりやすいEBNと栄養疫学。佐々木敏、同文書院、2005。2500円＋税<br>・佐々木敏の栄養データはこう読む！（第2版）女子栄養大学出版部、2020。2,500円＋税<br>・佐々木敏のデータ栄養学のすすめ 女子栄養大学出版部、2017。2,600円＋税 |          |                                                                                                                                                                                                                                       |                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                               |                      | Materials                                         |                                     |                                                                                                                                     |          |                                                                                                                                                                                                                                       |                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                               |                      | Materials will be distributed in class as needed. |                                     |                                                                                                                                     |          |                                                                                                                                                                                                                                       |                                                                                                                               |

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------|
| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Advanced Lectures on Dietary Reference Intake | Prof. Kazuhiro Uenishi                                       | Compulsory                                                                                                                                                      | <input checked="" type="checkbox"/> Selective | 1 credit |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                               |                                                              |                                                                                                                                                                 |                                               |          |
| This course seeks to deepen the understanding of nutrition science and its challenges through the establishment of dietary reference intakes for the Japanese. Students will be able to understand the meaning of the establishment of dietary reference intakes for the Japanese and how to utilize them. Students will also be able to explain frail, sarcopenia, and locomotive syndromes. It is related to the acquisition of research skills in the major field of study from a broad perspective of nutrition as stated in the Diploma Policy |                                               |                                                              |                                                                                                                                                                 |                                               |          |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                               |                                                              |                                                                                                                                                                 |                                               |          |
| This course is designed to learn in detail about the 2015 dietary reference intakes for the Japanese and understand their rationale. Students will also learn frail, sarcopenia, and locomotive syndromes, which are now becoming critical problems among elderly people.                                                                                                                                                                                                                                                                           |                                               |                                                              |                                                                                                                                                                 |                                               |          |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                               |                                                              |                                                                                                                                                                 |                                               |          |
| 1. Dietary reference intakes for the Japanese: Concept and transition<br>2. Dietary reference intakes for the Japanese: Usage<br>3. Dietary reference intakes for the Japanese: Energy<br>4. Dietary reference intakes for the Japanese: Balance of energy-providing nutrients                                                                                                                                                                                                                                                                      |                                               |                                                              | 5. Dietary reference intakes for the Japanese: Vitamins<br>6. Dietary reference intakes for the Japanese: Minerals<br>7. Frail, sarcopenia, locomotive syndrome |                                               |          |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |                                                              |                                                                                                                                                                 |                                               |          |
| Students are required to read papers related to the course, summarize the contents in a report, and submit the report in class. Students are required to devote twice as much time to self-study as they do to class time (100 minutes per class).                                                                                                                                                                                                                                                                                                  |                                               |                                                              |                                                                                                                                                                 |                                               |          |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                               | Textbooks                                                    | References                                                                                                                                                      |                                               |          |
| In-class performance (50%)<br>Reports (50%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                               | Dietary Reference Intakes for Japanese 2025年版 策定検討会報告書、厚生労働省 | None                                                                                                                                                            |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                               | Materials                                                    | Remarks                                                                                                                                                         |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                               | Handouts will be distributed as needed.                      | This course is also a graduate BP course and is offered online using Teams.                                                                                     |                                               |          |

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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Advanced Lectures on Nutrition Management | Prof. Hiromi Ishida | Compulsory                                                                                                                                                                                                                                                                                                                                                                                                                  | <input checked="" type="checkbox"/> Selective | 1 credit |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                           |                     |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                               |          |
| This course will focus on diets that help maintain our mental and physical health, and consider them from multiple viewpoints including nutrition, preparation, quality, culture, and economics. Students will be able to understand the cycle of nutrition management, select assessment methods depending on different target recipients, and develop appropriate nutrition intervention (by providing meal)/evaluation plans. In addition, the Japanese Dietary Reference Intakes and the Japanese Standard Tables of Food Composition can be appropriately utilized in dietary assessment and meal planning. Students also will be able to acquire the ability to promote practical research in the field of nutrition management practice. |                                           |                     |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                               |          |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                           |                     |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                               |          |
| This course will help students understand the current dietary situation of Japanese people at different stages of life and consider diets that can maintain our mental and physical health. Explanations will be given on how to assess dietary intakes and apply the assessment results, and basic knowledge about menu planning and composition. Using one life stage as an example, consider the process of nutrition management with a focus on dietary assessment.                                                                                                                                                                                                                                                                         |                                           |                     |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                               |          |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                           |                     |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                               |          |
| 1. Utilization of the Japanese Dietary Reference Intakes<br>dietary assessment, meal planning, utilization of the Japanese Dietary Reference Intakes<br>2. General idea of nutrition management, procedures of nutrition management, the PDCA cycle<br>3. Nutritional assessment, anthropometry, clinical testing, clinical examination<br>4. Dietary assessment, dietary assessment methods, nutrients, food groups, cuisines, dietary patterns, standard tables of food composition in Japan                                                                                                                                                                                                                                                  |                                           |                     | 5. Food preparation and dietary quality, nutrition, dietary volume, dietary shape, quality standards, seasoning ratio<br>6. Meal plan, menu development criteria, nutrition plan, food composition, dietary pattern, and cost<br>7. Summary (Consider the priority of meal improvement from the perspective of dietary assessment and summarize the connection among nutrient level, food level, cuisine and dietary level) |                                               |          |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |                     |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                               |          |
| Students are required to allocate twice as much preparatory and review time to do dietary analysis for each assigned life stage as they do to class time (100 minutes per class).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                           |                     |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                               |          |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                           |                     | Textbooks                                                                                                                                                                                                                                                                                                                                                                                                                   | References                                    |          |
| • In-class performance (including comments made in class, presentations, etc.) (50%)<br>• Reports (50%)<br>Submitted reports will be returned with comments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                           |                     | 日本人の食事摂取基準2025(女子栄養大学出版部)、日本食品標準成分表8訂増補Handouts will be distributed as needed.                                                                                                                                                                                                                                                                                                                                              | None                                          |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                           |                     | Materials                                                                                                                                                                                                                                                                                                                                                                                                                   | Remarks                                       |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                           |                     | None                                                                                                                                                                                                                                                                                                                                                                                                                        | None                                          |          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                            |                                         |            |                                               |          |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Advanced Lectures on Food Service Management                                                                                                                                                                                                                                                                                                                                                                               | Prof. Hiromi Ishida                     | Compulsory | <input checked="" type="checkbox"/> Selective | 1 credit |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                            |                                         |            |                                               |          |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                            |
| The focus of this course is to learn how to establish an effective and efficient food service system which aims at serving a large number of clients with specific needs. Students will be able to come up with research methods related to the food service system. Based on marketing theories, they will also be able to explain how to manage food service resources in nutritional management services (ingredients, cooks, costs, equipment, methodology, information, etc.) and meet the users' needs. Students also will be able to acquire research skills in food service management.                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                            |                                         |            |                                               |          |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                            |                                         |            |                                               |          |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                            |
| The lecture will be centered around the latest trends of the meal provision system and management cycle at food service facilities. Students will jointly review challenges related to food service operation and management that they face and discuss how to solve them.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                            |                                         |            |                                               |          |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                            |                                         |            |                                               |          |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <table><tr><td>1. Nutrition management and food service management (1)<br/>Nutrition supply, education materials, meal development, quality development, production<br/>2. Nutrition management and food service management (2)<br/>Management resources, marketing, management<br/>3. Cookery/provision system and quality management (1)<br/>Cookery /provision system, menu management, quality management</td><td>4. Cookery/provision system and quality management (2)<br/>Facility/equipment, cooking procedures, procedures, standardization<br/>5. Hygiene management/risk management, HACCP system, general hygiene management, risk management<br/>6. Food service system development, total system, sub-system, integration<br/>7. Summary (Clarify the challenges of the student's food service management and summarize the solution.)</td></tr></table> |                                                                                                                                                                                                                                                                                                                                                                                                                            |                                         |            |                                               |          | 1. Nutrition management and food service management (1)<br>Nutrition supply, education materials, meal development, quality development, production<br>2. Nutrition management and food service management (2)<br>Management resources, marketing, management<br>3. Cookery/provision system and quality management (1)<br>Cookery /provision system, menu management, quality management | 4. Cookery/provision system and quality management (2)<br>Facility/equipment, cooking procedures, procedures, standardization<br>5. Hygiene management/risk management, HACCP system, general hygiene management, risk management<br>6. Food service system development, total system, sub-system, integration<br>7. Summary (Clarify the challenges of the student's food service management and summarize the solution.) |
| 1. Nutrition management and food service management (1)<br>Nutrition supply, education materials, meal development, quality development, production<br>2. Nutrition management and food service management (2)<br>Management resources, marketing, management<br>3. Cookery/provision system and quality management (1)<br>Cookery /provision system, menu management, quality management                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 4. Cookery/provision system and quality management (2)<br>Facility/equipment, cooking procedures, procedures, standardization<br>5. Hygiene management/risk management, HACCP system, general hygiene management, risk management<br>6. Food service system development, total system, sub-system, integration<br>7. Summary (Clarify the challenges of the student's food service management and summarize the solution.) |                                         |            |                                               |          |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                            |                                         |            |                                               |          |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Students are required to allocate twice as much time to self-study as they do to class time. It is recommended that students place their own thematic focus related to food service operation and management in the context of the course contents.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                            |                                         |            |                                               |          |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                            | Textbooks                               | References |                                               |          |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                            |
| • In-class performance (including comments made in class, presentations, etc.) (50%)<br>• Reports (50%)<br>Submitted reports will be returned with comments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                            | None                                    | None       |                                               |          |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                            | Materials                               | Remarks    |                                               |          |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                            | Handouts will be distributed as needed. | None       |                                               |          |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                            |

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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Advanced Lectures on Nutrition Education                                                                                  | Prof. Fumi Hayashi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Compulsory | <input checked="" type="checkbox"/> Selective | 1 credit |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |                                               |          |
| This main focus of the course is to help the student deepening their understanding on the behavioral science theories and applying the models used to nutrition and dietary education. Students will become able to understand basic theories necessary for an interventional study of nutrition education and develop concrete plans.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |                                               |          |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |                                               |          |
| Lectures will cover the basics of behavioral science theories and models that are used for the practice and study of nutrition education and dietary education targeted at individuals and groups, so that students will learn examples of how to use them in nutrition education and dietary education. In addition, students will also learn a series of processes, including assessment, identification of priority issues, determination of objectives and goals, selection of evaluation metrics and methods, planning of interventional programs, selection of educational materials and learning styles, cooperation and collaboration with related parties, evaluation of intervention, and review of programs, in line with the management cycles of nutrition education and dietary education. Through not only lectures but also literature readings and discussions on multiple themes including nutrition education and dietary education studies for different life stages, students will deepen understanding of theoretical basics and management cycles. |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |                                               |          |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |                                               |          |
| <div> <div> 1. Understanding of factors related to food choices and dietary behaviors that are addressed in nutrition education.<br/> 2. Basic theory/model of behavior science and how to apply them to nutrition education and dietary education study (Mainly learn about individual behavior change)<br/> 3. Management cycle of nutrition education/dietary education and research plans.<br/> 4. Fundamentals of Nutrition Communication and Practice of Nutrition Communication </div> <div> 5. Review and discussion of research articles related to nutrition education (Part1)<br/> 6. Review and discussion of research articles related to nutrition education (Part2)<br/> 7. Basic criteria of intervention research and case studies in the nutrition education field </div> </div>                                                                                                                                                                                                                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |                                               |          |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |                                               |          |
| Review what you learnt in your undergraduate program as preparatory study. Develop questions and themes that will lead to discussion in class thorough preparatory and review self-study, including reading papers and materials provided in class. The estimated amount of time for self-study should be about 30 minutes per class.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |                                               |          |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Textbooks                                                                                                                 | References                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                                               |          |
| <ul style="list-style-type: none"> <li>In-class performance (20%)</li> <li>Reports (80%)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>Contento IR 著, 足立己幸, 衛藤久美, 佐藤都喜子監訳. これからの栄養教育論—研究・理論・実践の輪—, 2015. 第一出版.</li> </ul> | <ul style="list-style-type: none"> <li>赤松利恵, 林芙美 編. 管理栄養士・栄養士のための栄養コミュニケーション 基礎・活用・実践. 臨床栄養(臨時増刊号) 143巻4号, 2023.</li> <li>Contento IR. &amp; Koch PA. Nutrition Education: Linking research, theory, and practice, 5th edition. Jones &amp; Bartlett Learning, 2025.</li> <li>Contento IR 著, 足立己幸, 衛藤久美, 佐藤都喜子監訳. これからの栄養教育論—研究・理論・実践の輪—, 2015. 第一出版.</li> <li>Glanz, K., Rimer, BK., Viswanath K. Health Behavior and Health Education: Theory, research, and practice, 6th edition. Jossey-Bass, 2024.</li> <li>Mayfield B.J. Communicating Nutrition: The Authoritative Guide, Academy of Nutrition and Dietetics, 2020.</li> <li>中山健夫, 津谷喜一郎編著. 臨床研究と疫学研究のための国際ルール集, 2008. ライフサイエンス出版</li> <li>中山健夫, 津谷喜一郎編著. 臨床研究と疫学研究のための国際ルール集Part 2, 2016. ライフサイエンス出版</li> </ul> |            |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Materials                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Materials will be distributed in class.                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |                                               |          |

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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Advanced Lectures on Community Nutrition                                                                                                                                                                                                        | Prof. Yukari Takemi | Compulsory                                                  | <input checked="" type="checkbox"/> | Selective                                                                                                                                                                | 1 credit |                                                                                                                                                             |                                                                                                                                                                                                                                                 |                                                                                                                                                   |                                                                                                                                                                                        |                                                                                                                                                                          |                                                                                                                                                   |  |                                                                                                                              |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                 |                     |                                                             |                                     |                                                                                                                                                                          |          |                                                                                                                                                             |                                                                                                                                                                                                                                                 |                                                                                                                                                   |                                                                                                                                                                                        |                                                                                                                                                                          |                                                                                                                                                   |  |                                                                                                                              |
| <p>The course focuses on nutrition education and food environment development in the community. Food environment improvement is an activity that includes both the provision of healthy food and meals and the provision of relevant and appropriate information. The implementation of nutrition education and food environment improvement in a community should be based on the health and nutrition policy of the community. Students will gain the ability to develop, implement, and evaluate nutrition education and food environment improvement program in consideration of the characteristics of the target groups. In addition, students in this course will acquire the ability required for highly specialized professionals for community action.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                 |                     |                                                             |                                     |                                                                                                                                                                          |          |                                                                                                                                                             |                                                                                                                                                                                                                                                 |                                                                                                                                                   |                                                                                                                                                                                        |                                                                                                                                                                          |                                                                                                                                                   |  |                                                                                                                              |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                 |                     |                                                             |                                     |                                                                                                                                                                          |          |                                                                                                                                                             |                                                                                                                                                                                                                                                 |                                                                                                                                                   |                                                                                                                                                                                        |                                                                                                                                                                          |                                                                                                                                                   |  |                                                                                                                              |
| <p>In the first half of the course, the latest trends in Japanese policies on health, nutrition, and food education are given based on professor's own experience of being involved in the policy development process. Next, the course will introduce some key concepts necessary for promoting nutrition education and improving the food environment in the communities. These include the 'radical population approach,' which will be explained based on domestic and international case studies, the 'ladder of intervention,' which is a framework for understanding the effects of the population approach, and the application of 'social marketing' and 'nudge technique' from behavioral economics to help come up with effective measures and programs. Each session will include time for discussion based on the lecture content, so students can learn to clarify and refine their thoughts. The final session will provide an exercise using the 'ladder of intervention' in practice and then hold a group discussion.</p>                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                 |                     |                                                             |                                     |                                                                                                                                                                          |          |                                                                                                                                                             |                                                                                                                                                                                                                                                 |                                                                                                                                                   |                                                                                                                                                                                        |                                                                                                                                                                          |                                                                                                                                                   |  |                                                                                                                              |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                 |                     |                                                             |                                     |                                                                                                                                                                          |          |                                                                                                                                                             |                                                                                                                                                                                                                                                 |                                                                                                                                                   |                                                                                                                                                                                        |                                                                                                                                                                          |                                                                                                                                                   |  |                                                                                                                              |
| <table><tr><td>1. The concept of food environment: Perception of food environment in Japan and overseas, its conceptual framework, and why it is deemed globally important</td><td>4. Sustainable diet and food environment beyond human health: Global trends in sustainable healthy diets; the contents and challenges of the "Strategic Initiative for a Healthy and Sustainable Food Environment" launched by the MHLW in 2022</td></tr><tr><td>2. Health policy and improvement of the food environment: Goals, progress, and challenges of Health Japan 21 (national health promotion campaign)</td><td>5. The 'ladder of intervention' as a theoretical framework of a fundamental population approach: Understanding the ladder of approach and its use cases for improving food environment</td></tr><tr><td>3. What is a healthy diet?: Consideration of healthy diet by the MHLW and a healthy diet/food environment certification system by a consortium of academic organizations</td><td>6. Application of social marketing and nudge theory (from behavioral economics) to the food environment improvement: learning from specific cases</td></tr><tr><td></td><td>7. Exercise: Planning food environment improvement measures using the 'ladder of intervention,' presentation, and discussion</td></tr></table> |                                                                                                                                                                                                                                                 |                     |                                                             |                                     |                                                                                                                                                                          |          | 1. The concept of food environment: Perception of food environment in Japan and overseas, its conceptual framework, and why it is deemed globally important | 4. Sustainable diet and food environment beyond human health: Global trends in sustainable healthy diets; the contents and challenges of the "Strategic Initiative for a Healthy and Sustainable Food Environment" launched by the MHLW in 2022 | 2. Health policy and improvement of the food environment: Goals, progress, and challenges of Health Japan 21 (national health promotion campaign) | 5. The 'ladder of intervention' as a theoretical framework of a fundamental population approach: Understanding the ladder of approach and its use cases for improving food environment | 3. What is a healthy diet?: Consideration of healthy diet by the MHLW and a healthy diet/food environment certification system by a consortium of academic organizations | 6. Application of social marketing and nudge theory (from behavioral economics) to the food environment improvement: learning from specific cases |  | 7. Exercise: Planning food environment improvement measures using the 'ladder of intervention,' presentation, and discussion |
| 1. The concept of food environment: Perception of food environment in Japan and overseas, its conceptual framework, and why it is deemed globally important                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 4. Sustainable diet and food environment beyond human health: Global trends in sustainable healthy diets; the contents and challenges of the "Strategic Initiative for a Healthy and Sustainable Food Environment" launched by the MHLW in 2022 |                     |                                                             |                                     |                                                                                                                                                                          |          |                                                                                                                                                             |                                                                                                                                                                                                                                                 |                                                                                                                                                   |                                                                                                                                                                                        |                                                                                                                                                                          |                                                                                                                                                   |  |                                                                                                                              |
| 2. Health policy and improvement of the food environment: Goals, progress, and challenges of Health Japan 21 (national health promotion campaign)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 5. The 'ladder of intervention' as a theoretical framework of a fundamental population approach: Understanding the ladder of approach and its use cases for improving food environment                                                          |                     |                                                             |                                     |                                                                                                                                                                          |          |                                                                                                                                                             |                                                                                                                                                                                                                                                 |                                                                                                                                                   |                                                                                                                                                                                        |                                                                                                                                                                          |                                                                                                                                                   |  |                                                                                                                              |
| 3. What is a healthy diet?: Consideration of healthy diet by the MHLW and a healthy diet/food environment certification system by a consortium of academic organizations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 6. Application of social marketing and nudge theory (from behavioral economics) to the food environment improvement: learning from specific cases                                                                                               |                     |                                                             |                                     |                                                                                                                                                                          |          |                                                                                                                                                             |                                                                                                                                                                                                                                                 |                                                                                                                                                   |                                                                                                                                                                                        |                                                                                                                                                                          |                                                                                                                                                   |  |                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 7. Exercise: Planning food environment improvement measures using the 'ladder of intervention,' presentation, and discussion                                                                                                                    |                     |                                                             |                                     |                                                                                                                                                                          |          |                                                                                                                                                             |                                                                                                                                                                                                                                                 |                                                                                                                                                   |                                                                                                                                                                                        |                                                                                                                                                                          |                                                                                                                                                   |  |                                                                                                                              |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                 |                     |                                                             |                                     |                                                                                                                                                                          |          |                                                                                                                                                             |                                                                                                                                                                                                                                                 |                                                                                                                                                   |                                                                                                                                                                                        |                                                                                                                                                                          |                                                                                                                                                   |  |                                                                                                                              |
| <p>Students are required to read the basic plan of each country thoroughly prior to class. Prepare to make comments in class by thinking about how to utilize what you learn in the class, by placing it in the context of your research theme.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                 |                     |                                                             |                                     |                                                                                                                                                                          |          |                                                                                                                                                             |                                                                                                                                                                                                                                                 |                                                                                                                                                   |                                                                                                                                                                                        |                                                                                                                                                                          |                                                                                                                                                   |  |                                                                                                                              |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                 |                     | Textbooks                                                   |                                     | References                                                                                                                                                               |          |                                                                                                                                                             |                                                                                                                                                                                                                                                 |                                                                                                                                                   |                                                                                                                                                                                        |                                                                                                                                                                          |                                                                                                                                                   |  |                                                                                                                              |
| <ul style="list-style-type: none"><li>In-class performance (20%)</li><li>Short essay (50%)</li><li>Comprehensive report (50%)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                 |                     | 「人間の行動変容に関する基本-効果的な栄養教育のための理論とモデル」武見ゆかり, 赤松利恵編, 医歯薬出版, 2022 |                                     | 「日本人の長寿を支える「健康な食事」のあり方検討会」報告書. 厚生労働省 2014.<br>「自然に健康になれる持続可能な食環境づくりの推進に向けた検討会」報告書. 厚生労働省 2021                                                                            |          |                                                                                                                                                             |                                                                                                                                                                                                                                                 |                                                                                                                                                   |                                                                                                                                                                                        |                                                                                                                                                                          |                                                                                                                                                   |  |                                                                                                                              |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                 |                     | Materials will be distributed in class.                     |                                     | This course is also a graduate BP course, therefore the first and the second sessions are offered face-to-face and third to 7th sessions are offered online using Teams. |          |                                                                                                                                                             |                                                                                                                                                                                                                                                 |                                                                                                                                                   |                                                                                                                                                                                        |                                                                                                                                                                          |                                                                                                                                                   |  |                                                                                                                              |

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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Advanced Lectures on Children's Dietary Management | Prof. Akemi Nakanishi                                      | Compulsory | <input checked="" type="checkbox"/> Selective | 1 credit |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                    |                                                            |            |                                               |          |
| The topics of this course are dietary management of children, including food habit formation, food eating, and dietary guidance in school lunches. The attainment goal is to acquire knowledge and practical skills in children's dietary management to support children's healthy eating habits at home, school, and in society, and to acquire the ability to promote practical research. This goal is related to the acquisition of in-depth knowledge from a broad perspective of nutritional science for dietary management of children in the Diploma Policy.                                                                                                                                      |                                                    |                                                            |            |                                               |          |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                    |                                                            |            |                                               |          |
| Learn about the current state of food surrounding children and the challenges associated with it, as well as the family and social factors that influence the formation of children's eating habits. Regarding food, we will learn about the relationship between the development of children's sense of taste and their eating habits, the relationship between the development of oral functions and food, as well as nutritional management and dietary management of school lunches and guidance regarding food during lunchtime to meet these realities. Finally, through paper abstracts and discussions on children's dietary management, students will deepen their understanding of this topic. |                                                    |                                                            |            |                                               |          |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                    |                                                            |            |                                               |          |
| <div><div>1) Circumstances and issues surrounding children's eating<br/>2) Formation of children's eating habits: Influences from family and social factors<br/>3) Formation of children's eating habits: Development of children's sense of taste<br/>4) Eating style: Oral functions and eating</div><div>5) Guidance on food during lunchtime<br/>6) Nutrition and dietary management of school lunches (group and individual)<br/>7) Discussion and summary of articles related to children's dietary management</div></div>                                                                                                                                                                         |                                                    |                                                            |            |                                               |          |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                    |                                                            |            |                                               |          |
| Students are expected to read relevant papers, summarize their contents, and submit them as a report. Students are required to secure self-study time (preparation, review, etc.) amounting to at least twice as much as the class time (100 minutes per class).                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                    |                                                            |            |                                               |          |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Textbooks                                          | References                                                 |            |                                               |          |
| In-class performance (50%)<br>Reports (50%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | None                                               | ・文部科学省『食に関する指導の手引—第二次改訂版—』平成31年3月<br>・小中高等学校学習指導要領解説,文部科学省 |            |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Materials                                          | Remarks                                                    |            |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Handouts will be distributed as needed.            | None                                                       |            |                                               |          |

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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Advanced Lectures on Nutritional Care for Children with Disability                                                                                                                  | Prof. Kazuhiro Shimokawa | Compulsory                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <input checked="" type="checkbox"/> Selective | 1 credit |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                               |          |
| This course will cover various cases requiring nutritional care and support, including type 1 diabetes of sickly children, obesity of mentally challenged children, extreme fussiness of autistic children, eating disorders like anorexia and bulimia associated with mental disability, and eating and swallowing disorders observed in severely disabled children. Students will be able to understand the various conditions of pupils requiring dietary care and support, know how to care and support them, and, as nutrition teachers, provide dietary consulting and other support services to pupils and their parents. The objective of this course is to acquire knowledge to become a person who has profound knowledge from a broad perspective of nutritional science as stated in the DP. |                                                                                                                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                               |          |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                               |          |
| Students will learn disability characteristics of various disabled children including those with development disability, and master basic knowledge and skills about ways to support them depending on their disability characteristics.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                               |          |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                               |          |
| 1. Overview of education policy for children with disabilities (CWD) and selection of research themes<br>2. Characteristics of disabilities of CWD (1) Sensory disturbance and communication support<br>3. Characteristics of disabilities of CWD (2) Cognitive features of CWD and support                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                     |                          | 4. Characteristics of disabilities of CWD (3) Swallowing mechanism development and support for disorders of feeding and swallowing<br>5. Research Presentation and Discussion (1) "Case Studies of School Lunch Accidents"<br>6. Characteristics of disabilities of CWD (4) Support for endocrine disorders, eating disorders, picky eaters"<br>7. Research Presentation and Discussion (2) "Consultation Support for Children and Families in Need of Food Considerations" |                                               |          |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                               |          |
| Lecture notes will be distributed as a textbook in the first class. Students are required to attend the class after referring to/reviewing "PowerPoint PDF Data" (provided via Teams) before participating in the class. In "Research Presentation and Discussion," two themes (case law research and consultation support) will be presented in the first class, and students are required to select one theme for each. Students are required to present their research in the 5th and 7th classes. Students are also required to prepare reports and materials for the presentation. (200 minutes per week required.)                                                                                                                                                                                 |                                                                                                                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                               |          |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Textbooks                                                                                                                                                                           |                          | References                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                               |          |
| • In-class presentations (25%)<br>• Participation in discussions (25%)<br>• Outcomes of the research presentation (50%)<br>Evaluations and other comments will be shared in the class.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Lecture Notes distributed in class will be used as the textbook.                                                                                                                    |                          | 「食べる機能の障害 その考え方とリハビリテーション」金子芳洋・向井美恵・尾本和彦（日本医師薬出版）<br>「特別支援教育ハンドブック」飯野順子・岡田加奈子・玉川進編著（東山書房）                                                                                                                                                                                                                                                                                                                                                                                   |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Materials                                                                                                                                                                           |                          | Remarks                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Lecture Notes and PDFs of the PowerPoint used in class will be sent to through Teams. Students will be notified of materials the are required to prepare themselves prior to class. |                          | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                               |          |

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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Advanced Lectures on Chrono-Nutrition                                                        | Prof. Masaki Takahashi | Compulsory                                                                                                                                                                                                                                                                                                                                                             | <input checked="" type="checkbox"/> Selective | 1 credit |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                              |                        |                                                                                                                                                                                                                                                                                                                                                                        |                                               |          |
| The goal of this course is to understand the relationship between the body clock, biological rhythms, and health, and the importance of considering the timing of meals and exercise throughout the day, using time nutrition as a key word. The course aims to enable students to think about nutrition and dietary habits in accordance with their individual body clocks and life rhythms. These contents are related to the acquisition of knowledge to become a person who has profound knowledge from a broad perspective of nutritional science as stated in the Diploma Policy.                                                                                        |                                                                                              |                        |                                                                                                                                                                                                                                                                                                                                                                        |                                               |          |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                              |                        |                                                                                                                                                                                                                                                                                                                                                                        |                                               |          |
| Students gain an understanding of the regulation of biological clocks and clock genes that cause cycles in the body, and the different effects on the body depending on the timing of nutrient and food intake. The course will also introduce the findings of temporal nutrition and temporal kinesiology regarding the medium- and long-term effects on disease prevention, particularly lifestyle-related diseases, and exercise and sports performance in humans. Furthermore, since individual lifestyles differ greatly depending on life stages and social environments, the application of temporal nutritional science will be considered from multiple perspectives. |                                                                                              |                        |                                                                                                                                                                                                                                                                                                                                                                        |                                               |          |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                              |                        |                                                                                                                                                                                                                                                                                                                                                                        |                                               |          |
| (1) Biological Clock and Health (Overview of Biological Clock, Assessment Methods, Relationship to Health Issues)<br>(2) Temporal Nutrition and Health (1) (Relationship between the body clock, biological rhythms, and nutrition and diet)<br>(3) Temporal Nutrition and Health (2) (Temporal nutrition for disease prevention with a focus on lifestyle-related diseases)<br>(4) Relationship between Body Clock and Exercise/Sports Performance                                                                                                                                                                                                                            |                                                                                              |                        | (5) Temporal Exercise Science and Health (Timing of exercise and prevention of lifestyle-related diseases)<br>(6) Individualized Nutrition (Nutrition and diet based on individual lifestyles and personal differences)<br>(7) General discussion (Introduction of case studies of temporal nutritional science in society and its potential for clinical application) |                                               |          |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                              |                        |                                                                                                                                                                                                                                                                                                                                                                        |                                               |          |
| Prepare for matters related to the lesson plan. In addition, review the materials and slides distributed in each class and conduct in-depth research on topics of particular interest to you. In addition, students are expected to summarize their research in a report and a PowerPoint presentation to be able to make a presentation in the general discussion. Independent study should be approximately twice as much as class time.                                                                                                                                                                                                                                     |                                                                                              |                        |                                                                                                                                                                                                                                                                                                                                                                        |                                               |          |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Textbooks                                                                                    |                        | References                                                                                                                                                                                                                                                                                                                                                             |                                               |          |
| • In-class performance (50%)<br>• Reports (50%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | None in particular. Class slides and handouts will be distributed at each session as needed. |                        | None                                                                                                                                                                                                                                                                                                                                                                   |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Materials                                                                                    |                        | Remarks                                                                                                                                                                                                                                                                                                                                                                |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | None in particular. Class slides and handouts will be distributed at each session as needed. |                        | None                                                                                                                                                                                                                                                                                                                                                                   |                                               |          |

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| Subject                                                                                                                                                                                                                                                                                                                                                       | Advanced Lectures on Molecular Nutrition                    | Prof. Akiko Fukushima | Compulsory                                                                                                                                                                                                                              | <input checked="" type="checkbox"/> Selective | 1 credit |
| Course goals                                                                                                                                                                                                                                                                                                                                                  |                                                             |                       |                                                                                                                                                                                                                                         |                                               |          |
| The thematic focus of this course is lifestyle-related diseases and genes. Students will be able to explain the diversity of genes and lifestyle-related diseases at the genetic level. This course is in line with the Master's Diploma Policy which is to acquire a high degree of expertise and a broad perspective on nutritional science                 |                                                             |                       |                                                                                                                                                                                                                                         |                                               |          |
| Course Summary                                                                                                                                                                                                                                                                                                                                                |                                                             |                       |                                                                                                                                                                                                                                         |                                               |          |
| The human genome has been analyzed, and all life phenomena are being analyzed at the genetic level. Nutrition science also requires the understanding of humans at the genetic level. The course will cover vast areas from basic knowledge on genes to the molecular mechanism of the onset of lifestyle-related diseases.                                   |                                                             |                       |                                                                                                                                                                                                                                         |                                               |          |
| Course Plan                                                                                                                                                                                                                                                                                                                                                   |                                                             |                       |                                                                                                                                                                                                                                         |                                               |          |
| 1. Molecular composition of DNA<br>2. Flow of genetic information (Replication, transcription, translation)<br>3. Human genome (Autosome, sex chromosome, mitochondria DNA)<br>4. Lifestyle-related diseases and genetic polymorphisms (genetic diseases, genetic polymorphisms, disease susceptibility genes)                                                |                                                             |                       | 5. Molecular mechanism of obesity (mast cells, adipocytokines)<br>6. Molecular mechanism of diabetes (insulin, TNF- $\alpha$ , gluconeogenesis)<br>7. Molecular mechanisms such as hyperlipidemia (LDL receptor, PPAR)                  |                                               |          |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                          |                                                             |                       |                                                                                                                                                                                                                                         |                                               |          |
| Students are required to review a textbook used in the undergraduate biochemistry class prior to the course. Students are also required (a) to read designated papers prior to class, (b) summarize the keywords and study the relevant parts of the references as a review. Approximately 60 minutes of preparatory and review study are required per class. |                                                             |                       |                                                                                                                                                                                                                                         |                                               |          |
| Grading criteria                                                                                                                                                                                                                                                                                                                                              | Textbooks                                                   |                       | References                                                                                                                                                                                                                              |                                               |          |
| Grades will be determined based on submitted reports.                                                                                                                                                                                                                                                                                                         | None in particular. Handouts will be distributed as needed. |                       | 1. 佐久間慶子、福島亜紀子著 栄養と遺伝子のはなし—分子栄養学入門 技報堂出版<br>2. 有波忠雄、太田敏子、清水淑子、福島亜紀子、三村邦裕編 メディカルサイエンス遺伝子検査学 近代出版<br>3. 田村隆明著、基礎から学ぶ遺伝子工学 第3版 羊土社<br>4. 加藤久典、藤原葉子／編、栄養科学イラストレイテッド 分子栄養学 改訂第3版 羊土社<br>5. ジェームス・D・ワトソン著、中村桂子／翻訳、ワトソン遺伝子の分子生物学 第7版 東京電機大学出版局 |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                               | Materials                                                   |                       | Remarks                                                                                                                                                                                                                                 |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                               | Materials will be distributed as needed.                    |                       | None                                                                                                                                                                                                                                    |                                               |          |

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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------|
| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Advanced Lectures on Biochemistry                                                         | Prof. Hisanori Kato | Compulsory                                                                                                                                          | <input checked="" type="checkbox"/> Selective | 1 credit |
| Course goals and Course summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                           |                     |                                                                                                                                                     |                                               |          |
| <p>The thematic focus of this course is cell communication and the regulation of gene expression. Students will be able to explain how stimuli from outside the cells, such as food components and hormones, induce cellular responses. The course will help students acquire deep and accurate knowledge and develop a broad perspective in nutritional science as outlined in the Diploma Policy.</p>                                                                                                                                                                              |                                                                                           |                     |                                                                                                                                                     |                                               |          |
| <p>Hormones and growth factors trigger various cell responses by binding to the receptor of the target cell. Many food components can also cause similar responses, including changes in enzyme activity and regulation of gene expression. Students will learn about these phenomena, which may lead to disease development. The latter half of the course will introduce students to nutritional genomics technologies that enable comprehensive analysis of gene expression and the relation between the analysis results thereof and cell communication based on real cases.</p> |                                                                                           |                     |                                                                                                                                                     |                                               |          |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                           |                     |                                                                                                                                                     |                                               |          |
| <p>1. Overview of cell communication; G protein coupled receptors (i) – the functions of glucagon<br/>2. Tyrosine kinase-type receptors (i) (overview, insulin receptors)<br/>3. Nuclear receptors, various receptors<br/>4. Food components and gene expression regulation</p>                                                                                                                                                                                                                                                                                                      |                                                                                           |                     | <p>5. Overview and applications of nutrigenomics<br/>6. Applications of nutrigenomics and the epigenome<br/>7. Genomics and precision nutrition</p> |                                               |          |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                           |                     |                                                                                                                                                     |                                               |          |
| <p>Students are required to review the process from gene expression to protein synthesis (transcription, mRNA, translation, etc.) as well as the roles of hormones. Students are encouraged to spend 100 minutes or more per class to prepare for and review the contents.</p>                                                                                                                                                                                                                                                                                                       |                                                                                           |                     |                                                                                                                                                     |                                               |          |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Textbooks                                                                                 |                     | References                                                                                                                                          |                                               |          |
| <ul style="list-style-type: none"><li>In-class performance (50%)</li><li>Reports (50%)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | N/A Lectures will be mainly based on hand-out materials and PowePoint files.              |                     | <p>①加藤久典、藤原葉子編著、栄養科学イラストレイテッド 分子栄養学改訂第2版、羊土社<br/>②田村隆明、山本雅編 分子生物学イラストレイテッド、羊土社<br/>③佐久間慶子、福島亜紀子著 栄養と遺伝子のはなし—分子栄養学入門 技報堂出版</p>                       |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Materials                                                                                 |                     | Remarks                                                                                                                                             |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Materials will be distributed in class. PDF of the PPT will be also distributed in class. |                     | None                                                                                                                                                |                                               |          |

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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Advanced Lectures on Physiology        | Prof. Yukiko Kurihara | Compulsory     | <input checked="" type="checkbox"/> | Selective | 1 credit |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                        |                       |                |                                     |           |          |
| To be able to explain/propose diagnosis, pathophysiology, treatment, and lifestyle guidance for diseases that may be encountered at school, based on the basics of medicine and physiology. This lecture is related to the acquisition of in-depth knowledge from a broad perspective of nutritional science in the Diploma Policy.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                        |                       |                |                                     |           |          |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                        |                       |                |                                     |           |          |
| The first session will be a lecture on the pathophysiology of diseases that may be encountered at school, followed by self-study. In the second session, a related theme will be presented, so students will be required to complete a report based on the first lecture, using reference books and other materials. The first and second sessions will be held three times in total. Students are required to submit a presentation report.                                                                                                                                                                                                                                                                                                                                                                                                              |                                        |                       |                |                                     |           |          |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                        |                       |                |                                     |           |          |
| <div> <div> 1) Lecture on "obesity and weight loss"<br/> 2) Themes related to "obesity and weight loss" will be presented, and students will be required to complete reports using reference books, etc.<br/> 3) Lecture on "infectious diseases, especially influenza and COVID-19"<br/> 4) Themes related to "infectious diseases, especially influenza and COVID-19" will be presented, and students will be required to complete a report using reference books, etc. </div> <div> 5) Lecture on "diseases that may occur due to exercise"<br/> 6) Themes related to "diseases that may occur due to exercise" will be presented, and students will be required to complete a report using reference books, etc.<br/> 7) Students will give a PowerPoint presentation on one of the above themes based on the report they have prepared </div> </div> |                                        |                       |                |                                     |           |          |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                       |                |                                     |           |          |
| Before taking the course, students should review the relevant sections of the undergraduate physiology textbook.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                        |                       |                |                                     |           |          |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Textbooks                              |                       | References     |                                     |           |          |
| <ul style="list-style-type: none"> <li>In-class performance (50%)</li> <li>Presentation (50%)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | None                                   |                       | 東京化学同人「解剖・生理学」 |                                     |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Materials                              |                       | Remarks        |                                     |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Handouts will be distributed in class. |                       | None           |                                     |           |          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                    |                     |                                                                                                         |                                     |           |          |                                                                                                                                                                                                                                        |                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------|-----------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Advanced Lectures on Food Cultural Anthropology                                                                                                                    | A/Prof. Akiko Moria | Compulsory                                                                                              | <input checked="" type="checkbox"/> | Selective | 1 credit |                                                                                                                                                                                                                                        |                                                                                                                                                                    |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                    |                     |                                                                                                         |                                     |           |          |                                                                                                                                                                                                                                        |                                                                                                                                                                    |
| In this course, students will learn the significance of food to humans from an anthropological perspective. The goal is to understand social and cultural of food and various values reflected in food, based on specific examples. The goal of this course is related to the Diploma Policy, which is to acquire a high degree of expertise with in-depth knowledge of human food and a broad perspective on nutritional science                       |                                                                                                                                                                    |                     |                                                                                                         |                                     |           |          |                                                                                                                                                                                                                                        |                                                                                                                                                                    |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                    |                     |                                                                                                         |                                     |           |          |                                                                                                                                                                                                                                        |                                                                                                                                                                    |
| Students will learn the historical transition of Japanese food culture in the broader context of East Asian food culture. They will also review various cultural aspects reflected in food, through dietary records and ethnography.                                                                                                                                                                                                                    |                                                                                                                                                                    |                     |                                                                                                         |                                     |           |          |                                                                                                                                                                                                                                        |                                                                                                                                                                    |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                    |                     |                                                                                                         |                                     |           |          |                                                                                                                                                                                                                                        |                                                                                                                                                                    |
| <table><tr><td>1. Thinking about food from a cultural perspective (Face-to-face session)<br/>2. History of food culture in Japan (Face-to-face session)<br/>3. Rice and meat in Japanese culinary culture<br/>4. The culture of fermented foods in Japan</td><td>5. Food culture in East Asia (Face-to-face session)<br/>6. Food and ideology (Face-to-face session)<br/>7. Modern challenges surrounding food (Face-to-face session)</td></tr></table> |                                                                                                                                                                    |                     |                                                                                                         |                                     |           |          | 1. Thinking about food from a cultural perspective (Face-to-face session)<br>2. History of food culture in Japan (Face-to-face session)<br>3. Rice and meat in Japanese culinary culture<br>4. The culture of fermented foods in Japan | 5. Food culture in East Asia (Face-to-face session)<br>6. Food and ideology (Face-to-face session)<br>7. Modern challenges surrounding food (Face-to-face session) |
| 1. Thinking about food from a cultural perspective (Face-to-face session)<br>2. History of food culture in Japan (Face-to-face session)<br>3. Rice and meat in Japanese culinary culture<br>4. The culture of fermented foods in Japan                                                                                                                                                                                                                  | 5. Food culture in East Asia (Face-to-face session)<br>6. Food and ideology (Face-to-face session)<br>7. Modern challenges surrounding food (Face-to-face session) |                     |                                                                                                         |                                     |           |          |                                                                                                                                                                                                                                        |                                                                                                                                                                    |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                    |                     |                                                                                                         |                                     |           |          |                                                                                                                                                                                                                                        |                                                                                                                                                                    |
| Read food-related literature based on your individual interests.                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                    |                     |                                                                                                         |                                     |           |          |                                                                                                                                                                                                                                        |                                                                                                                                                                    |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                        | Textbooks                                                                                                                                                          |                     | References                                                                                              |                                     |           |          |                                                                                                                                                                                                                                        |                                                                                                                                                                    |
| In-class performance (20%)<br>Reports (80%)                                                                                                                                                                                                                                                                                                                                                                                                             | None                                                                                                                                                               |                     | To be informed in the class                                                                             |                                     |           |          |                                                                                                                                                                                                                                        |                                                                                                                                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Materials                                                                                                                                                          |                     | Remarks                                                                                                 |                                     |           |          |                                                                                                                                                                                                                                        |                                                                                                                                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Handouts will be distributed in class.                                                                                                                             |                     | The course may be changed to online classes, in consultation with students, depending on circumstances. |                                     |           |          |                                                                                                                                                                                                                                        |                                                                                                                                                                    |

| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Advanced Lectures on Eating Psychology                                                                                                                                                                                                                                                                                                                   | Prof. Tomoko Hasegawa | Compulsory                              | <input checked="" type="checkbox"/> | Selective | 1 credit |
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| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                          |                       |                                         |                                     |           |          |
| <p>The main theme of this course is the psychological approach to diet behavior. The course aims to enable students to 1) intensively read English research papers describing diet behavior and related actions from a psychological perspective, and 2) understand and explain psychological theories on diet behavior. This lecture is related to the acquisition of in-depth knowledge from a broad perspective of nutritional science in the Diploma Policy.</p>                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                          |                       |                                         |                                     |           |          |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                          |                       |                                         |                                     |           |          |
| <p>We can psychologically analyze diet behavior from the perspectives of 1) the human as an animal, 2) persons as individuals, and 3) human beings as social and cultural creatures. And in terms of psychology, eating behavior is related to 1) neuroscience, 2) learning and motivation, 3) culture and society, 4) health and clinicalness, and 5) development. The latest literature will be selected from the following themes: the development of diet behavior, interactions between diet behavior and society, cognitive effects on diet behavior, diet behavior and desires to slim down, etc. Research on the development of diet behavior will be explained from the perspective of interactions with humans. The number of hours of literature reading will vary depending on the number of students.</p> |                                                                                                                                                                                                                                                                                                                                                          |                       |                                         |                                     |           |          |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                          |                       |                                         |                                     |           |          |
| <div> <div> 1. Outline of diet behavior from the<br/>2. Reading papers on development<br/>3. Reading papers on diet behavior<br/>4. Reading literature on cognitive e </div> <div> Not be offierd in 2026 </div> <div> ting behavior and desire for slimming<br/>s in Developmental Psychology of<br/>he perspective of food selection<br/>s in Development Psychology of<br/>he perspective of mother and child<br/>relationships and family relationships </div> </div>                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                          |                       |                                         |                                     |           |          |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                          |                       |                                         |                                     |           |          |
| <p>Please prepare your resume after carefully reading the assigned sections (including a verbatim translation). Please refer to Yuhikaku's "Dictionary of Psychology" or Heibonsha's "Encyclopedia of Psychology," etc., and prepare carefully for the psychological terms that will be used. Detailed instructions will be given after registration. Self-study time will be about twice as much as class time.</p>                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                          |                       |                                         |                                     |           |          |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Textbooks                                                                                                                                                                                                                                                                                                                                                |                       | References                              |                                     |           |          |
| Presentation contents(70%),<br>level of participation in<br>discussions (30%)<br><br>Feedback will be given on<br>students' comments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Splane, E. C. et al. (2020).<br>Psychology of Eating: From biology<br>to culture to policy second edition.<br>Routledge., Meiselman, H. L. et al.<br>(Eds).(2020). Handbook of Eating<br>and Drinking. Springer. Readings will<br>be determined on a case-by-case<br>basis, including scholarly articles.<br>Readings will be distributed in<br>advance. |                       | References will be designated in class. |                                     |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                          |                       | Remarks                                 |                                     |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                          |                       | None                                    |                                     |           |          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |                                               |          |
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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Advanced Lectures on Global Nutrition | Prof. Chizuru Nishida                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Compulsory | <input checked="" type="checkbox"/> Selective | 1 credit |
| Course goals and Course summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |                                               |          |
| <p>The objective of this course is to comprehensively examine global nutrition challenges against the backdrop of structural transformations in the contemporary world and to develop advanced scholarly expertise based on a broad perspective in nutritional science, in accordance with the Diploma Policy (DP). Through this course, students will acquire the following competencies :</p> <ul style="list-style-type: none"><li>· Critically analyze global nutrition data and trends</li><li>· Evaluate scientific evidence underlying dietary guidelines</li><li>· Assess effectiveness of food environment policies</li><li>· Propose coherent, evidence-based strategies for healthy and sustainable diets</li><li>· Articulate the role of nutrition professionals in addressing global systemic challenges</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |                                               |          |
| Marking 80 years since the end of World War II and the establishment of the multilateral global order, the course situates nutrition within interlocking crises, such as climate change, geopolitical instability, economic fragmentation, pandemics, and the growing burden of noncommunicable diseases (NCDs). Today malnutrition exists in multiple forms: undernutrition, micronutrient deficiencies, overweight, obesity, and diet-related NCDs. The world has reached a historic turning point in which obesity among school-age children and adolescents has surpassed undernutrition at the global level. Drawing on major global data sources and WHO guidelines, this course critically analyzes current trends and explores policy and food systems transformations needed to build safer, healthier, fairer, and more sustainable societies.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |                                               |          |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |                                               |          |
| <div><div><div><u>1. Global Nutrition Governance and Historical Evolution</u><ul style="list-style-type: none"><li>· Evolution of FAO, WHO, Codex, ICN, and the SDGs</li><li>· The UN Decade of Action on Nutrition</li><li>· From globalization to fragmentation and multipolarity</li><li>· Nutrition as central to sustainable development</li></ul></div><div><u>2. The Global State of Food and Nutrition</u><ul style="list-style-type: none"><li>· Trends in hunger, food insecurity, and affordability of healthy diets</li><li>· Child malnutrition (stunting, wasting, overweight)</li><li>· Rising obesity and NCD burden</li><li>· Impacts of COVID-19 and climate change</li></ul></div><div><u>3. Healthy Diets: Evidence and Guidelines</u><ul style="list-style-type: none"><li>· WHO recommendations on sugars, salt, fats, and trans fats</li><li>· FAO/WHO core principles of a healthy diet</li><li>· Sustainable healthy diets and planetary health</li><li>· Insights from Global Burden of Disease and recent evidence</li></ul></div></div><div><div><u>4. Food Environment Policy Interventions</u><ul style="list-style-type: none"><li>· Sugar-sweetened beverage taxation</li><li>· Trans-fat elimination policies</li><li>· Sodium reduction strategies</li><li>· Marketing restrictions to protect children</li><li>· Front-of-pack labelling and fiscal policies</li><li>· WHO Acceleration Plan to Stop Obesity</li></ul></div><div><u>5. Food Systems Transformation and Policy Coherence</u><ul style="list-style-type: none"><li>· UN Food Systems Summit commitments and progress</li><li>· Coherence across production, trade, distribution, and consumer behavior</li><li>· Climate-nutrition nexus and One Health approach</li><li>· Financing and equity considerations</li></ul></div></div></div> |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |                                               |          |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |                                               |          |
| <p>Students are expected to review the references listed in the reading list, relevant academic journals, newspaper articles, and official websites of organizations, such as WHO, FAO, and UNICEF in order to understand current issues and developments in global nutrition and food systems transformation efforts. Each student will select one topic from the main lecture themes and prepare a 10–15 minute presentation to be delivered in class. In addition, students are required to submit a written report on the selected topic, incorporating insights gained from class discussions.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |                                               |          |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                       | References                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                                               |          |
| Final grades will be determined based on a comprehensive evaluation of the presentation, participation in discussions, and the quality of the final report.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                       | <div><div>1. The State of Food Security and Nutrition in the World (SOFI) 2025, FAO, IFAD, UNICEF, WFP &amp; WHO</div><div>2. Global Burden of Risk Factors (dietary risks), 1990 – 2021 (Lancet), Global Burden of Disease (GBD) 2021 Risk Factors Collaborators</div><div>3. Feeding Profit: How Food environments are Failing Children, UNICEF (2025)</div><div>4. WHO guidelines on marketing (2023) or fiscal policies (2024)</div><div>5. EAT–Lancet Commission 2019 and EAT–Lancet Commission 2.0</div><div>6. Lancet Commission on Ultra-processed foods (UPF)(2025)</div></div> |            |                                               |          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                        |                |                                                             |                                               |          |                                                                                                                                                                                                                                                                                              |                                                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------------------------------------------|-----------------------------------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Advanced Lectures on Food Communication                                                                                                | Prof. Kumi Eto | Compulsory                                                  | <input checked="" type="checkbox"/> Selective | 1 credit |                                                                                                                                                                                                                                                                                              |                                                                                                                                        |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                        |                |                                                             |                                               |          |                                                                                                                                                                                                                                                                                              |                                                                                                                                        |
| The objective of this course is to enable students to understand people’s dietary habits by integrating perspectives from traditional nutrition science with those of communication studies. This lecture is related to the acquisition of in-depth knowledge from a broad perspective of nutritional science in the Diploma Policy.                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                        |                |                                                             |                                               |          |                                                                                                                                                                                                                                                                                              |                                                                                                                                        |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                        |                |                                                             |                                               |          |                                                                                                                                                                                                                                                                                              |                                                                                                                                        |
| The course aims to deepen understanding of the nature of communication through food, using the examples of eating together, eating alone, and dietary history (the history of each person’s dietary habits). For eating together and alone, lectures on domestic and international research trends will be given, followed by discussions on themes related to the course content. In the area of dietary history, a workshop will be held after lectures on related topics to deepen understanding of the connection between past, present, and future dietary habits. In the final session, the students will present and discuss the issues designated in advance. |                                                                                                                                        |                |                                                             |                                               |          |                                                                                                                                                                                                                                                                                              |                                                                                                                                        |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                        |                |                                                             |                                               |          |                                                                                                                                                                                                                                                                                              |                                                                                                                                        |
| <table><tr><td>1) Diet and communication<br/>2) Research trends on eating together and eating alone: (1) National trends and related factors<br/>3) Research trends on eating together and eating alone: (2) Qualitative perspectives and promoting eating together<br/>4) Reflecting on one’s dietary history</td><td>5) Dietary history and current and future eating habits<br/>6) Communication through food<br/>7) Presentations, discussions, and summary</td></tr></table>                                                                                                                                                                                     |                                                                                                                                        |                |                                                             |                                               |          | 1) Diet and communication<br>2) Research trends on eating together and eating alone: (1) National trends and related factors<br>3) Research trends on eating together and eating alone: (2) Qualitative perspectives and promoting eating together<br>4) Reflecting on one’s dietary history | 5) Dietary history and current and future eating habits<br>6) Communication through food<br>7) Presentations, discussions, and summary |
| 1) Diet and communication<br>2) Research trends on eating together and eating alone: (1) National trends and related factors<br>3) Research trends on eating together and eating alone: (2) Qualitative perspectives and promoting eating together<br>4) Reflecting on one’s dietary history                                                                                                                                                                                                                                                                                                                                                                          | 5) Dietary history and current and future eating habits<br>6) Communication through food<br>7) Presentations, discussions, and summary |                |                                                             |                                               |          |                                                                                                                                                                                                                                                                                              |                                                                                                                                        |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                        |                |                                                             |                                               |          |                                                                                                                                                                                                                                                                                              |                                                                                                                                        |
| Read carefully the class handouts, materials and papers specified in the class, as well as materials presented as reference materials, and review them. Students are expected to summarize their own ideas in preparation for in-class discussions. It is advisable to do self-study for at least twice the class time.                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                        |                |                                                             |                                               |          |                                                                                                                                                                                                                                                                                              |                                                                                                                                        |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Textbooks                                                                                                                              |                | References                                                  |                                               |          |                                                                                                                                                                                                                                                                                              |                                                                                                                                        |
| • In-class performance (25%)<br>• Presentation (Japanese or English) (25%)<br>• Reports (Japanese or English) (50%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | None                                                                                                                                   |                | 足立 己幸／編 足立 己幸・衛藤 久美／著：共食と孤食—50年の食生態学研究から未来へ，女子栄養大学出版部(2023) |                                               |          |                                                                                                                                                                                                                                                                                              |                                                                                                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Materials                                                                                                                              |                | Other                                                       |                                               |          |                                                                                                                                                                                                                                                                                              |                                                                                                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Handouts will be distributed as needed.                                                                                                |                | None                                                        |                                               |          |                                                                                                                                                                                                                                                                                              |                                                                                                                                        |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                        |                                             |            |                                               |          |                                                    |                         |                                    |                                                |                                     |                                                                        |                                  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------|------------|-----------------------------------------------|----------|----------------------------------------------------|-------------------------|------------------------------------|------------------------------------------------|-------------------------------------|------------------------------------------------------------------------|----------------------------------|--|
| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Advanced Lectures on Human Life Education                              | Prof. Rie Imoto                             | Compulsory | <input checked="" type="checkbox"/> Selective | 1 credit |                                                    |                         |                                    |                                                |                                     |                                                                        |                                  |  |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                        |                                             |            |                                               |          |                                                    |                         |                                    |                                                |                                     |                                                                        |                                  |  |
| <p>This course is a prerequisite for students who wish to acquire an advanced home economics teaching license for middle and high schools.</p> <p>Students will be able to consider the interaction between people and the environment in human life centered on the home, deeply understand the contents and methods of home economics required in the course of study, and be able to provide specialized guidance. In order to achieve the Diploma Policy of “those who acquire a high degree of expertise and a broad prospective on nutritional science,” the program will deepen knowledge in the field of food culture science.</p> |                                                                        |                                             |            |                                               |          |                                                    |                         |                                    |                                                |                                     |                                                                        |                                  |  |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                        |                                             |            |                                               |          |                                                    |                         |                                    |                                                |                                     |                                                                        |                                  |  |
| <p>After deeply considering how to perceive life, students will understand the relationship between various issues in modern society and life. In addition, students will formulate specialized guidance to develop the ability to solve life problems in home economics education. Furthermore, we will formulate specialized instruction to develop life problem-solving skills in home economics education.</p>                                                                                                                                                                                                                         |                                                                        |                                             |            |                                               |          |                                                    |                         |                                    |                                                |                                     |                                                                        |                                  |  |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                        |                                             |            |                                               |          |                                                    |                         |                                    |                                                |                                     |                                                                        |                                  |  |
| <table><tr><td>1. Value-consciousness and decision-making in life</td><td>5. Information and life</td></tr><tr><td>2. Living hours and life resources</td><td>6. Research trends in home economics education</td></tr><tr><td>3. Money in life and various values</td><td>7. Education methods to develop the capacity to solve problems in life</td></tr><tr><td>4. Environmental issues and life</td><td></td></tr></table>                                                                                                                                                                                                              |                                                                        |                                             |            |                                               |          | 1. Value-consciousness and decision-making in life | 5. Information and life | 2. Living hours and life resources | 6. Research trends in home economics education | 3. Money in life and various values | 7. Education methods to develop the capacity to solve problems in life | 4. Environmental issues and life |  |
| 1. Value-consciousness and decision-making in life                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5. Information and life                                                |                                             |            |                                               |          |                                                    |                         |                                    |                                                |                                     |                                                                        |                                  |  |
| 2. Living hours and life resources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 6. Research trends in home economics education                         |                                             |            |                                               |          |                                                    |                         |                                    |                                                |                                     |                                                                        |                                  |  |
| 3. Money in life and various values                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 7. Education methods to develop the capacity to solve problems in life |                                             |            |                                               |          |                                                    |                         |                                    |                                                |                                     |                                                                        |                                  |  |
| 4. Environmental issues and life                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                        |                                             |            |                                               |          |                                                    |                         |                                    |                                                |                                     |                                                                        |                                  |  |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                        |                                             |            |                                               |          |                                                    |                         |                                    |                                                |                                     |                                                                        |                                  |  |
| <p>Students are required to read research papers, references, and materials designated in class and and dedicate twice as much time to preparatory and review study as they do to class time.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                        |                                             |            |                                               |          |                                                    |                         |                                    |                                                |                                     |                                                                        |                                  |  |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Textbooks                                                              | References                                  |            |                                               |          |                                                    |                         |                                    |                                                |                                     |                                                                        |                                  |  |
| Presentations and comments in class (50%)<br>Reports (50%)<br>Comments will be returned as feedback.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Handouts will be distributed as needed.                                | (一社)日本家政学会 家政学原論部会 編<br>『やさしい家政学原論』建帛社、2018 |            |                                               |          |                                                    |                         |                                    |                                                |                                     |                                                                        |                                  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Materials                                                              | Other                                       |            |                                               |          |                                                    |                         |                                    |                                                |                                     |                                                                        |                                  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Materials will be distributed as needed.                               | N/A                                         |            |                                               |          |                                                    |                         |                                    |                                                |                                     |                                                                        |                                  |  |

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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------|
| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Advanced Lectures on Environmental Education | Prof. Rie Imoto | Compulsory                                                                                                                                                                                                                                                                                        | <input checked="" type="checkbox"/> Selective | 1 credit |
| Course goals and Course summary                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                              |                 |                                                                                                                                                                                                                                                                                                   |                                               |          |
| <p>This course aims to ensure that students can understand the close linkage between dietary life and environmental issues and propose practical classes or projects on dietary education as part of education for sustainable development (ESD). In order to achieve the Diploma Policy of “those who acquire a high degree of expertise and a broad perspective on nutritional science,” the program will deepen knowledge in the field of food culture science.</p> |                                              |                 |                                                                                                                                                                                                                                                                                                   |                                               |          |
| <p>Students will first learn the linkage between dietary life and environmental issues and the underlying ESD theory, undertake literature reviews of a few selected key papers, and examine some case studies. They will then choose their own research topics and make presentations on their plans for dietary environment education. Class members will discuss each plan.</p>                                                                                     |                                              |                 |                                                                                                                                                                                                                                                                                                   |                                               |          |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                              |                 |                                                                                                                                                                                                                                                                                                   |                                               |          |
| <p>1. Theories related to the relationship between dietary life and environmental issue and the orientation of dietary education as ESD</p> <p>2. Dietary education in school education</p> <p>3. Dietary education in social education</p> <p>4. Dietary education in England and Germany</p>                                                                                                                                                                         |                                              |                 | <p>5. Dietary education as international cooperation</p> <p>6. Mock lesson on dietary environmental education by each student or project proposal and presentation</p> <p>7. Discussion and consideration of the mock lesson or project proposal and presentation for environmental education</p> |                                               |          |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                   |                                              |                 |                                                                                                                                                                                                                                                                                                   |                                               |          |
| <p>Students are required to read research papers, references, and materials designated in class and dedicate twice as much time to preparatory and review study as they do to class time.</p>                                                                                                                                                                                                                                                                          |                                              |                 |                                                                                                                                                                                                                                                                                                   |                                               |          |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Textbooks                                    |                 | References                                                                                                                                                                                                                                                                                        |                                               |          |
| Presentations and comments in class (50%)<br>Reports (50%)<br>Reports will be returned with feedback.                                                                                                                                                                                                                                                                                                                                                                  | Handouts will be distributed as needed.      |                 | 日本環境教育学会編『環境教育とESD』東洋館出版社、2014<br>日本環境教育学会[監修]『知る・わかる・伝える SDGs I－貧困・食料・健康・ジェンダー』学文社、2019<br>その他、授業の際に指示する。                                                                                                                                                                                        |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Materials                                    |                 | Other                                                                                                                                                                                                                                                                                             |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Materials will be distributed in class.      |                 | N/A                                                                                                                                                                                                                                                                                               |                                               |          |

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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Advanced Lectures on Food Analysis                                             | Prof. Teruyuki Usui | Compulsory                                                                                                                                                                                                       | <input checked="" type="checkbox"/> Selective | 1 credit |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                |                     |                                                                                                                                                                                                                  |                                               |          |
| Students will become able to understand and explain the purpose of use of analytical instruments in food analysis. The course is related to the Master's Diploma Policy which is to acquire a high degree of expertise and a broad perspective on nutritional science.                                                                                                                                                                                                                                |                                                                                |                     |                                                                                                                                                                                                                  |                                               |          |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                |                     |                                                                                                                                                                                                                  |                                               |          |
| Students will learn about the major analytical methods used in food research and development. The term "food analysis" encompasses a broad range of activities, including not only the quantification of food components but also the evaluation of food functionality. The use of computers for controlling analytical instruments and analyzing data is common practice; therefore, this course will also cover the principles and practical applications of major instrumental analytical methods. |                                                                                |                     |                                                                                                                                                                                                                  |                                               |          |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                |                     |                                                                                                                                                                                                                  |                                               |          |
| 1) Food development and particle size distribution measurement<br>2) Absorption, fluorescence, and luminescence analysis methods<br>3) Applications of fluorescence spectroscopy and mass spectrometry<br>4) Methods for separating food components and examples of their use (1)                                                                                                                                                                                                                     |                                                                                |                     | 5) Methods for separating food components and examples of their use (2)<br>6) Research methods for food aromas<br>7) Experimental methods for chemical structure analysis (including nuclear magnetic resonance) |                                               |          |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                |                     |                                                                                                                                                                                                                  |                                               |          |
| Students are required to dedicate twice as much time to preparatory and review study as they do to class time (including review using files distributed after class).                                                                                                                                                                                                                                                                                                                                 |                                                                                |                     |                                                                                                                                                                                                                  |                                               |          |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Textbooks                                                                      |                     | References                                                                                                                                                                                                       |                                               |          |
| Grades will be determined based on submitted homework through Forms                                                                                                                                                                                                                                                                                                                                                                                                                                   | N/A                                                                            |                     | Introduced in class as needed.                                                                                                                                                                                   |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Materials                                                                      |                     | Other                                                                                                                                                                                                            |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | PDF files to review what was covered in class will be distributed after class. |                     | N/A                                                                                                                                                                                                              |                                               |          |

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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Advanced Lectures on Food Material Development | Prof. Masataka Saito | Compulsory                                                                                                                                                                                                                                                                                                                                              | <input checked="" type="checkbox"/> Selective | 1 credit |
| Course goals and Course summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                |                      |                                                                                                                                                                                                                                                                                                                                                         |                                               |          |
| High value-added foods, including physiological functional foods for the purpose of utilizing recyclable food waste, are widely distributed and are readily available in the market. Many of these foods are made from a wide variety of domestically-produced ingredients. The goal in this course is to understand the social needs for food and the research and development processes, and to become able to explain the characteristics of processed foods etc that use specific food materials and ingredients. In addition, this course is related to the acquisition of in-depth knowledge from a broad perspective of nutritional science as stated in the diploma policy. |                                                |                      |                                                                                                                                                                                                                                                                                                                                                         |                                               |          |
| Students will investigate how specific food materials or ingredients have been utilized in recent years and grasp in detail their characteristics and functionality.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |                      |                                                                                                                                                                                                                                                                                                                                                         |                                               |          |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                |                      |                                                                                                                                                                                                                                                                                                                                                         |                                               |          |
| 1. Food materials that are attracting attention such as lipids, proteins, peptides, amino acids, etc.<br>2. Production techniques and usage of food materials (production of food materials and development of processed food)<br>3. Case study on food material development basic research (composition, nature, genome editing): online class                                                                                                                                                                                                                                                                                                                                     |                                                |                      | 4. Food ingredients that are attracting attention such as food wasting and locally specialized food, etc.)<br>5. Seafood and agricultural foods (raw materials, ingredients)<br>6. Development of proposals related to processed food: online class (Developing the PPT)<br>7. Summary (presentation, discussion, reference introduction): online class |                                               |          |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |                      |                                                                                                                                                                                                                                                                                                                                                         |                                               |          |
| Students are required to read and summarize designated research papers and reviews in food science western magazines. They are also required to create a report in the form of a PowerPoint presentation and submit it in class. Students are required to dedicate twice as much time to preparation and review study as they do to class time.                                                                                                                                                                                                                                                                                                                                     |                                                |                      |                                                                                                                                                                                                                                                                                                                                                         |                                               |          |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Textbooks                                      |                      | References                                                                                                                                                                                                                                                                                                                                              |                                               |          |
| •In-class performance and presentations (60%)<br>• Reports (40%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Handouts will be distributed as needed.        |                      | Food and Development (UBM ジャパン株式会社)                                                                                                                                                                                                                                                                                                                     |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Materials                                      |                      | Remarks                                                                                                                                                                                                                                                                                                                                                 |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | N/A                                            |                      | Students are required to prepare a PC for online classes. (Classes 3 and 6 in the course plan)                                                                                                                                                                                                                                                          |                                               |          |

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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Advanced Lectures on Quality Management                                                                                                                          | Prof. Hideki Tsuda                                                                                                                                                          | Compulsory | <input checked="" type="checkbox"/> | Selective | 1 credit |                                                                                                                                                                    |                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                        |                                                 |                                                                                                                                                                                                                                                      |                                                                                                                                                                             |           |         |                                             |      |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                  |                                                                                                                                                                             |            |                                     |           |          |                                                                                                                                                                    |                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                        |                                                 |                                                                                                                                                                                                                                                      |                                                                                                                                                                             |           |         |                                             |      |
| <p>In this advanced seminar, while there are numerous subjects within the scope of quality control and quality assurance, we will focus on “Quality Control and Quality Assurance in Food and Beverage Manufacturing”—a topic familiar to those in the fields of nutrition and health sciences. The learning objective is to acquire the knowledge and concepts of quality control and quality assurance in the operations of companies that manufacture or serve food and beverages. This is considered the minimum requirement for students to be recognized as having “acquired the research capabilities in their major field or the competencies necessary to become a professional with advanced expertise,” as stated in the Diploma Policy.</p> <p>The lectures will proceed through a dialogue with the students, so we ask for your active participation.</p>                                                                                                                                                                                                                      |                                                                                                                                                                  |                                                                                                                                                                             |            |                                     |           |          |                                                                                                                                                                    |                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                        |                                                 |                                                                                                                                                                                                                                                      |                                                                                                                                                                             |           |         |                                             |      |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                  |                                                                                                                                                                             |            |                                     |           |          |                                                                                                                                                                    |                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                        |                                                 |                                                                                                                                                                                                                                                      |                                                                                                                                                                             |           |         |                                             |      |
| <p>The course consists of three modules: “Introduction,” which covers the differences between quality control and quality assurance, as well as their methodologies; “Trends and Objectives of Regulatory and Standard Revisions Affecting Quality Control and Quality Assurance,” which examines recent trends in revisions to food and beverage-related laws and regulations and analyzes the intent behind various global standards; and “Quality Control and Quality Assurance in Normal and Emergency Situations,” which uses real-world examples from the food and beverage manufacturing industry to explore the practical aspects of quality control and quality assurance operations.</p> <p>The final session will include a tour of an actual manufacturing plant to provide an opportunity to gain a better understanding of the field.</p> <p>Please note that while an understanding of laws, regulations, and international standards is necessary due to the nature of the course topics, this advanced course will be based on Japanese laws and regulations.</p>           |                                                                                                                                                                  |                                                                                                                                                                             |            |                                     |           |          |                                                                                                                                                                    |                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                        |                                                 |                                                                                                                                                                                                                                                      |                                                                                                                                                                             |           |         |                                             |      |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                  |                                                                                                                                                                             |            |                                     |           |          |                                                                                                                                                                    |                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                        |                                                 |                                                                                                                                                                                                                                                      |                                                                                                                                                                             |           |         |                                             |      |
| <table><tr><td>1. 2. Introduction of quality management and assurance (Keywords: quality, quality management, quality assurance, analysis/evaluation method, (QMS) ,quality fraud</td><td>5. 6. Quality management and quality assurance under normal and emergency situations (Keywords: quality accident, health damage, recall/voluntary recall system)</td></tr><tr><td>3. 4. Trends and objective in amendment of laws and regulations which affect quality management and quality assurance (Keywords: food hygiene law, food labeling law, food labeling standards, Pharmaceutical Machinery Law (Pharmaceuticals and Medical Devices Law), Freebie Labeling Law, ISO22000, FSSC22000, International Standardization, etc.)</td><td>7. Excursion to Krin beer factory in Yokohama</td></tr><tr><td colspan="2">As stated in the “Course Overview” above, since the course is based on Japanese laws and regulations, course materials will be in Japanese; however, lectures will be conducted in English as appropriate. Reports may also be submitted in English.</td></tr></table> |                                                                                                                                                                  |                                                                                                                                                                             |            |                                     |           |          | 1. 2. Introduction of quality management and assurance (Keywords: quality, quality management, quality assurance, analysis/evaluation method, (QMS) ,quality fraud | 5. 6. Quality management and quality assurance under normal and emergency situations (Keywords: quality accident, health damage, recall/voluntary recall system) | 3. 4. Trends and objective in amendment of laws and regulations which affect quality management and quality assurance (Keywords: food hygiene law, food labeling law, food labeling standards, Pharmaceutical Machinery Law (Pharmaceuticals and Medical Devices Law), Freebie Labeling Law, ISO22000, FSSC22000, International Standardization, etc.) | 7. Excursion to Krin beer factory in Yokohama   | As stated in the “Course Overview” above, since the course is based on Japanese laws and regulations, course materials will be in Japanese; however, lectures will be conducted in English as appropriate. Reports may also be submitted in English. |                                                                                                                                                                             |           |         |                                             |      |
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| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                  |                                                                                                                                                                             |            |                                     |           |          |                                                                                                                                                                    |                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                        |                                                 |                                                                                                                                                                                                                                                      |                                                                                                                                                                             |           |         |                                             |      |
| <p>Students are required to review the previous class and assigned homework as preparation for the next class. (200 minutes per week)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                  |                                                                                                                                                                             |            |                                     |           |          |                                                                                                                                                                    |                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                        |                                                 |                                                                                                                                                                                                                                                      |                                                                                                                                                                             |           |         |                                             |      |
| <table><tr><td>Grading criteria</td><td>Textbooks</td><td>References</td></tr><tr><td rowspan="3">• In-class performance (50%)<br/>• Reports (50%)</td><td>No textbooks. Related documents will be distributed.</td><td>①真壁 肇・鈴木和幸(著)、品質管理と品質保証、信頼性の基礎、日科技連出版社、2018<br/>②山田正美(著)、図解 よくわかるこれからの品質管理、同文館出版、2017<br/>③河岸宏和(著)、食品工場の品質管理、同文館出版、2015<br/>④深田博史・寺田和正(著)、見るみる食品安全・HACCP・FSSC22000、日本規格協会、2020</td></tr><tr><td>Materials</td><td>Remarks</td></tr><tr><td>Handouts will be distributed in every class</td><td>None</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                  |                                                                                                                                                                             |            |                                     |           |          | Grading criteria                                                                                                                                                   | Textbooks                                                                                                                                                        | References                                                                                                                                                                                                                                                                                                                                             | • In-class performance (50%)<br>• Reports (50%) | No textbooks. Related documents will be distributed.                                                                                                                                                                                                 | ①真壁 肇・鈴木和幸(著)、品質管理と品質保証、信頼性の基礎、日科技連出版社、2018<br>②山田正美(著)、図解 よくわかるこれからの品質管理、同文館出版、2017<br>③河岸宏和(著)、食品工場の品質管理、同文館出版、2015<br>④深田博史・寺田和正(著)、見るみる食品安全・HACCP・FSSC22000、日本規格協会、2020 | Materials | Remarks | Handouts will be distributed in every class | None |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Textbooks                                                                                                                                                        | References                                                                                                                                                                  |            |                                     |           |          |                                                                                                                                                                    |                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                        |                                                 |                                                                                                                                                                                                                                                      |                                                                                                                                                                             |           |         |                                             |      |
| • In-class performance (50%)<br>• Reports (50%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | No textbooks. Related documents will be distributed.                                                                                                             | ①真壁 肇・鈴木和幸(著)、品質管理と品質保証、信頼性の基礎、日科技連出版社、2018<br>②山田正美(著)、図解 よくわかるこれからの品質管理、同文館出版、2017<br>③河岸宏和(著)、食品工場の品質管理、同文館出版、2015<br>④深田博史・寺田和正(著)、見るみる食品安全・HACCP・FSSC22000、日本規格協会、2020 |            |                                     |           |          |                                                                                                                                                                    |                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                        |                                                 |                                                                                                                                                                                                                                                      |                                                                                                                                                                             |           |         |                                             |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Materials                                                                                                                                                        | Remarks                                                                                                                                                                     |            |                                     |           |          |                                                                                                                                                                    |                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                        |                                                 |                                                                                                                                                                                                                                                      |                                                                                                                                                                             |           |         |                                             |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Handouts will be distributed in every class                                                                                                                      | None                                                                                                                                                                        |            |                                     |           |          |                                                                                                                                                                    |                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                        |                                                 |                                                                                                                                                                                                                                                      |                                                                                                                                                                             |           |         |                                             |      |

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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Advanced Lectures on Food System Science                                                                                            | Prof. Yasuhiro Nakashima             | Compulsory | <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                         | Selective | 1 credit |                                                                                                                                                                          |                                                                                                                                     |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                     |                                      |            |                                                                                                                                                                                                                                                                                                             |           |          |                                                                                                                                                                          |                                                                                                                                     |
| The objective of this course is to acquire a social scientific background related to academic knowledge and research skills in the specialized fields of nutrition and health science as stated in the Diploma Policy. To this end, students will acquire the thinking methods and specialized knowledge to understand and consider the actual conditions and background of changes in dietary habits, industries related to food, and socially necessary systems from a social scientific perspective, especially from an economic perspective.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                     |                                      |            |                                                                                                                                                                                                                                                                                                             |           |          |                                                                                                                                                                          |                                                                                                                                     |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                     |                                      |            |                                                                                                                                                                                                                                                                                                             |           |          |                                                                                                                                                                          |                                                                                                                                     |
| Food and agriculture today are facing a major turning point. In order to see where the future is headed, students will study the current status and issues of food and agriculture, and the social framework that supports them, through the concept of food systems. The framework and functions of the food system, which are the basis for thinking throughout the class, will be introduced. The course will then review how food consumption in our country and around the world has changed in the postwar period and describe the characteristics of recent years. Next, the actual conditions of the agriculture, food manufacturing, distribution, and retail industries that support those foods will be explained in terms of industrial structure and industrial organization. Furthermore, the student will discuss the food safety system and the labeling system, which have been the biggest concerns of consumers in recent years, and examine their framework and social issues. Finally, students will learn and think about the dilemma of food and environmental issues facing the world in the pursuit of the SDGs and the role that food systems should play in this dilemma. |                                                                                                                                     |                                      |            |                                                                                                                                                                                                                                                                                                             |           |          |                                                                                                                                                                          |                                                                                                                                     |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                     |                                      |            |                                                                                                                                                                                                                                                                                                             |           |          |                                                                                                                                                                          |                                                                                                                                     |
| <table><tr><td>1) What is the food system?<br/>2) Food consumption and eating behavior<br/>3) Food security policy and food self-sufficiency rate<br/>4) Current agriculture and fisheries</td><td>5) Industrial structure of food system<br/>6) Institutional framework (food hygiene, labeling and standards)<br/>7) Sustainable diets</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                     |                                      |            |                                                                                                                                                                                                                                                                                                             |           |          | 1) What is the food system?<br>2) Food consumption and eating behavior<br>3) Food security policy and food self-sufficiency rate<br>4) Current agriculture and fisheries | 5) Industrial structure of food system<br>6) Institutional framework (food hygiene, labeling and standards)<br>7) Sustainable diets |
| 1) What is the food system?<br>2) Food consumption and eating behavior<br>3) Food security policy and food self-sufficiency rate<br>4) Current agriculture and fisheries                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5) Industrial structure of food system<br>6) Institutional framework (food hygiene, labeling and standards)<br>7) Sustainable diets |                                      |            |                                                                                                                                                                                                                                                                                                             |           |          |                                                                                                                                                                          |                                                                                                                                     |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                     |                                      |            |                                                                                                                                                                                                                                                                                                             |           |          |                                                                                                                                                                          |                                                                                                                                     |
| Students are required to read not only textbooks but also research papers distributed in class. Students are also required to read references (indicated below) for writing reports. When writing a report in English, be sure to cite your sources.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                     |                                      |            |                                                                                                                                                                                                                                                                                                             |           |          |                                                                                                                                                                          |                                                                                                                                     |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                     | Textbooks                            |            | References                                                                                                                                                                                                                                                                                                  |           |          |                                                                                                                                                                          |                                                                                                                                     |
| • In-class performance (50%)<br>• Reports (50%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                     | None                                 |            | 時子山ひろみ・荏開津典生・中嶋康博『フードシステムの経済学(第6版)』医歯薬出版、<br>Students are required to have the 2019 edition of the book. The previous edition should be avoided because the statistical data is out-dated.<br><br>FAO「The State of Food Security and Nutrition in the World」year 2026 (You are able to download after July) |           |          |                                                                                                                                                                          |                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                     | Materials                            |            | Remarks                                                                                                                                                                                                                                                                                                     |           |          |                                                                                                                                                                          |                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                     | Materials are distributed as needed. |            | Since this course is also part of the Graduate School's BP program, it will be taught online via Teams.                                                                                                                                                                                                     |           |          |                                                                                                                                                                          |                                                                                                                                     |

|                                                                                                                                                                                                                                                                                                                                                                                                               |                                               |                     |                                                                                                                                                                                                                                                                                                          |                                               |          |
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| Subject                                                                                                                                                                                                                                                                                                                                                                                                       | Advanced Lectures on Food Preparation Science | Prof. Keiko Shibata | Compulsory                                                                                                                                                                                                                                                                                               | <input checked="" type="checkbox"/> Selective | 1 credit |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                  |                                               |                     |                                                                                                                                                                                                                                                                                                          |                                               |          |
| Students will be able to understand and explain changes in food ingredients and structure that happen in the cooking process, subsequent changes in taste and texture, preference factors of eaters and their evaluation. Furthermore, students are also required to acquire a high degree of expertise and a broad perspective on food science while taking a broad view of nutrition                        |                                               |                     |                                                                                                                                                                                                                                                                                                          |                                               |          |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                |                                               |                     |                                                                                                                                                                                                                                                                                                          |                                               |          |
| Focusing primarily on heat cooking, which has a significant influence on preference, this course will discuss the relationship between changes in food and palatability. Students will also learn cooking operation, the characteristics of cooking devices, effective ways to use cooking devices, and related applied research. Evaluation methods will be taught through exercises using typical examples. |                                               |                     |                                                                                                                                                                                                                                                                                                          |                                               |          |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                   |                                               |                     |                                                                                                                                                                                                                                                                                                          |                                               |          |
| 1. 2. Food preference factors and their evaluation: Taste, odour, vision, taste interaction, sensory evaluation<br>3. 4. Food changes and human acceptability during the cooking process: Cooking conditions, taste, texture, difference test, preference test                                                                                                                                                |                                               |                     | 5. 6. Changes in heat transfer characteristics: Food characteristics, food structure, heat conduction, microwave heating<br>7. Summary of food taste and preference evaluation: Sensory attributes, time-series evaluation (time intensity/qualitative change over time), factors influencing evaluation |                                               |          |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                          |                                               |                     |                                                                                                                                                                                                                                                                                                          |                                               |          |
| Students are required to read research papers and books introduced in the class. Approximately 30 minutes of self-study are required per 100-minute class.                                                                                                                                                                                                                                                    |                                               |                     |                                                                                                                                                                                                                                                                                                          |                                               |          |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                              | Textbooks                                     |                     | References                                                                                                                                                                                                                                                                                               |                                               |          |
| • In-class participation (30%)<br>• Reports (70%) Comments on reports will be made when returning the report or by providing an explanation in class.                                                                                                                                                                                                                                                         | Handouts will be distributed as needed.       |                     | •NEW 調理と理論 第2版(山崎、島田他著)同文書院<br>•調理科学講座 1 ～ 7 卷(島田、橋本他 編著)朝倉書店<br>•新版 総合調理科学事典(日本調理科学会編)光生館                                                                                                                                                                                                               |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                               | Materials                                     |                     | Other                                                                                                                                                                                                                                                                                                    |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                               | Handouts will be distributed in class.        |                     | None                                                                                                                                                                                                                                                                                                     |                                               |          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                           |                                         |            |                                         |           |          |                                                                                                                                                                                            |                                                                                                                                                                                           |
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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Advanced Lectures on Nutrition Education for Food Preparation                                                                                                                             | Prof. Yukie Yanagisawa                  | Compulsory | <input checked="" type="checkbox"/>     | Selective | 1 credit |                                                                                                                                                                                            |                                                                                                                                                                                           |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                           |                                         |            |                                         |           |          |                                                                                                                                                                                            |                                                                                                                                                                                           |
| <p>Understand the basic premise that nutrients are supplied through meals, the significance of good taste as an oral sensation, and how to respond to the feeding function of the subject in meal planning.</p> <p>Learn how to plan meals that take into consideration the characteristics of each life stage and be able to plan meals according to the subject. This lecture is related to the acquisition of in-depth knowledge from a broad perspective of nutritional science in the Diploma Policy.</p>                                                                   |                                                                                                                                                                                           |                                         |            |                                         |           |          |                                                                                                                                                                                            |                                                                                                                                                                                           |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                           |                                         |            |                                         |           |          |                                                                                                                                                                                            |                                                                                                                                                                                           |
| <p>Culinary education focuses on the understanding of meals and cooking techniques for preparing meals. For meal planning, the focus will be on oral functions during the life stages of the subject, explaining the characteristics of each life stage and how to develop meals from the viewpoint of oral functions. In addition, the course will also focus on "cooking skills" as one of the meal preparation skills. Finally, as part of practical culinary education, I provide dietary guidance using cooking as a medium, focusing on topics related to my research.</p> |                                                                                                                                                                                           |                                         |            |                                         |           |          |                                                                                                                                                                                            |                                                                                                                                                                                           |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                           |                                         |            |                                         |           |          |                                                                                                                                                                                            |                                                                                                                                                                                           |
| <table><tr><td>1) 2) The significance of taste in eating<br/>3) 4) Meal planning by life stage (1): Acquiring a sense of taste and oral function development in infants, toddlers, and school-age children</td><td>5) 6) Meal planning by life stage (2): Meals for older adults that take oral function into account, and prevention of frailty<br/>7) Practical cooking education using cooking as a medium</td></tr></table>                                                                                                                                                  |                                                                                                                                                                                           |                                         |            |                                         |           |          | 1) 2) The significance of taste in eating<br>3) 4) Meal planning by life stage (1): Acquiring a sense of taste and oral function development in infants, toddlers, and school-age children | 5) 6) Meal planning by life stage (2): Meals for older adults that take oral function into account, and prevention of frailty<br>7) Practical cooking education using cooking as a medium |
| 1) 2) The significance of taste in eating<br>3) 4) Meal planning by life stage (1): Acquiring a sense of taste and oral function development in infants, toddlers, and school-age children                                                                                                                                                                                                                                                                                                                                                                                       | 5) 6) Meal planning by life stage (2): Meals for older adults that take oral function into account, and prevention of frailty<br>7) Practical cooking education using cooking as a medium |                                         |            |                                         |           |          |                                                                                                                                                                                            |                                                                                                                                                                                           |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                           |                                         |            |                                         |           |          |                                                                                                                                                                                            |                                                                                                                                                                                           |
| <p>Read the papers introduced in class and search for related papers and books to deepen your understanding of their contents, and search for related papers and books to deepen your understanding of the content. In addition, students will explore the relevance to their own research themes.</p>                                                                                                                                                                                                                                                                           |                                                                                                                                                                                           |                                         |            |                                         |           |          |                                                                                                                                                                                            |                                                                                                                                                                                           |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                           | Textbooks                               |            | References                              |           |          |                                                                                                                                                                                            |                                                                                                                                                                                           |
| <ul style="list-style-type: none"><li>• In-class performance (50%: Contents of comments made in the class discussion)</li><li>• Reports (50%)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                           | None                                    |            | References will be designated in class. |           |          |                                                                                                                                                                                            |                                                                                                                                                                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                           | Materials                               |            | Remarks                                 |           |          |                                                                                                                                                                                            |                                                                                                                                                                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                           | Material swill be distributed in class. |            | None                                    |           |          |                                                                                                                                                                                            |                                                                                                                                                                                           |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |                                                                                                                                                                                                                                                            |            |                                               |          |                                                                                                                                                                          |                                                                                                                             |                                                                                                                                                        |                                                                                               |                                                                                                                                                                          |                                                                                                                             |  |                                                                                                                           |  |                                                                                       |  |
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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Advanced Lectures on Development Support Studies                                                                            | Prof. Mika Ooishi                                                                                                                                                                                                                                          | Compulsory | <input checked="" type="checkbox"/> Selective | 1 credit |                                                                                                                                                                          |                                                                                                                             |                                                                                                                                                        |                                                                                               |                                                                                                                                                                          |                                                                                                                             |  |                                                                                                                           |  |                                                                                       |  |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                             |                                                                                                                                                                                                                                                            |            |                                               |          |                                                                                                                                                                          |                                                                                                                             |                                                                                                                                                        |                                                                                               |                                                                                                                                                                          |                                                                                                                             |  |                                                                                                                           |  |                                                                                       |  |
| <p>The thematic focus of this course is child development and its support.</p> <ul style="list-style-type: none"><li>– Students will learn the necessity to support both children themselves and their families and communities in which they grow.</li><li>– Students will deepen their understanding of problems faced by children in families, schools, and communities.</li><li>– Students will be able to think about better environments for child growth from a broader perspective.</li></ul> <p>The contents of the course will be in line with the Master's Diploma Policy which is to acquire a high degree of expertise and a broad perspective on developmental support.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                             |                                                                                                                                                                                                                                                            |            |                                               |          |                                                                                                                                                                          |                                                                                                                             |                                                                                                                                                        |                                                                                               |                                                                                                                                                                          |                                                                                                                             |  |                                                                                                                           |  |                                                                                       |  |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                             |                                                                                                                                                                                                                                                            |            |                                               |          |                                                                                                                                                                          |                                                                                                                             |                                                                                                                                                        |                                                                                               |                                                                                                                                                                          |                                                                                                                             |  |                                                                                                                           |  |                                                                                       |  |
| <p>The environment surrounding children is greatly changing due to changes in people's attitudes toward child rearing, and an increase in nuclear families and dual income families. An increase in bullying and truancy/child abuse has become a social problem, affecting child growth significantly. The course seeks to understand challenges and problems faced by children at each stage of their development, learn the current situation of child support, and explore solutions. It will also shed light on the problematic situation of each environment surrounding children and consider how to create better environments for them from various perspectives.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                             |                                                                                                                                                                                                                                                            |            |                                               |          |                                                                                                                                                                          |                                                                                                                             |                                                                                                                                                        |                                                                                               |                                                                                                                                                                          |                                                                                                                             |  |                                                                                                                           |  |                                                                                       |  |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                             |                                                                                                                                                                                                                                                            |            |                                               |          |                                                                                                                                                                          |                                                                                                                             |                                                                                                                                                        |                                                                                               |                                                                                                                                                                          |                                                                                                                             |  |                                                                                                                           |  |                                                                                       |  |
| <table><tr><td>1. What is developmental support ? (It is the developmental stages and developmental issues of children, various environments surrounding children, and social changes.)</td><td rowspan="4">5. Social support for child-rearing (development as a parent, situation of child-rearing, social support for child-rearing)</td></tr><tr><td>2. Children's growth and surrounding environment of children. (function of families, nuclear families, society with fewer children, local communities)</td></tr><tr><td>3. Problems faced by children (juvenile crime, bullying, truancy, child abuse, child poverty)</td></tr><tr><td>4. Parent-child relationship and children's independence in adolescence (developmental issues in adolescence, separation from parents and children, social independence)</td></tr><tr><td colspan="2">5. Social support for child-rearing (development as a parent, situation of child-rearing, social support for child-rearing)</td></tr><tr><td colspan="2">6. Balance of work and child-rearing. (balance of work and life, childcare leave system, a place for children to grow up)</td></tr><tr><td colspan="2">7. Aiming to build a society that nurtures both children and adults:Group discussion.</td></tr></table> |                                                                                                                             |                                                                                                                                                                                                                                                            |            |                                               |          | 1. What is developmental support ? (It is the developmental stages and developmental issues of children, various environments surrounding children, and social changes.) | 5. Social support for child-rearing (development as a parent, situation of child-rearing, social support for child-rearing) | 2. Children's growth and surrounding environment of children. (function of families, nuclear families, society with fewer children, local communities) | 3. Problems faced by children (juvenile crime, bullying, truancy, child abuse, child poverty) | 4. Parent-child relationship and children's independence in adolescence (developmental issues in adolescence, separation from parents and children, social independence) | 5. Social support for child-rearing (development as a parent, situation of child-rearing, social support for child-rearing) |  | 6. Balance of work and child-rearing. (balance of work and life, childcare leave system, a place for children to grow up) |  | 7. Aiming to build a society that nurtures both children and adults:Group discussion. |  |
| 1. What is developmental support ? (It is the developmental stages and developmental issues of children, various environments surrounding children, and social changes.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 5. Social support for child-rearing (development as a parent, situation of child-rearing, social support for child-rearing) |                                                                                                                                                                                                                                                            |            |                                               |          |                                                                                                                                                                          |                                                                                                                             |                                                                                                                                                        |                                                                                               |                                                                                                                                                                          |                                                                                                                             |  |                                                                                                                           |  |                                                                                       |  |
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| 3. Problems faced by children (juvenile crime, bullying, truancy, child abuse, child poverty)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                             |                                                                                                                                                                                                                                                            |            |                                               |          |                                                                                                                                                                          |                                                                                                                             |                                                                                                                                                        |                                                                                               |                                                                                                                                                                          |                                                                                                                             |  |                                                                                                                           |  |                                                                                       |  |
| 4. Parent-child relationship and children's independence in adolescence (developmental issues in adolescence, separation from parents and children, social independence)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                             |                                                                                                                                                                                                                                                            |            |                                               |          |                                                                                                                                                                          |                                                                                                                             |                                                                                                                                                        |                                                                                               |                                                                                                                                                                          |                                                                                                                             |  |                                                                                                                           |  |                                                                                       |  |
| 5. Social support for child-rearing (development as a parent, situation of child-rearing, social support for child-rearing)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                             |                                                                                                                                                                                                                                                            |            |                                               |          |                                                                                                                                                                          |                                                                                                                             |                                                                                                                                                        |                                                                                               |                                                                                                                                                                          |                                                                                                                             |  |                                                                                                                           |  |                                                                                       |  |
| 6. Balance of work and child-rearing. (balance of work and life, childcare leave system, a place for children to grow up)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                             |                                                                                                                                                                                                                                                            |            |                                               |          |                                                                                                                                                                          |                                                                                                                             |                                                                                                                                                        |                                                                                               |                                                                                                                                                                          |                                                                                                                             |  |                                                                                                                           |  |                                                                                       |  |
| 7. Aiming to build a society that nurtures both children and adults:Group discussion.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                             |                                                                                                                                                                                                                                                            |            |                                               |          |                                                                                                                                                                          |                                                                                                                             |                                                                                                                                                        |                                                                                               |                                                                                                                                                                          |                                                                                                                             |  |                                                                                                                           |  |                                                                                       |  |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                             |                                                                                                                                                                                                                                                            |            |                                               |          |                                                                                                                                                                          |                                                                                                                             |                                                                                                                                                        |                                                                                               |                                                                                                                                                                          |                                                                                                                             |  |                                                                                                                           |  |                                                                                       |  |
| <p>Students are required to read the materials distributed prior to class carefully, and are also asked to research the related topics before coming to class.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                             |                                                                                                                                                                                                                                                            |            |                                               |          |                                                                                                                                                                          |                                                                                                                             |                                                                                                                                                        |                                                                                               |                                                                                                                                                                          |                                                                                                                             |  |                                                                                                                           |  |                                                                                       |  |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Textbooks                                                                                                                   | References                                                                                                                                                                                                                                                 |            |                                               |          |                                                                                                                                                                          |                                                                                                                             |                                                                                                                                                        |                                                                                               |                                                                                                                                                                          |                                                                                                                             |  |                                                                                                                           |  |                                                                                       |  |
| <ul style="list-style-type: none"><li>• In-class performance (50%)</li><li>• Reports (50%)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | While textbooks are not used in this course, handouts will be distributed prior to class.                                   | 安發明子『一人ひとりに届ける福祉を支えるフランスの子どもの育ちと家族』かもがわ出版、2023<br>柏木恵子『子どもが育つ条件』岩波書店、2008<br>持続可能な生活研究会編『持続可能な社会と人の暮らし』建帛社、2024<br>社会保障入門編集委員会『社会保障入門2026』中央法規、2026<br>長津美代子・小澤千穂子編著『三訂新しい家族関係学』建帛社、2023<br>日本家政学会家政教育部会編『家族生活の支援－理論と実践－』建帛社、2014<br>日本家政学会編『現代家族を読み解く12章』 |            |                                               |          |                                                                                                                                                                          |                                                                                                                             |                                                                                                                                                        |                                                                                               |                                                                                                                                                                          |                                                                                                                             |  |                                                                                                                           |  |                                                                                       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Materials                                                                                                                   | Remarks                                                                                                                                                                                                                                                    |            |                                               |          |                                                                                                                                                                          |                                                                                                                             |                                                                                                                                                        |                                                                                               |                                                                                                                                                                          |                                                                                                                             |  |                                                                                                                           |  |                                                                                       |  |
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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Advanced Lectures on School Management        | Prof. Takahide Kato | Compulsory                                                                                                                                                                                                                                     | <input checked="" type="checkbox"/> Selective | 1 credit |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                               |                     |                                                                                                                                                                                                                                                |                                               |          |
| The thematic focus of this course is school management and organization and the positioning of nutrition teachers and Home Economics Teachers at schools. Students will be able to understand the concept of public education and school management, and express their ideas on school management. They will also deepen their understanding of leadership and roles of principals and organizational collaboration of teachers, and be able to explain the positioning and roles of nutrition teachers and Home Economics Teachers in a school as a team. The goal of this course involves the acquisition of knowledge to become a person who is recognized as having acquired the necessary competencies to become a professional with a high level of expertise in his/her major field of study (special license for nutrition teachers). |                                               |                     |                                                                                                                                                                                                                                                |                                               |          |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |                     |                                                                                                                                                                                                                                                |                                               |          |
| Students will learn the concept of public education and school management and deepen their understanding of the reason why school management reforms are demanded and the independence and autonomy of schools. In doing so, they will understand principals' leadership and teachers' organizations, and then grasp the positioning and roles of nutrition teachers. They will give thought to the roles and significance of nutrition teachers in a school as a team. Finally, discussions will be held on how nutrition teachers should act in future schools, in the context of school management.                                                                                                                                                                                                                                        |                                               |                     |                                                                                                                                                                                                                                                |                                               |          |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                               |                     |                                                                                                                                                                                                                                                |                                               |          |
| 1. The significance of public education and schools<br>2. School management reform and school autonomy and independence<br>3. Principal's leadership<br>4. School organization and staffing system<br>5. Relationships with parents and community and outlet of school management                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                               |                     | 6. Food safety and the school's response as an organization (countermeasures against allergies and infectious diseases)<br>7. The future of the "school as a team" and the role of the nutrition teachers and home economics teachers: Summary |                                               |          |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                               |                     |                                                                                                                                                                                                                                                |                                               |          |
| Students are required to read related materials, etc., as instructed in class, and to prepare for and review the class. Students are also required to prepare for the class by connecting what they have learned to their own research topics and to be prepared to present in class. Approximately 200 minutes of self-study is required each week.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                               |                     |                                                                                                                                                                                                                                                |                                               |          |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Textbooks                                     |                     | References                                                                                                                                                                                                                                     |                                               |          |
| • In-class performance (including comments in class) (20%)<br>• Reports (80%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ・加藤崇英・臼井智美編著『改訂新版 教育の制度と学校のマネジメント』時事通信社、2025年 |                     | ・加藤崇英編『「チーム学校」まるわかりガイドブック』教育開発研究所、2016年<br>・References will be distributed in class.                                                                                                                                                           |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Materials                                     |                     | Remarks                                                                                                                                                                                                                                        |                                               |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | None                                          |                     | We will be using the new edition of the textbook, revised in April 2025, as mentioned above.                                                                                                                                                   |                                               |          |

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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Advanced Lectures on Shokuiku at School                                                                                                                                                                                                                                                                          | Prof. Rie Imoto・Prof. Akemi Nakanishi | Compulsory                                                                                                                                                    | <input checked="" type="checkbox"/> Selective | 1 credit |                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                  |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                  |                                       |                                                                                                                                                               |                                               |          |                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                  |
| <p>The main theme is to increase the capacity of dietary education at schools and school management to promote effective dietary education. To achieve the Master's Diploma Policy which is to acquire a high degree of expertise and a broad perspective on nutritional science, students are required to deeply increase their knowledge of the teaching field.</p> <p>1. Students can assess the actual situation of children's food.</p> <p>2. Students can assess the organization and resources used to promote food education in schools.</p> <p>3. Based on the assessment results, students can formulate a dietary education promotion plan and evaluation method.</p>                                              |                                                                                                                                                                                                                                                                                                                  |                                       |                                                                                                                                                               |                                               |          |                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                  |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                  |                                       |                                                                                                                                                               |                                               |          |                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                  |
| <p>The course requires the students review the curriculum of dietary education applied by the respective students as a nutrition/home economics teacher to reveal their challenges. Based on that, the students will conduct school visit, observation, and investigation through interview and consider the way of the dietary education.</p>                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                  |                                       |                                                                                                                                                               |                                               |          |                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                  |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                  |                                       |                                                                                                                                                               |                                               |          |                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                  |
| <table><tr><td><p>1. Guidance, review of your own dietary education curriculum, and clarification of challenges</p><p>2. Observation at school sites (observation of a dietary education class) (off-campus)</p><p>3. Observation in a school setting (observing school lunch instruction) &lt;off-campus&gt;</p><p>4. Survey at a school (interview with teachers) (off-campus)</p></td><td><p>5. Return to the university and develop a plan to promote food education and establish evaluation methods based on the results of observations and surveys</p><p>6. Sharing a plan for promoting dietary education and evaluation methods in the class.</p><p>7. Future challenges in dietary education</p></td></tr></table> |                                                                                                                                                                                                                                                                                                                  |                                       |                                                                                                                                                               |                                               |          | <p>1. Guidance, review of your own dietary education curriculum, and clarification of challenges</p> <p>2. Observation at school sites (observation of a dietary education class) (off-campus)</p> <p>3. Observation in a school setting (observing school lunch instruction) &lt;off-campus&gt;</p> <p>4. Survey at a school (interview with teachers) (off-campus)</p> | <p>5. Return to the university and develop a plan to promote food education and establish evaluation methods based on the results of observations and surveys</p> <p>6. Sharing a plan for promoting dietary education and evaluation methods in the class.</p> <p>7. Future challenges in dietary education</p> |
| <p>1. Guidance, review of your own dietary education curriculum, and clarification of challenges</p> <p>2. Observation at school sites (observation of a dietary education class) (off-campus)</p> <p>3. Observation in a school setting (observing school lunch instruction) &lt;off-campus&gt;</p> <p>4. Survey at a school (interview with teachers) (off-campus)</p>                                                                                                                                                                                                                                                                                                                                                      | <p>5. Return to the university and develop a plan to promote food education and establish evaluation methods based on the results of observations and surveys</p> <p>6. Sharing a plan for promoting dietary education and evaluation methods in the class.</p> <p>7. Future challenges in dietary education</p> |                                       |                                                                                                                                                               |                                               |          |                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                  |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                  |                                       |                                                                                                                                                               |                                               |          |                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                  |
| <p>Read the handouts and literature provided in the classes to clarify the challenges. Plan and summarize observations and investigations at school sites.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                  |                                       |                                                                                                                                                               |                                               |          |                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                  |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Textbooks                                                                                                                                                                                                                                                                                                        |                                       | References                                                                                                                                                    |                                               |          |                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                  |
| <ul style="list-style-type: none"><li>• In-class presentations (50%)</li><li>• Reports (50%)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 朝岡幸彦・野村 卓編著『食育の力－食育・農育・教育』光生館、2010<br>小中高等学校学習指導要領解説、文部科学省                                                                                                                                                                                                                                                       |                                       | ・文部科学省『食に関する指導の手引―第二次改訂版―』平成31年3月<br>・文部科学省『栄養教諭を中核としたこれからの学校の食育～チーム学校で取り組む食育推進のPDCA～』平成29年3月<br>・朝岡幸彦・野村 卓編著『食育の力－食育・農育・教育』光生館、2010<br>・小中高等学校学習指導要領解説、文部科学省 |                                               |          |                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Materials                                                                                                                                                                                                                                                                                                        |                                       | Other                                                                                                                                                         |                                               |          |                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Materials will be distributed as needed.                                                                                                                                                                                                                                                                         |                                       | This course can be taken only by students who wish to obtain a specialized license of nutrition teacher and home economics teacher.                           |                                               |          |                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                               |                     |                                                                           |                                     |           |          |
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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Research Methodology in Nutrition I (Research Planning)                                                                                       | Prof. Hisanori Kato | Compulsory                                                                | <input checked="" type="checkbox"/> | Selective | 1 credit |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                               |                     |                                                                           |                                     |           |          |
| Various nutrients regulate biological functions by influencing gene expression within the body. Through the use of a wide range of comprehensive techniques—including those focused on gene function—the roles of food components are becoming increasingly clear. The objective of this course is to provide students with a fundamental understanding of these cutting-edge technologies and to equip them with the knowledge necessary to apply them as needed. |                                                                                                                                               |                     |                                                                           |                                     |           |          |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                               |                     |                                                                           |                                     |           |          |
| Students will learn ways to formulate hypotheses, make research plans, conduct experiments, and draw conclusions in the fields of nutrition science and health science. In particular,experimental techniques using the latest molecular biological methods will be explained.                                                                                                                                                                                     |                                                                                                                                               |                     |                                                                           |                                     |           |          |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                               |                     |                                                                           |                                     |           |          |
| <div><div>1) Gene expression and its analysis<br/>2) Methods for analyzing gene expression regulation mechanisms<br/>3) Transcriptome analysis<br/>4) Proteome and metabolome</div><div>5) Multi-omics<br/>6) The epigenome, epigenetics, and nutrition<br/>7) Genomic analysis, the genome, and diet</div></div>                                                                                                                                                  |                                                                                                                                               |                     |                                                                           |                                     |           |          |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                               |                     |                                                                           |                                     |           |          |
| Review the “Nuclear Acids” section in your undergraduate biochemistry textbook before attending the course. Be sure to review the basics of molecular nutrition. Students are encouraged to spend 60 minutes or more per class to prepare for and review the contents.                                                                                                                                                                                             |                                                                                                                                               |                     |                                                                           |                                     |           |          |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Textbooks                                                                                                                                     |                     | References                                                                |                                     |           |          |
| Evaluation will be based on the report.                                                                                                                                                                                                                                                                                                                                                                                                                            | Handouts will be distributed as needed.                                                                                                       |                     | ①加藤久典、藤原葉子編著、栄養科学イラストレイテッド 分子栄養学 改訂第2版、羊土社<br>② 田村隆明著、基礎から学ぶ遺伝子工学 第3版 羊土社 |                                     |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Materials                                                                                                                                     |                     | Remarks                                                                   |                                     |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | The handout file will be distributed before class. The explanation will be given while projecting the materials onto the screen in the class. |                     | None                                                                      |                                     |           |          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                               |                        |                                                                                                                                                                            |                                     |           |          |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                               |
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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Research Methodology in Nutrition II                                                                                                                                                          | Prof. Tetsuji Yokoyama | Compulsory                                                                                                                                                                 | <input checked="" type="checkbox"/> | Selective | 1 credit |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                               |
| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                               |                        |                                                                                                                                                                            |                                     |           |          |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                               |
| <p>The main theme is the method of information processing and statistical analysis in nutritional research.</p> <p>Goal 1: Can make analysis plans in consideration of the linkage among research purposes, methods, results and analyses.</p> <p>Goal 2: Can process outliers and theoretical errors appropriately and determine data to be used for analysis.</p> <p>Goal 3: Can conduct summarization, univariate analysis, and multivariate analysis of the characteristics of research targets and summarize the results in charts.</p> <p>Goal 4: Can interpret the results of analyses appropriately and draw suitable conclusions.</p> |                                                                                                                                                                                               |                        |                                                                                                                                                                            |                                     |           |          |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                               |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                               |                        |                                                                                                                                                                            |                                     |           |          |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                               |
| <p>Students will master the process of quantitative research in the nutritional science and health science fields: appropriately processing information collected based on research protocols, conducting optimal statistical analysis, and summarizing the results.</p>                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                               |                        |                                                                                                                                                                            |                                     |           |          |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                               |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                               |                        |                                                                                                                                                                            |                                     |           |          |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                               |
| <table><tr><td>1. Introduction to quantitative research.<br/>2. Information processing method.<br/>3. Statistical analysis (1) Analysis plan, descriptive statistics, univariate analysis<br/>4. Statistical analysis (2) Multivariate analysis, summary in figures and tables<br/>5. Research presentation</td><td>6. Statistical analysis methods (3) Improvement of analysis methods based on research presentations<br/>7. Statistical analysis methods (4) Interpretation of analysis results and conclusions</td></tr></table>                                                                                                           |                                                                                                                                                                                               |                        |                                                                                                                                                                            |                                     |           |          | 1. Introduction to quantitative research.<br>2. Information processing method.<br>3. Statistical analysis (1) Analysis plan, descriptive statistics, univariate analysis<br>4. Statistical analysis (2) Multivariate analysis, summary in figures and tables<br>5. Research presentation | 6. Statistical analysis methods (3) Improvement of analysis methods based on research presentations<br>7. Statistical analysis methods (4) Interpretation of analysis results and conclusions |
| 1. Introduction to quantitative research.<br>2. Information processing method.<br>3. Statistical analysis (1) Analysis plan, descriptive statistics, univariate analysis<br>4. Statistical analysis (2) Multivariate analysis, summary in figures and tables<br>5. Research presentation                                                                                                                                                                                                                                                                                                                                                       | 6. Statistical analysis methods (3) Improvement of analysis methods based on research presentations<br>7. Statistical analysis methods (4) Interpretation of analysis results and conclusions |                        |                                                                                                                                                                            |                                     |           |          |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                               |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                               |                        |                                                                                                                                                                            |                                     |           |          |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                               |
| <p>Preparation of the research presentation will be conducted by individual students between classes 4 and 5 in the above course plan.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                               |                        |                                                                                                                                                                            |                                     |           |          |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                               |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                               | Textbooks              |                                                                                                                                                                            | References                          |           |          |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                               |
| Reports                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 初めての栄養学研究論文—人には聞けない要点とコツ。日本栄養改善学会監修。第一出版。                                                                                                                                                     |                        | 保健活動のための調査・研究ガイド。中村好一。医学書院。医学への統計学【第3版】。丹後俊郎著。朝倉書店。<br>Survey Research Methods (Applied Social Research Methods Series) (5th) Floyd J. Fowler, Jr. SAGE Publications, Inc. |                                     |           |          |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Materials                                                                                                                                                                                     |                        | Remarks                                                                                                                                                                    |                                     |           |          |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Original teaching materials will be distributed in class.                                                                                                                                     |                        | It is desirable that you have already collected data based on the research plan. It is desirable to have studied basic statistics.                                         |                                     |           |          |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                               |

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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Research Methodology in Nutrition III<br>(Nutritional Assessment and Dietary Evaluation) | Prof.Hiromi Ishida・<br>Prof. Kazuhiro Uenishi | Compulsory                | <input checked="" type="checkbox"/> | Selective | 1 credit |
| <b>Course goals</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                          |                                               |                           |                                     |           |          |
| This course seeks to ensure that students will understand the characteristics, advantages and disadvantages of methodologies for measuring the nutritional status used in research and consider what to do to increase the accuracy of data obtained. Students will be able to design and conduct nutritional assessments and dietary evaluation studies, and analyze the obtained data according to the purposes. They will also be able to understand the meaning of data.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                          |                                               |                           |                                     |           |          |
| <b>Course Summary</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                          |                                               |                           |                                     |           |          |
| Students will measure the weight/height, consumed daily diet, and energy metabolism of other students and check the accuracy of data obtained. They will also conduct statistical data processing to evaluate and diagnose the nutritional status.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                          |                                               |                           |                                     |           |          |
| <b>Course Plan</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                          |                                               |                           |                                     |           |          |
| <div> <div> 1. Anthropometry (DXA method, impedance method)/Prof. Uenishi<br/> 2. Anthropometry (circumference, sebum thickness)/Prof. Uenishi<br/> 3. Bone mass measurement (ultrasonography)/Prof. Uenishi<br/> 4. Clinical examination (blood chemistry)/Prof. Uenishi<br/> 5. Physiological examination (blood pressure, lung activity, resting metabolic rate)/Prof. Uenishi<br/> 6. Dietary survey (identification of examinee's food, coding, confirmation of agreement in weight estimation)/Prof. Ishida<br/> 7. Setting the purpose of the dietary survey, survey planning and preparation/Prof. Ishida<br/> 8. Meal recording method (characteristics and points to be noted in implementation)/Prof. Ishida </div> <div> 9. 24-hour recalling method (features and points to note in implementation)/Prof. Ishida<br/> 10. Food intake frequency questionnaire (features and points to note in implementation)/Prof. Ishida<br/> 11. Utilization of the table of food composition (examination of changes in ingredients due to cooking)/Prof. Ishida<br/> 12. Statistical analysis of body measurements/Prof. Uenishi.<br/> 13. Statistical analysis of results of dietary survey/Prof. Ishida<br/> 14. Discussion of points to be noted regarding the survey and criteria for determining nutritional status based on the results of statistical analysis/Prof. Uenishi, Ishida </div> </div> |                                                                                          |                                               |                           |                                     |           |          |
| <b>Work to be done outside of class (preparation, etc.)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                          |                                               |                           |                                     |           |          |
| Students are required to dedicate at least twice as much time to self-study and practice as they do to class time, in order to write reports on the assignments presented before and after the practicums.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                          |                                               |                           |                                     |           |          |
| <b>Grading criteria</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Textbooks</b>                                                                         |                                               | <b>References</b>         |                                     |           |          |
| Grades will be determined based on:<br>・ A summary of the results of measurement and analysis and presentation (50%)<br>・ A comprehensive report (50%)<br>Submitted reports will be returned with comments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 日本食品標準成分表 2020 年版(八訂増補)文部科学省、日本人の食事摂取基準 2025 年版 女子栄養大学出版部                                |                                               | 食事調査マニュアル(南山堂)日本栄養改善学会 監修 |                                     |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Materials</b>                                                                         |                                               | <b>Remarks</b>            |                                     |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Materials will be introduced and distributed as needed.                                  |                                               | None                      |                                     |           |          |

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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Research Methodology in Nutrition IV<br>(Diet and Food Environment)                                                                                                                                                                             | Prof. Yukari Takemi                    | Compulsory | <input checked="" type="checkbox"/>                                                                                                                                             | Selective | 1 credit |                                                                                                                    |                                                                                                                                                                                                                                                 |                                                                                                                                                  |                                                                                                                                                  |            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| Course goals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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| This course will focus on methods of quantitative surveys and qualitative surveys in nutritional research. As methods of surveys on dietary habits and food environments necessary for nutritional research targeted at populations, students will be able to understand the methodologies of quantitative surveys using questionnaires and qualitative surveys using individual/group interviews. Students will also be able to explain the methodology of design surveys in accordance with research purposes and the methodology of surveys on food environments. Students will be able to acquire the fundamental research skills required for survey-based research in the field of practical nutrition, as well as the competencies necessary for professionals with advanced expertise in this field.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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| As quantitative surveys, students will learn the basics of questionnaire surveys aiming to examine dietary action, dietary behavior, and dietary knowledge, and deepen their understanding by actually designing questionnaires. As qualitative surveys, students will learn the methods and case studies of individual interviews and focus group interviews, and experience the analysis of recorded interviews. As food environment surveys, students will learn the utilization of existing materials, observation methods, questionnaire methods, and GIS and get to know the trends of previous studies. Lastly, students will simulate the combination of these surveys in accordance with research purposes, and deepen their understanding of the features of each survey and the mutual relationship among such surveys.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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| <table><tr><td>1. Necessity of selecting a research method that meets the research purpose and ethical considerations in research</td><td>7. Qualitative research 1: Types and characteristics of qualitative research, sampling of subjects, and preparation of interview guide<br/>Translated with <a href="http://www.DeepL.com/Translator">www.DeepL.com/Translator</a> (free version)</td></tr><tr><td>2. Quantitative research 1: Basics of questionnaire survey (selection and sampling of subjects, characteristics of various survey methods, etc.)</td><td>8. Qualitative Research 2: Learn how to conduct a survey and write a paper based on the examples of previous studies using individual interviews</td></tr><tr><td>3. Quantitative research 1: Basics of questionnaire survey (methods of selecting and extracting subjects, characteristics of various survey methods, etc.) 3) Quantitative research 2: Development of questionnaire (development of survey framework based on theoretical model and design of questionnaire)</td><td>9. Qualitative Research 3: Learn how to conduct a survey and write a paper based on the examples of previous studies using focus group interviews</td></tr><tr><td>4. Quantitative research 2: Questionnaire development (development of a research framework and questionnaire design based on a theoretical model) 4) Quantitative research 3: Considering issues in the design and implementation of questionnaire surveys based on examples from previous studies</td><td>10. Qualitative Research 4: Practice analyzing verbatim transcripts as a method of qualitative research analysis</td></tr><tr><td>5. Quantitative Research 3: Thinking about issues in designing and implementing questionnaire surveys from examples of previous studies</td><td>11. Food environment research 1: Basics of food environment research methods (organizing the concept of food environment, its significance in nutrition research, types and characteristics of research methods, etc.)</td></tr><tr><td>6. Quantitative Research 4: Creating a survey framework and practicing questionnaire design according to the research question</td><td>12. Food environment survey 2: Conduct a survey of the food environment for low-sodium foods by visiting a nearby supermarket and using observational methods</td></tr><tr><td>7. Quantitative survey 5: Processing and analysis of obtained data (necessity of thinking about analysis methods before conducting the survey)</td><td>13. Dietary environment survey 3: Recent trends in previous studies on the relationship between dietary environment and health status of food intake</td></tr><tr><td></td><td>Practice of actual use of survey methods (simulation and presentation of the use of multiple surveys in combination according to research objectives, assuming a community, school, workplace, etc.)</td></tr></table> |                                                                                                                                                                                                                                                 |                                        |            |                                                                                                                                                                                 |           |          | 1. 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Quantitative Research 4: Creating a survey framework and practicing questionnaire design according to the research question | 12. Food environment survey 2: Conduct a survey of the food environment for low-sodium foods by visiting a nearby supermarket and using observational methods | 7. Quantitative survey 5: Processing and analysis of obtained data (necessity of thinking about analysis methods before conducting the survey) | 13. Dietary environment survey 3: Recent trends in previous studies on the relationship between dietary environment and health status of food intake |  | Practice of actual use of survey methods (simulation and presentation of the use of multiple surveys in combination according to research objectives, assuming a community, school, workplace, etc.) |
| 1. Necessity of selecting a research method that meets the research purpose and ethical considerations in research                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 7. 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| 2. Quantitative research 1: Basics of questionnaire survey (selection and sampling of subjects, characteristics of various survey methods, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 8. Qualitative Research 2: Learn how to conduct a survey and write a paper based on the examples of previous studies using individual interviews                                                                                                |                                        |            |                                                                                                                                                                                 |           |          |                                                                                                                    |                                                                                                                                                                                                                                                 |                                                                                                                                                  |                                                                                                                                                  |                                                                                                                                                                                                                                                                                                              |                                                                                                                                                   |                                                                                                                                                                                                                                                                                                    |                                                                                                                  |                                                                                                                                         |                                                                                                                                                                                                                        |                                                                                                                                |                                                                                                                                                               |                                                                                                                                                |                                                                                                                                                      |  |                                                                                                                                                                                                      |
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| 5. Quantitative Research 3: Thinking about issues in designing and implementing questionnaire surveys from examples of previous studies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 11. Food environment research 1: Basics of food environment research methods (organizing the concept of food environment, its significance in nutrition research, types and characteristics of research methods, etc.)                          |                                        |            |                                                                                                                                                                                 |           |          |                                                                                                                    |                                                                                                                                                                                                                                                 |                                                                                                                                                  |                                                                                                                                                  |                                                                                                                                                                                                                                                                                                              |                                                                                                                                                   |                                                                                                                                                                                                                                                                                                    |                                                                                                                  |                                                                                                                                         |                                                                                                                                                                                                                        |                                                                                                                                |                                                                                                                                                               |                                                                                                                                                |                                                                                                                                                      |  |                                                                                                                                                                                                      |
| 6. 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| 7. Quantitative survey 5: Processing and analysis of obtained data (necessity of thinking about analysis methods before conducting the survey)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 13. Dietary environment survey 3: Recent trends in previous studies on the relationship between dietary environment and health status of food intake                                                                                            |                                        |            |                                                                                                                                                                                 |           |          |                                                                                                                    |                                                                                                                                                                                                                                                 |                                                                                                                                                  |                                                                                                                                                  |                                                                                                                                                                                                                                                                                                              |                                                                                                                                                   |                                                                                                                                                                                                                                                                                                    |                                                                                                                  |                                                                                                                                         |                                                                                                                                                                                                                        |                                                                                                                                |                                                                                                                                                               |                                                                                                                                                |                                                                                                                                                      |  |                                                                                                                                                                                                      |
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| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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| Read the relevant prior literature and materials as instructed in class, and prepare for and review the class. Students are expected to deepen their understanding of the contents of the course by connecting them to their own research topics and considering how they can be utilized.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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| In-class performance (20%)<br>Comprehensive report (80%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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                                                                                | None                                   |            | 中村好一：保健活動のための調査・研究ガイド、2002。医学書院<br>保坂亨、中澤潤、大野木裕明編著：心理学マニュアル 面接法、2000。北大路書房<br>キャサリン・ポープ／ニコラス・メイズ編著、大滝純司監訳：質的研究実践ガイド-保健医療サービス向上のために、2008。医学書院<br>佐藤郁哉：質的データ分析法-原理・方法・実践、2008。新曜社 |           |          |                                                                                                                    |                                                                                                                                                                                                                                                 |                                                                                                                                                  |                                                                                                                                                  |            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                                                                                | Materials will be distributed in class |            | None                                                                                                                                                                            |           |          |                                                                                                                    |                                                                                                                                                                                                                                                 |                                                                                                                                                  |                                                                                                                                                  |            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| Subject | Special Common Course I ~ IV | Prof. Hisanori Kato, Chief<br>of the Nutrition Sciences<br>Degree Program | Compulsory | <input checked="" type="checkbox"/> | Selective | 1 credit |
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### Course goals and Course summary

The National Institute of Public Health and the Graduate School of Kagawa Nutrition University have concluded an agreement on human resource development and research cooperation. This agreement allows our students to participate in short-term training sessions and some classes of long-term training courses that are provided by the National Institute of Public Health. By taking these classes of the National Institute of Public Health, students will aim to develop capabilities necessary to become leaders in society, including a broad range of knowledge and expertise regarding the fields of public health and medical health welfare. Depending on the number of classes you take, you can receive credits of Special Common Courses I to IV.

### Course Plan

For more information on the training offered by the National Institute of Health Sciences, please visit the following website:  
<https://www.niph.go.jp>

Read the related materials assigned in class, and prepare for and review the class.

### Work to be done outside of class (preparation, etc.)

Read the related materials assigned in class, and prepare for and review the class.

| Grading criteria                                                                                                 | Textbooks                                                                          | References                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Grades will be determined based on a report after after the course at the National Institute of Health Sciences. | Refer to the class outline published by the National Institute of Health Sciences. | Refer to the class outline published by the National Institute of Health Sciences.                                                                                                                                                                                                                                                                             |
|                                                                                                                  | Materials                                                                          | Remarks                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                  | Refer to the class outline published by the National Institute of Health Sciences. | The training courses conducted by the National Institute of Health Sciences are originally intended for local government employees. Therefore, graduate students may not necessarily be able to take the training or courses they desire if they do not meet the course requirements or if there is a limit to the number of students who can take the course. |

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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Introduction to Research Methodology<br>(Literature Review, Preparation of Presentation, Ethics in Research)                      | Prof. Fumi Hayashi・Prof. Shigeho Tanaka | Compulsory                                                                                                                                                   | <input checked="" type="checkbox"/> | Selective | 1 credit |                                                                                                             |                                                                                                                 |                                                                                                        |                                                                                                                              |                                                                                                                     |                                                                                                                                   |                                                                                              |  |
| Course goals and Course summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                   |                                         |                                                                                                                                                              |                                     |           |          |                                                                                                             |                                                                                                                 |                                                                                                        |                                                                                                                              |                                                                                                                     |                                                                                                                                   |                                                                                              |  |
| The goal of this course is to master basic knowledge and skills necessary to conduct research in the nutrition and health science fields. Specifically, students will 1) understand ways to search and utilize literature, 2) master basic presentation skills, and 3) understand guidelines regarding research ethics. In addition, this course aims to develop the basic knowledge necessary for acquiring diverse and in-depth academic knowledge from a broad perspective of nutritional science as stated in the Diploma Policy.                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                   |                                         |                                                                                                                                                              |                                     |           |          |                                                                                                             |                                                                                                                 |                                                                                                        |                                                                                                                              |                                                                                                                     |                                                                                                                                   |                                                                                              |  |
| Course Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                   |                                         |                                                                                                                                                              |                                     |           |          |                                                                                                             |                                                                                                                 |                                                                                                        |                                                                                                                              |                                                                                                                     |                                                                                                                                   |                                                                                              |  |
| As basic items necessary to conduct research, students will master the following: 1) how to search domestic and foreign literature on prior research and prepare evidence tables, 2) basic presentation skills used in research seminars and academic meetings (i.e., how to use PowerPoint, speaking techniques), and 3) matters related to research ethics guidelines, application for the ethics review committee, and conflicts of interest and data management etc. In the mean time, students will develop the ability to critically analyze information based on scientific evidence, using everyday health topics as a starting point.                                                                                                                                                                                                                                                                                          |                                                                                                                                   |                                         |                                                                                                                                                              |                                     |           |          |                                                                                                             |                                                                                                                 |                                                                                                        |                                                                                                                              |                                                                                                                     |                                                                                                                                   |                                                                                              |  |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                   |                                         |                                                                                                                                                              |                                     |           |          |                                                                                                             |                                                                                                                 |                                                                                                        |                                                                                                                              |                                                                                                                     |                                                                                                                                   |                                                                                              |  |
| <table><tr><td>1. Literature search and usage 1: A critical approach to interpreting everyday health information (Hayashi)</td><td>5. Presentation skills 2: How to speak and ask questions at research presentations, conferences, etc. (Hayashi)</td></tr><tr><td>2. Literature search and usage 2: Practical aspects of database searches and manual searches (Hayashi)</td><td>6. Research Ethics 1: Ethical Guidelines for Medical Research Involving Human Subjects and Other Ethical Guidelines (Tanaka)</td></tr><tr><td>3. Literature search and usage 3: Practice of creating evidence tables and the evaluation of the evidence (Hayashi)</td><td>7. Research Ethics 2: Necessity of Application to the Ethics Review Committee and Conflict of Interest (COI) in Research (Tanaka)</td></tr><tr><td>4. Presentation skill 1: Develop the PowerPoint presentations for research reports (Hayashi)</td><td></td></tr></table> |                                                                                                                                   |                                         |                                                                                                                                                              |                                     |           |          | 1. Literature search and usage 1: A critical approach to interpreting everyday health information (Hayashi) | 5. Presentation skills 2: How to speak and ask questions at research presentations, conferences, etc. (Hayashi) | 2. Literature search and usage 2: Practical aspects of database searches and manual searches (Hayashi) | 6. Research Ethics 1: Ethical Guidelines for Medical Research Involving Human Subjects and Other Ethical Guidelines (Tanaka) | 3. Literature search and usage 3: Practice of creating evidence tables and the evaluation of the evidence (Hayashi) | 7. Research Ethics 2: Necessity of Application to the Ethics Review Committee and Conflict of Interest (COI) in Research (Tanaka) | 4. Presentation skill 1: Develop the PowerPoint presentations for research reports (Hayashi) |  |
| 1. Literature search and usage 1: A critical approach to interpreting everyday health information (Hayashi)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5. Presentation skills 2: How to speak and ask questions at research presentations, conferences, etc. (Hayashi)                   |                                         |                                                                                                                                                              |                                     |           |          |                                                                                                             |                                                                                                                 |                                                                                                        |                                                                                                                              |                                                                                                                     |                                                                                                                                   |                                                                                              |  |
| 2. Literature search and usage 2: Practical aspects of database searches and manual searches (Hayashi)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 6. Research Ethics 1: Ethical Guidelines for Medical Research Involving Human Subjects and Other Ethical Guidelines (Tanaka)      |                                         |                                                                                                                                                              |                                     |           |          |                                                                                                             |                                                                                                                 |                                                                                                        |                                                                                                                              |                                                                                                                     |                                                                                                                                   |                                                                                              |  |
| 3. Literature search and usage 3: Practice of creating evidence tables and the evaluation of the evidence (Hayashi)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 7. Research Ethics 2: Necessity of Application to the Ethics Review Committee and Conflict of Interest (COI) in Research (Tanaka) |                                         |                                                                                                                                                              |                                     |           |          |                                                                                                             |                                                                                                                 |                                                                                                        |                                                                                                                              |                                                                                                                     |                                                                                                                                   |                                                                                              |  |
| 4. Presentation skill 1: Develop the PowerPoint presentations for research reports (Hayashi)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                   |                                         |                                                                                                                                                              |                                     |           |          |                                                                                                             |                                                                                                                 |                                                                                                        |                                                                                                                              |                                                                                                                     |                                                                                                                                   |                                                                                              |  |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                   |                                         |                                                                                                                                                              |                                     |           |          |                                                                                                             |                                                                                                                 |                                                                                                        |                                                                                                                              |                                                                                                                     |                                                                                                                                   |                                                                                              |  |
| Participate in conferences and research meetings, and experience watching and listening to good presentations. As for ethics education, all graduate students are required to attend the CITI Japan Program.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                   |                                         |                                                                                                                                                              |                                     |           |          |                                                                                                             |                                                                                                                 |                                                                                                        |                                                                                                                              |                                                                                                                     |                                                                                                                                   |                                                                                              |  |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Textbooks                                                                                                                         |                                         | References                                                                                                                                                   |                                     |           |          |                                                                                                             |                                                                                                                 |                                                                                                        |                                                                                                                              |                                                                                                                     |                                                                                                                                   |                                                                                              |  |
| A comprehensive report will be required based on study of the three parts (literature search and utilization, presentation, and ethics education). Grades will be determined based on a combination of the report (60%), coursework (20%) and class participation (20%).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | None                                                                                                                              |                                         | References will be introduced as needed.                                                                                                                     |                                     |           |          |                                                                                                             |                                                                                                                 |                                                                                                        |                                                                                                                              |                                                                                                                     |                                                                                                                                   |                                                                                              |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Materials                                                                                                                         |                                         | Remarks                                                                                                                                                      |                                     |           |          |                                                                                                             |                                                                                                                 |                                                                                                        |                                                                                                                              |                                                                                                                     |                                                                                                                                   |                                                                                              |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Materials will be distributed in each class.                                                                                      |                                         | All master's course students are required to take this course. Doctoral students who have entered from other graduate schools are also encouraged to attend. |                                     |           |          |                                                                                                             |                                                                                                                 |                                                                                                        |                                                                                                                              |                                                                                                                     |                                                                                                                                   |                                                                                              |  |

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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Comprehensive Lectures on Nutrition | Prof. Hisanori Kato, Chief of the Nutrition Sciences Degree Program | Compulsory                                                                | <input checked="" type="checkbox"/> | Selective | 1 credit |
| Course goals and Course summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                     |                                                                     |                                                                           |                                     |           |          |
| <p>The course aims to enable students to know various challenges on nutrition science, broaden their perspectives, and position their interest and research agendas in order to launch a research on nutrition science. Graduate students are expected to find their research themes from among various challenges on nutrition science, explore them, publish the results, and receive professional evaluation. In order to do so, they are firstly required to have sufficient expertise and understand new issues in each field of nutrition science. Each of all full-time professors of the Nutrition Science Degree Programs gives a 90-minute class once during the course and explains challenges on nutrition science, interdisciplinary/diversity of its methodology, and its future prospects based on their own research and activities. Students will be able to understand the whole picture of nutrition science and clarify the positioning of the themes they are going to work on in the respective specialized fields.</p> |                                     |                                                                     |                                                                           |                                     |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                     |                                                                     |                                                                           |                                     |           |          |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                     |                                                                     |                                                                           |                                     |           |          |
| Part 1. Prof. Shigeo Tanaka; Human Growth and Development Studies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                     |                                                                     | Part 11. Prof. Yukiko Kurihara; Physiology                                |                                     |           |          |
| Part 2. Prof. Terue Kawabata; Basic Nutrition.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                     |                                                                     | Part 12. A/Prof. Akiko Moriya; Food Culture Anthropology                  |                                     |           |          |
| Part 3. Prof. Kazuhiro Uenishi; Nutritional Physiology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                     |                                                                     | Part 13. Prof. Kumi Eto; Food communication                               |                                     |           |          |
| Part 4. Prof. Kazuyo Tsushita; Clinical Nutrition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                     |                                                                     | Part 14. Prof. Rie Imoto; Environmental Education                         |                                     |           |          |
| Part 5. Prof. Hiromi Ishida; Nutrition Management                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                     |                                                                     | Part 15. Prof. Teruyuki Usui; Food Analysis                               |                                     |           |          |
| Part 6. Prof. Fumi Hayashi; Nutrition Education                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                     |                                                                     | Part 16. Prof. Masataka Saito; Food Material Development                  |                                     |           |          |
| Part 7. Prof. Yukari Takemi, Community Nutrition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                     |                                                                     | Part 17. Prof. Yasuhiro Nakajima; Food System                             |                                     |           |          |
| Part 8. A/Prof. Akemi Nakanishi; Children's Dietary Management                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                     |                                                                     | Part 18. Prof. Keiko Shibata; Food Preparation Science                    |                                     |           |          |
| Part 9. Prof. Akiko Fukushima; Molecular Nutrition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                     |                                                                     | Part 19. Prof. Yukie Yanagisawa; Nutrition Education for Food Preparation |                                     |           |          |
| Part 10. Prof. Hisanori Kato; Biochemistry                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                     |                                                                     | Part 20. Prof. Yasuo Kagawa; Aging Biochemistry                           |                                     |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                     |                                                                     | Part 21. Summary                                                          |                                     |           |          |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                     |                                                                     |                                                                           |                                     |           |          |
| <p>Review what you have learned in each teacher's class and summarize it briefly. Submit a report at the end of class.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                     |                                                                     |                                                                           |                                     |           |          |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Textbooks                           |                                                                     | References                                                                |                                     |           |          |
| Grades will be determined based on a summary report after each class.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |                                                                     |                                                                           |                                     |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Materials                           |                                                                     | Remarks                                                                   |                                     |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                     |                                                                     | None                                                                      |                                     |           |          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                              |                                          |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |           |        |
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| Subject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Comprehensive Seminars on Nutrition<br>(A,B,C type seminars) | Prof. Hisanori Kato/Prof.<br>Yumi Ishida | X | Compulsory                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2 | Selective | credit |
| Course goals and Course summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                              |                                          |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |           |        |
| <p>Students aim to deepen and broaden their understanding of nutrition science by discussing topics related to research themes and nutrition science. At the same time, they will improve their expertise and professional capability and develop the capacity to think theoretically. They will also learn knowledge and techniques to write master’s theses and reports. They further aim to improve their academic presentation skills and develop the ability to lead and manage seminars.</p>                                                       |                                                              |                                          |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |           |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                              |                                          |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |           |        |
| Course Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                              |                                          |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |           |        |
| <p>The seminar will consist of the following three types.<br/>In the first semester, second-year students are in charge, and in the second semester, first-year students are in charge. The first semester is taught by second-year students, and the second semester by first-year students. The chairperson (facilitator) will also be a student, and this will serve as training in the skills of facilitating and coordinating a single session. The class will be held mainly on Wednesdays, but also on other days during 5th and 6th periods.</p> |                                                              |                                          |   | <p>Type B seminar: A symposium or workshop-style seminar conducted mainly by students in the Advanced Human Resources Development Program (external lecturers are also planned). Students take the initiative in planning (setting themes, selecting external lecturers, etc.), organizing, and evaluating the seminar. Plan to hold one seminar per year (first year students in charge). The schedule will be decided through coordination.<br/>C-type seminar: All second-year students give an interim report on their research. All 1st and 2nd year students are expected to participate.</p> |   |           |        |
| Work to be done outside of class (preparation, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                              |                                          |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |           |        |
| <p>For your own presentation, prepare the PowerPoint and handouts well. For other students’ presentations, read through the materials distributed in advance, understand the content of the presentation, and actively participate in the discussion.</p>                                                                                                                                                                                                                                                                                                |                                                              |                                          |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |           |        |
| Grading criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                              | Textbooks                                |   | References                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |           |        |
| <p>Grades will be determined comprehensively based on the content of their presentations in class and their participation in discussions.</p>                                                                                                                                                                                                                                                                                                                                                                                                            |                                                              |                                          |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |           |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                              | Materials                                |   | Remarks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |           |        |
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