



Syllabus

Graduate School of Kagawa Nutrition University

Year 2023

Health Sciences Degree Programs

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

Subjects Name	Credit Number		Prof. in charge	Page
	Compulsory Subject	Elective Subject		
I Health Science				
Advanced Lectures on Health Promotion		2	Prof. Yuko Suketomo	1
(Sat) Advanced Lectures on Health for the Mature and Elderly		2	Prof. Takashi Sekiya	2
Advanced Lectures on Environmental Health		2	Prof. Ken Kawamura	3
Advanced Lectures on Community Health		2	Prof. Shoji Shinkai/Prof. Yoshinori Fujiwara	4
Advanced Lectures on Occupational Health		2	Prof. Hiroshi Fukuda	5
Advanced Lectures on Global Health		2	Prof. Tamotsu Nakasa	6
Advanced Lectures on Health Sociology		2	Prof. Kazuhiro Nakayama	7
Advanced Lectures on Health Statistic		2	Prof. Hiromitsu Ogata	8
Advanced Lectures on Kinanthropometry		2	A/Prof. Masaharu Kagawa	9
(Sat) Advanced Lectures on Sports Methodology		2	Prof. Yoshinori Kaneko	10
II Clinical Pathophysiology and Biochemistry				
(Sat) Advanced Lectures on Clinical Biochemistry		2	Prof. Naoko Ikoshi	11
Advanced Lectures on Molecular Biology		2	Prof. Akiko Fukushima	12
Advanced Lectures on Microbiology and Infection Control		2	—	
Advanced Lectures on Immunology		2	Prof. Kenichi Ishibashi	13
Advanced Lectures on Exercise and Pathophysiology		2	Prof. Toshikazu Yamashita	14
		2	—	
Advanced Lectures on Pathological Cytology		2	Prof. Toshihide Shiotsu	15
Advanced Lectures on Clinical Hematology		2	Prof. Kenji Ikebuchi	16
III Applied School Health Nursing				
Advanced Lectures on School Health Nursing		2	Prof. Nobuko Endo	17
Advanced Lectures on Mental Health at School		2	Prof. Tsukasa Sasaki	18
Advanced Lectures on Gender Education		2	Prof. Toshimi Marui	19
		2	—	
Advanced Lectures on Human Growth and Health		2	Prof. Shigeho Tanaka	20
(Sat) Advanced Lectures on Pedagogy in Nursing		2	Prof. Kumiko Ohnuma	21
evening Advanced Lectures on Human Growth and Health		2	Prof. Hiromitsu Ogata	22
VII Common Subject				
Research Methods in Health Sciences I (Information Processing)		1	Prof. Hiromitsu Ogata	23
Research Methods in Health Sciences II (Experiments)		1	Prof. Akiko Fukushima	24
Research Methods in Health Sciences III (Surveying)		1	A/Prof. Masaharu Kagawa	25
Advanced Common Lectures on Research Methods in Health Sciences I		1	Prof. Hiromitsu Ogata	26
Advanced Common Lectures on Research Methods in Health Sciences II		1	Prof. Hiromitsu Ogata	26
Advanced Common Lectures on Research Methods in Health Sciences III		1	Prof. Hiromitsu Ogata	26
Advanced Common Lectures on Research Methods in Health Sciences IV		1	Prof. Hiromitsu Ogata	26
Comprehensive Seminars on Health Sciences	4		All full-time professors of health program	27
Comprehensive Seminars on Health Sciences	2		All full-time professors of health program	28
Seminars	2	Thesis development	Each student's supervisor	
Experiment and Practicum	12	Thesis development	Each student's supervisor	
Compulsory Credits	20	Total necessary number of credit for graduation		30
Selective Credits	10			

Subject	Advanced Lectures on Health Promotion	Prof. Yuko Suketomo	Compulsory	<input checked="" type="checkbox"/> Selective	2 credit
Course goals					
<p>Health promotion is a process that allows people to control and improve their health conditions and their determining factors. This activity encompasses social strategies to provide opportunities to give consideration to health in all life situations through educating individuals and, eventually, improving the social environment. Through this course, students will become able to recall and scientifically explain the actual health promotion activities in their research area.</p>					
Course Summary					
<p>Taking examples from health promotion initiatives in Japan and overseas, the evaluation framework will be explained, and discussions will be held based on the areas of interest of each student.</p>					
Course Plan					
<div> <div> 1) Introduction to Health Promotion (Keywords: Health Promotion) 2) WHO Health Promotion Strategy (Keywords: Ottawa Charter, Bangkok Charter) 2) WHO Health Promotion Strategies (Keywords: Ottawa Charter, Bangkok Charter) (3) Health Supportive Environment (Keywords: Environment, Health) 4) Health Literacy (Keywords: Health Literacy) 5) Creating Healthy Schools (Keywords: Health Promoting Schools) 6) Creating healthy workplaces (keywords: health management) 7) Health Communication (Keywords: Health Communication) </div> <div> 8) Health Education and Empowerment (Keywords: empowerment, health volunteer) 9) Social Capital (Keyword: Social Capital) 10) Healthy City (Keyword: Community Development) 11) Healthy Public Policy (Keywords: policy, plan, project, measure) 12) Social Determinants of Health (Keywords: social determinants, disparity) 13) Disease Control and Health Education (Keywords: Health Education, Prevention) Design of Health Promotion Research (Keywords: Research Design) </div> </div>					
Work to be done outside of class (preparation, etc.)					
<p>Current information on health promotion policies from the WHO, the Ministry of Health, Labor and Welfare, the Ministry of Education, Culture, Sports, Science and Technology, and other relevant ministries and agencies will be provided, so be sure to read through them regularly. (About 200 minutes per week)</p>					
Grading criteria			Textbooks	References	
<ul style="list-style-type: none"> In-class performance (50%) Reports (50%) 			<ul style="list-style-type: none"> 健康社会学会編. 事例分析でわかるヘルスプロモーションの5つの活動. ライフ出版、2016. 	<ul style="list-style-type: none"> ・日本健康教育学会編. 健康行動理論による研究と実践. 医学書院、2019. ・島内憲夫, 鈴木美奈子. ヘルスプロモーション-WHO: バンコク憲章. 垣内出版、2012. ・島内憲夫, 鈴木美奈子. ヘルスプロモーション-WHO: オタワ憲章. 垣内出版、2013. 	
			Materials	Remarks	
			Distributed as needed.	In order to enhance the discussion, each student will read an abstract of a paper in each class.	

Subject	Advanced Lectures on Health for the Mature and Elderly	Prof. Takashi Sekiya	Compulsory	<input checked="" type="checkbox"/> Selective	2 credit
Course goals and Course Summary					
<p>Health, essentially, is considered to cover all matters necessary to live a healthy life, not only treating and preventing diseases. Therefore, health-related services are provided in various fields. This course aims to help students learn more practical health sciences through studies of those health-related services.</p> <p>Students will learn specific and practical health sciences by reference to health activities carried out by medical institutions, health insurance associations, local governments, private companies, educational institutions, etc. By understanding the processes of surveys, problem understanding, plan making, presentation, adjustments, budgeting, re-surveys, advertisement, implementation, accounting, reporting, post-surveys, etc., students will obtain abilities to think for themselves. The specific health checkups and specific health services, as well as mental health and stress checkups, which have recently become increasingly important, will be also discussed. In addition, folk health activities that are used by medical institutions, health insurance associations and private corporations, including supplements, Chinese medicine, aromatherapy, massage, exercise therapy, and music therapy, will be studied. Lectures also cover the application of artificial intelligence in the medical and health fields, as well as new forms of health sciences, such as living labs. The final goal is to enable students to make their own health plans.</p>					
Course Plan					
<div> <div> 1) Introduction 2) Overview: Introductory of health science 3) Specialized (Adult health: efforts of medical institutions, health examination, medical care, health guidance) 4) Specialized (Adult health: efforts of companies (occupational health), health committee, occupational health) 5) Specialized (Adult health: corporate (welfare) initiatives, health events, accommodation, sports gyms) 6) Specialized (Adult health: health insurance association, educational institution, social insurance system, union activities) health care for the elderly, home health care, community health care 7) Specialized (health care for the elderly, home health care, community health care) </div> <div> 8) Specialized (Other health services: Complementary and alternative medicine, etc.) 9) Overview: Basic knowledge to establish health services (laws, regulations, notices, etc.) 10) Practicum: Health field trip (1) Factories, hospitals, clinics, etc. 11) Practicum: Health field trip (2) Factories, hospitals, clinics, etc. 12) Practicum: Health field trip (3): Factories, hospitals, clinics, etc. 13) Practicum: Health field trip (4) Factory, hospital, clinic, etc. 14) Conclusion and research presentation </div> </div>					
Work to be done outside of class (preparation, etc.)					
<p>The field experience will be a valuable experience. Students should spend about 200 minutes researching the materials assigned in class beforehand. We are planning to include factory tours, health checkup sites, and visits to clinics and hospitals. Due to circumstances in those organizations, the desired practical training may not be possible and may be changed to other training.</p>					
Grading criteria	Textbooks	References			
<p>This course emphasizes hands-on experience and practice. Three exams (oral or written) will be given to check the proficiency of the students. (In the event that students cannot attend the exams, they may submit reports, depending on the reason.) The standard for grading is a basic knowledge that enables you to develop your own health plan.</p>	<p>There are no specific textbooks. The materials will be prepared by the instructor.</p>	<p>Instructions or handouts will be provided in class. If you have other personal interests, please refer to books related to the Ministry of Health, Labor and Welfare, occupational health, nursing care insurance, health insurance, etc., which are of interest to you.</p>			
	Materials	Remarks			
	<p>Writing materials and notebooks are required. Internet access at home is recommended.</p>	<p>The progress of the class may change depending on the level of proficiency.</p>			

Subject	Advanced Lectures on Environmental Health	Prof. Ken Kawamura	Compulsory	<input checked="" type="checkbox"/> Selective	2 credit		
Course goals							
<p>Course theme; Relationship between the environment and human with health.</p> <p>The goal is to help students become able to explain the basic methods of risk analysis and have abilities to investigate and raise problems about the relationships between humans and the environment. The course is related to the Master's Diploma Policy which is to acquire a high degree of expertise and a broad perspective.</p>							
Course Summary							
<p>Substances in the environment affect human health and life, as well as ecosystems, in various ways. In order to live a healthy life, it is necessary to appropriately evaluate the substances in the environment and take necessary measures for society. Risk analysis is one of the methods to do so. Students will learn the basics and practices of risk analysis with specific examples of environmental substances, such as foods, mercury, and dioxins.</p>							
Course Plan							
<table><tr><td>1) Overview of risk analysis 2) Methods of risk assessment 3) Methods of risk management 4) Methods of risk communication 5) Risk assessment of food in Japan 6) Risk management of food in Japan 7) Risk communication of foods in Japan</td><td>8) Risk assessment of mercury in Japan 9) Risk management of mercury in Japan 10) Risk communication of mercury in Japan 11) Risk assessment of dioxins in Japan 12) Risk management of dioxins in Japan 13) Risk communication of dioxins in Japan 14) Summary of the relationship between the environment and human beings The topics to be covered and time allocation may be changed according to students' needs.</td></tr></table>						1) Overview of risk analysis 2) Methods of risk assessment 3) Methods of risk management 4) Methods of risk communication 5) Risk assessment of food in Japan 6) Risk management of food in Japan 7) Risk communication of foods in Japan	8) Risk assessment of mercury in Japan 9) Risk management of mercury in Japan 10) Risk communication of mercury in Japan 11) Risk assessment of dioxins in Japan 12) Risk management of dioxins in Japan 13) Risk communication of dioxins in Japan 14) Summary of the relationship between the environment and human beings The topics to be covered and time allocation may be changed according to students' needs.
1) Overview of risk analysis 2) Methods of risk assessment 3) Methods of risk management 4) Methods of risk communication 5) Risk assessment of food in Japan 6) Risk management of food in Japan 7) Risk communication of foods in Japan	8) Risk assessment of mercury in Japan 9) Risk management of mercury in Japan 10) Risk communication of mercury in Japan 11) Risk assessment of dioxins in Japan 12) Risk management of dioxins in Japan 13) Risk communication of dioxins in Japan 14) Summary of the relationship between the environment and human beings The topics to be covered and time allocation may be changed according to students' needs.						
Work to be done outside of class (preparation, etc.)							
<p>Read the handouts and the indicated related literature in advance to get an overview, organize questions and problems, and be prepared to participate in the discussion. Approximately 200 minutes of self-study per week is required.</p>							
Grading criteria			Textbooks	References			
<p>• Participation in discussions (50%) • Reports (50%)</p> <p>Students will be evaluated based on their understanding of risk analysis and the development of logic in considering the relationship between humans and the environment.</p>			Handouts will be distributed in class as needed.	N/A			
			Materials	Remarks			
			N/A	N/A			

Subject	Advanced Lectures on Community Health	Prof. Shoji Shinkai/Prof. Yoshinori Fujiwara	Compulsory	<input checked="" type="checkbox"/> Selective	2 credit
Course goals					
<p>Course Themes; Community Health Programs based on the scientific evidence</p> <p>Course Goals; Students will understand the mechanism of community health programs in Japan and learn about the basics of community epidemiological research and community health programs based on scientific evidence, So that the knowledge can be used for their master's thesis research.</p>					
Course Summary					
<p>First, a proper understanding of healthy life expectancy will be obtained. Next, the background and summary of the New Guidelines for Health and Longevity (Tokyo Metropolitan Institute of Gerontology, ed.), which should be considered guidelines for healthy longevity, will be studied. In addition, students will acquire general understand of epidemiological studies (observational and interventional methods) that served as the basis for the new guidelines to learn the basics of epidemiological research. Finally, students will learn the example cases and results of community health programs aimed at long-term health and longevity. Students will learn community health programs based on scientific evidence through the topics above.</p>					
Course Plan					
<p>1) To understand healthy life expectancy correctly (life expectancy and life span, healthy life expectancy and disability period, Japan's position in the world, relevant factors in life stages, World Report on Ageing and Health (WHO, 2015), etc.)</p> <p>2) To understand the history and current system of community health in Japan</p> <p>3) To understand the background of the development of the new guidelines and the outline of the studies on which they are based</p> <p>4) Key points of the new guidelines for health and longevity (a) What is lifestyle function?</p> <p>5) Key points of the new guidelines for health and longevity (b) Difference between prevention of lifestyle-related diseases and prevention of decline in lifestyle-related functions (Prof. Yoshinori Fujiwara)</p> <p>6) Key points of the new guidelines for health and longevity</p> <p>(c) Key points of frailty prevention (Prof. Yoshinori Fujiwara)</p> <p>7) (d) Importance of local environment and human relationships</p> <p>8) Introduction of case studies of community health activities (a) Kusatsu Town, Gunma Prefecture</p> <p>9) Introduction of case studies of community health activities (b) Hatoyama Town, Saitama Prefecture</p> <p>10) Introduction of case studies of community health activities (c) Yabu City, Hyogo Prefecture</p> <p>11) Introduction of case studies of community health activities (d) Ota Ward, Tokyo</p> <p>12) Analysis and presentation of cross-sectional data</p> <p>13) Analysis and presentation of longitudinal data</p> <p>14) Conclusion</p>					
Work to be done outside of class (preparation, etc.)					
<p>1. Prior study of textbooks and reference books, 2. prior subscription to related papers and materials, 3. analysis of data (cross-sectional and longitudinal) with personal information removed (data to be distributed in advance)</p> <p>Self-study (preparation, review, etc.) for double the class time. Students are expected to do double the amount of self-study (pre-study, review, etc.) during class time. For pre-study, students should prepare for the presentation by studying the lecture materials and related papers distributed in advance.</p>					
Grading criteria			Textbooks	References	
<ul style="list-style-type: none"> In-class performance (50%) Presentation of assignments (50%, including 12,13 of course plan) 			東京都健康長寿医療センター編「健康長寿新ガイドライン エビデンスブック」(社会保険出版社、2017年)	国民衛生の動向 2019/2020(厚生労働統計協会、2019年) Summary: World Report on Ageing and Health (WHO、2015)	
			Materials	Remarks	
			Textbook will be distributed in the first class with free. Handouts and materials will be distributed as needed.	If you are going to be absent, please inform the academic office in advance. If you are absent, you may be asked to submit assignments and reports on the materials and reference papers distributed on that day.	

Subject	Advanced Lectures on Occupational Health	Prof. Hiroshi Fukuda	Compulsory	<input checked="" type="checkbox"/> Selective	2 credit																
Course goals and Summary																					
<p>Issues in industrial health have become diversified and complex in recent years, which now include issues specific to the working generation, such as “metabolic syndromes,” lifestyle-related diseases, mental health, and anti-smoking measures. As in the cases for community health and school health, health management and health promotion in work environment, where people spend most of their lives, will become increasingly important in the future. In this course, students will learn the measures and processes for conducting industrial health activities from the perspectives of the purposes and roles of industrial health programs. It also aims to help students understand the interest and significance of industrial health programs, as well as the roles of nutritionists, by introducing initiatives taken by corporate employee cafeterias, the latest information on health promotions in the prime of life at international conferences and specific examples of typical days of industrial physicians.</p>																					
Course Plan																					
<table><tr><td>1) General theory of industrial health (purpose and outline of industrial health)</td><td>8) Needs-based measures (planning (Plan), implementation (Do), evaluation (Check), application and utilization of evaluation (Act))</td></tr><tr><td>2) Health management (Obligation and actual work of health management)</td><td>9) Preventive measures of infectious diseases in companies. (Influenza and COVID-19 countermeasures)</td></tr><tr><td>3) Health education and health promotion in occupational health</td><td>10) Mental health (stress check in companies)</td></tr><tr><td>4) Health literacy and health management</td><td>11) Measures against metabolic syndrome</td></tr><tr><td>5) Work environment management</td><td>12) Group work and presentation</td></tr><tr><td>5) Work environment management</td><td>13) Health checkup, health guidance and health counseling (importance of health checkup, health and nutrition guidance)</td></tr><tr><td>6) Workplace management and workplace inspection</td><td>14) Written examination</td></tr><tr><td>7) Anti-smoking measures (anti-smoking education in companies)</td><td></td></tr></table>						1) General theory of industrial health (purpose and outline of industrial health)	8) Needs-based measures (planning (Plan), implementation (Do), evaluation (Check), application and utilization of evaluation (Act))	2) Health management (Obligation and actual work of health management)	9) Preventive measures of infectious diseases in companies. (Influenza and COVID-19 countermeasures)	3) Health education and health promotion in occupational health	10) Mental health (stress check in companies)	4) Health literacy and health management	11) Measures against metabolic syndrome	5) Work environment management	12) Group work and presentation	5) Work environment management	13) Health checkup, health guidance and health counseling (importance of health checkup, health and nutrition guidance)	6) Workplace management and workplace inspection	14) Written examination	7) Anti-smoking measures (anti-smoking education in companies)	
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6) Workplace management and workplace inspection	14) Written examination																				
7) Anti-smoking measures (anti-smoking education in companies)																					
Work to be done outside of class (preparation, etc.)																					
<p>Read carefully the handouts and materials distributed to deepen your understanding of occupational health activities. Read the reference book “Health Literacy” in advance, focusing on Chapter 7. (About 200 minutes per week)</p>																					
Grading criteria			Textbooks	References																	
Evaluation will be based on class participation, group work, and written exams. Students will receive feedback on their presentations in the group work.			Textbooks will be designated as needed. Handouts will be distributed as needed.	ヘルスリテラシー〔健康教育の新しいキーワード〕福田洋・江口泰正編著、大修館書店 産業保健マニュアル第8版、産業医科大学教授 森 晃爾総編集、南山堂																	
Materials		Remarks																			
Use health and safety videos and other necessary visuals as needed.		We believe that there is great potential for nutritionists to be active in the corporate and professional fields. We hope that many graduate students will take this course to increase their future job options and learn about and take on the new and challenging fields of occupational health and preventive medicine. In the class, we also plan to introduce the “Sanpo-kai (Occupational Health Study Group),” where many occupational health staff members from actual companies gather and discuss things with each other in a multidisciplinary manner. Graduate students who have an interest in health in the working world are greatly welcomed.																			

Subject	Advanced Lectures on Global Health	Prof. Tamotsu Nakasa	Compulsory	<input checked="" type="checkbox"/> Selective	2 credit
Course goals and Summary					
<p>Students will be expected to be able to: (1) perceive, understand, and explain the concept of Sustainable Development Goals adopted by the United Nations as the world's common goals as well as global health and environmental issues in general; (2) respond to the multinationalizing environment of school health as a nurse teacher; (3) acquire a global perspective of health and nutrition activities in the local community through the course exercises</p> <p>To reach the goals mentioned above, the course will provide the basic concepts and methodologies necessary to conduct international public health activities related to health, medical care, and life support through lectures and practicum to those who acquired the research and necessary abilities required of professionals with high expertise and a broad prospective on nutritional science and health science</p>					
Course Plan					
<div> <div> 1) Overview: Trends in global health and global challenges: primary healthcare, Millennium Development Goals, and sustainable development; overview on the changing global challenges including infections. 2) Topics: Maternal and child health and reproductive health, which have always been a priority issue in global health 3) Topics: Health systems and their reinforcement necessary to solve various problems 4) Exercise: Maternal and child health and community health in Honduras 5) Topics: Diarrhea, pneumonia, the world's worst three infectious diseases HIV, tuberculosis, and malaria), and public health crises in developing countries </div> <div> 6) Topics: Health and nutrition issues during emergencies, disasters and among refugees 7) Topics: School health as an approach to community health in developing countries 8) Exercise: Outbreak of Ebola hemorrhagic fever in the Democratic Republic of the Congo 9) Topics: Aging and lifestyle-related diseases that will become the mainstream in global health 10) Food system: Mechanism that nurtures human health and equitably supports sustainability of the environment 11) Exercise: Exercise to understand the food system 12) Sociological survey and information collection 13) Facilitation and project management 14) Summary of the course </div> </div>					
Work to be done outside of class (preparation, etc.)					
Read through the reference books in advance and self-study after the classes.					
Grading criteria	Textbooks	References			
<ul style="list-style-type: none"> Participation for discussion (40%) Comments on Exercise Assignment (30%) Reports, to be submitted two weeks after the classes (30%) 	Handouts will be distributed as needed.	<ul style="list-style-type: none"> 実践グローバルヘルス: 現場における実践力向上をめざして (明石書店: 2022) SDGを学ぶ 国際開発・国際協力入門 (法律文化社: 2018) 食卓から地球を変える Can Fixing Dinner fix the Planet (日本評論社: 2022) 			
	Materials	Remarks			
	N/A	N/A			

Subject	Advanced Lectures on Health Sociology	Prof. Kazuhiro Nakayama	Compulsory	<input checked="" type="checkbox"/> Selective	2 credit
Course goals and Summary					
<p>Health sociology is a branch of sociology aimed at maintenance and promotion of health, elucidating the connection between people and relationships among people. In addition to diet and exercise, people’s mutual dependence and social connection, as well as ties among them, has become known to have larger influence on people’s health. The connection with other people has significant impacts on the formation and improvement of health literacy, which is the ability to gather, understand, evaluate, and use information about health issues. Health literacy is also the abilities of people to collect information and to make proper decisions in order to make full use of their potentials to stay healthy and ultimately achieve self-fulfillment. Students will learn how to measure and improve such abilities.</p>					
Course Plan					
<p>1) 2) What is health literacy? 3) 4) Health literacy-conscious communication in health care settings 5) 6) Health literacy in health education and health promotion 7) 8) Critical health literacy and social determinants of health 9) 10) Measurement and factors of health literacy and its relationship to health</p>			<p>11) 12) Health literacy initiatives in the world 13) 14) Citizen and patient centered decision However, depending on the interests of the students, the topics and time allocation may be changed, for example, to focus on a certain topic, or to focus on lectures and discussions of research and statistical analysis methods.</p>		
Work to be done outside of class (preparation, etc.)					
<p>Students are required to read the materials and reference books presented in class.</p>					
Grading criteria		Textbooks	References		
<p>Evaluation will be made based on the attitude toward class participation and a report. (Comments will be given as feedback on the report.)</p>		中山和弘: これからのヘルスリテラシー 健康を決める力. 講談社.	・福田洋・江口泰正編: ヘルスリテラシー健康教育の新しいキーワード. 大修館書店 ・中山和弘: 看護学のための多変量解析入門. 医学書院		
		Materials			
				N/A	

Subject	Advanced Lectures on Health Statistic	Prof. Hiromitsu Ogata	Compulsory	<input checked="" type="checkbox"/> Selective	2 credit		
Course goals							
<p>The topic of the course is the application of statistics in health sciences. The objectives of the course are as follows.</p> <p>(1) Students will become able to explain the basic concepts of statistics, which are the basis of methodologies in public health studies and health sciences.</p> <p>(2) Students will become able to apply the major statistical methods that are necessary in health education and health management.</p>							
Course Summary							
<p>In the first half of the course, students will learn about the importance of data as a scientific basis in public health studies and health sciences, basic concepts to handle quantitative data, specific methodologies according to data patterns, interpretation of results of analyses, and application to health education and health management. In the second half, students will work on exercises based on some specific examples with the goal to become able to apply the knowledge and techniques learned in the first half.</p>							
Course Plan							
<table><tr><td>1) Basics of health statistics 2) Descriptive statistics and inferential statistics 3) Concepts of interval estimation and hypothesis testing 4) Correlation and regression analysis 5) Multiple regression analysis and logistic regression analysis 6) General linear model and generalized linear model 7) One-way analysis of variance</td><td>8) Multiple-way analysis of variance 9) Normality test and transformation of variables 10) Non-parametric test 11) Treatment of outliers and missing values 12) Classification of analysis methods 13) Confounding factors and estimation of causal relations 14) Points to note in multivariate analysis</td></tr></table>						1) Basics of health statistics 2) Descriptive statistics and inferential statistics 3) Concepts of interval estimation and hypothesis testing 4) Correlation and regression analysis 5) Multiple regression analysis and logistic regression analysis 6) General linear model and generalized linear model 7) One-way analysis of variance	8) Multiple-way analysis of variance 9) Normality test and transformation of variables 10) Non-parametric test 11) Treatment of outliers and missing values 12) Classification of analysis methods 13) Confounding factors and estimation of causal relations 14) Points to note in multivariate analysis
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Work to be done outside of class (preparation, etc.)							
<p>At least 60 minutes of self-study for the assignment provided in class are required each week.</p>							
Grading criteria			Textbooks	References			
<ul style="list-style-type: none">In-class performance (30%)Reports (70%) <p>Report assignments will be presented in class.</p>			Handouts will be distributed in class.	緒方裕光編著. 疫学・健康統計学. 建帛社; 2021. 柳井晴夫・緒方裕光編著. SPSS による統計データ解析－医学・看護学・生物学・心理学の例題による統計学入門－. 現代数学社; 2020.			
			Materials	Remarks			
			N/A	N/A			

Subject	Advanced Lectures on Kinanthropometry	A/Prof. Masaharu Kagawa	Compulsory	<input checked="" type="checkbox"/> Selective	2 credit		
Course goals and Summary							
<p>This course will cover various topics related to the basic knowledge, techniques, and applications of anthropometry and body composition assessments that are fundamental assessment methods on human. The goal of this course is to provide students with knowledge of anthropometry and body composition assessment techniques and their applications, as well as to gain flexible and broad perspectives and the critical thinking to be able to use these techniques as a health professional.</p>							
<p>In order for humans to maintain good health and best performance, it is important to express their physiological functions normally as well as to the maximum extent possible. In order to correctly assess an individual's nutritional status and growth/developmental status that affect physiological functions and performance, appropriate knowledge and techniques for anthropometry and body composition must be acquired. In this course, the correct knowledge, techniques, and utilization of anthropometry and body composition assessments will be introduced through a combination of classroom lectures and practical experience.</p>							
Course Plan							
<table><tr><td>1) History of body measurement/Kinanthropometry and history 2) Measurement standards/Measurement standards, measuring devices, anatomical measurement points 3) Factors affecting body measurement values/Proficiency, measurement error, calibration, change 4) Body measurement in a real setting/Practice planning, practical skills, data processing, statistical analysis 5) Introduction of body composition assessments/Body composition, body composition measurements, hypotheses 6) Body composition – indirect methods/Density method, water method, DXA method 7) Body composition – doubly indirect methods/Body measurements, BIA method, ultrasound method, estimation equation, practical skills</td><td>8) Kinanthropometry in auxanology/Growth and development, DOHaD, WHO 9) Kinanthropometry in obesity research/Obesity, body mass index, fat distribution, MetS 10) Kinanthropometry in research on aging/Frailty, sarcopenia, bone density 11) Kinanthropometry in psychology/Body image, ideal body shape, abnormal eating behavior 12) Kinanthropometry in sports medicine/Performance, somatotype, lean mass 13) Anthropometry and ethics/Ethics, cultural understanding, dignity 14) Body measurement and body composition measurement – Summary – Summary and challenges</td></tr></table>						1) History of body measurement/Kinanthropometry and history 2) Measurement standards/Measurement standards, measuring devices, anatomical measurement points 3) Factors affecting body measurement values/Proficiency, measurement error, calibration, change 4) Body measurement in a real setting/Practice planning, practical skills, data processing, statistical analysis 5) Introduction of body composition assessments/Body composition, body composition measurements, hypotheses 6) Body composition – indirect methods/Density method, water method, DXA method 7) Body composition – doubly indirect methods/Body measurements, BIA method, ultrasound method, estimation equation, practical skills	8) Kinanthropometry in auxanology/Growth and development, DOHaD, WHO 9) Kinanthropometry in obesity research/Obesity, body mass index, fat distribution, MetS 10) Kinanthropometry in research on aging/Frailty, sarcopenia, bone density 11) Kinanthropometry in psychology/Body image, ideal body shape, abnormal eating behavior 12) Kinanthropometry in sports medicine/Performance, somatotype, lean mass 13) Anthropometry and ethics/Ethics, cultural understanding, dignity 14) Body measurement and body composition measurement – Summary – Summary and challenges
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Work to be done outside of class (preparation, etc.)							
<p>English papers may be used as lecture materials and therefore it is expected to review any materials provided prior to lectures and understand the content of the materials. In addition, students are expected to prepare for and review unfamiliar technical terms that they see in the materials and lectures to deepen their understanding. It is recommended that students take time for self-study (approximately the double of the lecture time).</p>							
Grading criteria			Textbooks	References			
<ul style="list-style-type: none">•Summary report in the 14th class (25%)•Summary report on the papers used as materials in each class (25%)•Final summary report (50%) <p>Students will be given feedback on the reports.</p>			N/A. Handouts will be distributed as needed prior to class.	N/A			
			Materials	Remarks			
			Lectures will be given using PowerPoint. Published papers may be used as references.	The content may be changed depending on the number of students. The lecture may be held in a form of online lecture using Microsoft Teams			

Subject	Advanced Lectures on Sports Methodology	Prof. Yoshinori Kaneko	Compulsory	<input checked="" type="checkbox"/> Selective	2 credit
Course goals and Summary					
Students will gain the ability to understand the importance of maintaining physical fitness, especially the physical fitness elements of “flexibility,” “endurance,” and “muscular strength” in a super-aging society. In this course, students will learn about the development, dissemination, and evaluation of exercise methods and equipment that can be practiced in daily life for the purpose of maintaining or improving physical fitness, with the university’s founding spirit as a foundation. Students will also learn about the possibility of using parks as health promotion facilities in Japan, based on examples from Southeast Asia, where health promotion activities in parks have been popular.					
Course Plan					
1) Importance of physical fitness in a super-aging society (super-aging society, frailty, physical fitness) 2) Physical benefits of moderate exercise (moderate exercise, physical benefits) 3) Physical fitness and exercise necessary for health promotion (physical fitness factors) 4) Physical activity guidelines for health promotion by age and target group (Physical Activity Guidelines) 5) Exercise guidance in specific health guidance (1) (lifestyle disease, specific health guidance) 6) Exercise guidance in specific health guidance (2) (exercise prescription) 7) Exercise for health promotion and its continuity (behavior change)			8) Development of exercise methods and equipment that can be practiced in daily life (1) (methods of exercise) 9) Development of exercise methods and equipment that can be practiced in daily life (2) (equipment development) 10) Promotion and evaluation of exercise methods and equipment that can be practiced in daily life (promotion, evaluation) 11) Current status of health promotion in parks in Southeast Asia and its potential in Japan (exercise facilities) 12) Significance of using city parks as health promotion facilities (city parks) 13) 14) Conclusion		
Work to be done outside of class (preparation, etc.)					
Outside of class, students are required to do self-study (preparation, review, etc.) equivalent to twice the amount of class time and read the following books in advance. 1. Elaine N. Marieb: Essentials of Human Anatomy and Physiology 2. Allan Bolton、Nigel Champion、Garry Egger: Fitness Leader’s Handbook 3. 前川峯雄：保健体育スポーツ指導選書 現代体育学研究法					
Grading criteria			Textbooks	References	
• In-class performance (70%) • Reports (30%)			Handouts will be distributed as needed.	Reference literature and materials will be provided in class.	
			Materials	Remarks	

Subject	Advanced Lectures on Clinical Biochemistry	Prof. Naoko Ikoshi	Compulsory	<input checked="" type="checkbox"/> Selective	2 credit		
Course goals							
Clinical laboratory technicians have a high level of expertise and are committed to their work. They expand their playing fields by participating in multi-disciplinary cooperation. They also become involved in task shifting, expanding their job scope. In addition, clinical laboratory technicians are considered to be best qualified for the positions to promote medical safety management calmly and systematically. Based on these, the course addresses ideal positions of clinical laboratory technicians with the experience and knowledge of a nutritionist in diverse ways. To that end, students will become able to approach and analyze the relationships between clinical testing and etiology and relationships between clinical conditions and clinical testing from multifaceted perspectives. Students will also have opportunities to contact with patients and their families to explain about the tests and give instructions while working on their surveys and research, developing capabilities of problem solution.							
Course Summary							
Students will learn how to be a nutritionist or clinical laboratory technician by communicating with mainly diabetic patients and their families.							
Course Plan							
<table><tr><td>1) 2) The position of the clinical laboratory technician in multidisciplinary cooperation – the spirit of hospitality and the attitude of listening 3) 4) Medical safety management 5) 6) Etiology and pathogenesis of diabetes mellitus</td><td>7) 8) Diagnostic criteria, goals, and tests for diabetes mellitus 9) 10) Complications and treatment of diabetes mellitus 11) Complications and treatment of diabetes mellitus 12) Education and guidance on diabetes mellitus, guidance on self-monitoring of blood glucose 13) 14) Conclusion and presentation</td></tr></table>						1) 2) The position of the clinical laboratory technician in multidisciplinary cooperation – the spirit of hospitality and the attitude of listening 3) 4) Medical safety management 5) 6) Etiology and pathogenesis of diabetes mellitus	7) 8) Diagnostic criteria, goals, and tests for diabetes mellitus 9) 10) Complications and treatment of diabetes mellitus 11) Complications and treatment of diabetes mellitus 12) Education and guidance on diabetes mellitus, guidance on self-monitoring of blood glucose 13) 14) Conclusion and presentation
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Work to be done outside of class (preparation, etc.)							
Review the basic aspects and read the literature and materials related to the research project as preparation. Research and read the handouts in advance. Students are expected to study on their own for double the time of the lecture.							
Grading criteria			Textbooks	References			
•Presentations and discussions (50%) •Reports (50%).			Instructions will be given as necessary.	Instructions will be given as necessary.			
			Materials	Remarks			
			Instructions will be given as necessary.	Set a day when you will visit an outside clinic or hospital in or around Tokyo for training.			

Subject	Advanced Lectures on Molecular Biology	Prof. Akiko Fukushima	Compulsory	<input checked="" type="checkbox"/> Selective	2 credit		
Course goals and Summary							
<p>The human genome has been analyzed, and analyses of all life phenomena at the genetic level have been advanced. In order to understand biological phenomena at the genetic level and advance research on them, it is necessary to understand molecular biological techniques and apply them to research. In this course, molecular biological techniques will be lectured to help students become able to explain the principles of each procedure and the type of analysis the procedure is used for. In addition, students will aim to obtain certification as an advanced biotechnology engineer (from Japan Association of Biotechnology Education). This is in line with the Master's Diploma Policy, which requires students to acquire a high degree of expertise and a broad perspective on nutritional science and health science.</p>							
Course Plan							
<table><tr><td>1) Plasmids and phages 2) Libraries and cloning 3) Expression of cloned genes in <i>E. coli</i> 4) Introducing cloned genes into Mammalian cells 5) Preparation and analysis of DNA 6) Preparation and analysis of RNA 7) Preparation and analysis of Rrotein</td><td>8) Mutagenesis 9) ES cells 10) iPS cells 11) Transgenic animals and KO animals 12) Regenerative medicine 13) Laws and ethics 14) Basics of bioinformatics</td></tr></table>						1) Plasmids and phages 2) Libraries and cloning 3) Expression of cloned genes in <i>E. coli</i> 4) Introducing cloned genes into Mammalian cells 5) Preparation and analysis of DNA 6) Preparation and analysis of RNA 7) Preparation and analysis of Rrotein	8) Mutagenesis 9) ES cells 10) iPS cells 11) Transgenic animals and KO animals 12) Regenerative medicine 13) Laws and ethics 14) Basics of bioinformatics
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Work to be done outside of class (preparation, etc.)							
<p>Review the undergraduate courses of "Biochemistry," "Molecular Nutrition," and "Molecular Biology." It is recommended that students spend approximately 60 minutes in total for preparation and review for each class.</p>							
Grading criteria		Textbooks	References				
<p>Evaluation will be based on reports. Feedback will be given on the submitted reports.</p>		N/A	1. 佐久間慶子、福島亜紀子著 栄養と遺伝子のはなしー分子栄養学入門 技報堂出版 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 3. 田村隆明著 基礎から学遺伝子工学第3版				
		Materials	Remarks				
		Materials will be distributed as needed.	N/A				

Subject	Advanced Lectures on Immunology	Prof. Kenichi Ishibashi	Compulsory	<input checked="" type="checkbox"/> Selective	2 credit
Course goals					
Under the theme of understanding diseases caused by disorders of the immune system, including allergies, and the impacts of lifestyle habits on the immune system, the goal of this course is to become able to understand the formation of general immunity and mucosal immunity, their connection with allergic diseases, stress and immunity, and the circadian rhythm of the immune system, and to examine and understand study cases regarding immunity and its related fields.					
Course Summary					
This course will provide lectures on immunity-related diseases and the connection between lifestyle habits and immunity. Students will have discussions on the topics of their interests to deepen understanding of these topics.					
Course Plan					
<div> <div> 1) 2) Basics of immunity – How the immune system protects the body 3) 4) Circadian rhythm of the immune system – Mechanism of the body clock and its role in maintaining health 5) 6) Stress and immunity – Interaction between the nervous and endocrine systems and the immune system 7) 8) Local mucosal immunity – Mucosal immunity as a preventive device against foreign invasion </div> <div> 9) 10) Allergy – Tissue damage by immunological mechanisms, food allergy and its management 11) 12) Functions of intestinal flora and immunity 13) 14) Food and immunity – use of supplements, etc. </div> </div>					
Work to be done outside of class (preparation, etc.)					
In order to actively participate in class, students are required to search for literature on the key words of each lecture and the connection between the research theme they are planning to use and this special topic, and read it in advance (200 minutes per week).					
Grading criteria			Textbooks	References	
Evaluation will be based on participation in discussions of lecture content.			PowerPoint handouts, etc., will be distributed as needed.	「新版微生物と免疫」(林修編著、建帛社)、「栄養科学イラストレイテッド 生化学 改訂第2版」(園田 勝編、羊土社)、「時間生物学事典」(石田直理雄・本間研一編、朝倉書店)、「ストレスの事典」(河野友信・石川俊男編、朝倉書店)、「免疫と栄養」(横越英彦編、幸書房)、「臨床粘膜免疫学」(清野宏編、シナジー)	
			Materials	Remarks	
			PowerPoint slides for lectures	Online classes may be used in conjunction with the program, depending on the situation.	

Subject	Advanced Lectures on Exercise and Pathophysiology	Prof. Toshikazu Yamashita	Compulsory	<input checked="" type="checkbox"/> Selective	2 credit
Course goals					
<p>The course aims to help students become able to make a presentation and have discussion with other students using the theme of exercise-induced asthma as a model for considering the interaction between sports and health.</p>					
Course Summary					
<p>To complete research activities, it is essential to repeatedly go through the process consists of getting ideas, planning, experiments and surveys, data aggregation, consideration, and presentation and discussion. In the first half of this course, students will learn the current situations surrounding exercise-induced asthma through literature etc., and then they will learn techniques to aggregate data using model data. In the second half, students will practice skills to prepare and make presentation, attempting to accomplish effective discussion.</p>					
Course Plan					
<div> <div> 1) What is exercise-induced asthma? 1: Identify issues surrounding exercise-induced asthma. Identify efficient ways to read academic papers in the natural sciences. 2) What is exercise-induced asthma 2: Consider the problems that exercise-induced asthma brings to children's growth and society. 3) Research method 1: Physiological experiments using model animals and cells 4) Research method 2: Physiological experiments using human body measurements 5) Research method 3: Effective online questionnaire method 6) Research method 4: Data aggregation by PC 7) Research method 5: Data storage and backup </div> <div> 8) Presentation techniques: Watch videos of excellent presentations to check skills and practice them. 9) Discussion techniques: Thinking about constructive discussion methods in natural science. 10) Presentation and discussion exercise 1 11) Presentation and discussion exercise 2 12) Presentation and discussion exercise 3 13) Presentation and discussion exercise 4 14) Reflection and summary </div> </div>					
Work to be done outside of class (preparation, etc.)					
<p>If students wish to learn more about topics they are interested in, those topics will be given priority. Therefore, students are required to be prepared to present their own research topics at all times. (Preparation time is about double the class time.)</p>					
Grading criteria			Textbooks	References	
<ul style="list-style-type: none"> •Participation in class (50%) •Presentation (50%) 			Handouts will be distributed as needed.	N/A	
			Materials	Remarks	
			N/A	N/A	

Subject	Advanced Lectures on Pathological Cytology	Prof. Toshihide Shiotsu	Compulsory	<input checked="" type="checkbox"/> Selective	2 credit
Course goals and Summary					
<p>Course goals and summary: A pathological diagnosis is regarded as the final diagnosis of a disease in clinical practice and has important implications in deciding on a course of treatment for a patient and other aspects. It is occasionally used as a judicial document and evidence. In histopathological diagnosis, cytodiagnosis sometimes gives greater insights than histodiagnosis and plays a significant role. In addition to learning histopathological proofs and various diagnostic techniques, the study of clinical cytology is critical to gaining a deeper understanding of disease. In this course, students will learn pathological background, specimen preparation methods, and the characteristics of tissue and cell images, which are all necessary to determine the benignancy or malignancy, tissue type, and other aspects of tumor cells based on cell images while comparing macro and micro images. Further, students will also learn auxiliary diagnoses, such as specific immunostaining. Students study anatomy, pathology, and cytology as the basis of diseases and pathological conditions, and acquire sufficient research skills, in order to acquire advanced academic knowledge and expertise from a broad perspective as a nationally certified professional in the health sciences, in relation to the DP.</p>					
Course Plan					
<p>1) The role of cytodiagnostics. 2) Origin of vital organs 3) Macroscopic view. Touching the organs. (a) 4) Macroscopic view. Touching the organs. (b) 5) Preparation of tissue specimen, how to view and cut out the specimen. (a) 6) Preparation of tissue specimen. how to read and cut out the specimen. (b) 7) Looking at tissue specimens. (a) 8) Looking at tissue specimens. (b)</p>			<p>9) Learn basic staining methods. (a) 10) Learn basic staining methods. (b) 11) To compare tissue and cytological diagnosis. (a) 12) To compare tissue and cytological diagnosis. (b) 13) To understand the basics of immunostaining (a) 14) To understand the basics of immunostaining. (b)</p>		
Work to be done outside of class (preparation, etc.)					
<p>When learning, always keep in mind anatomy, histology, and general pathology as you organize content presented in the class, and check the textbook.</p>					
Grading criteria		Textbooks	References		
<p>▪ In-class performance (50%) ▪ Report (50%)</p>		Use undergraduate textbooks on anatomy and histology, pathology, and cytodiagnosis.	Textbooks are considered sufficient, but reference materials will be introduced as needed.		
		Materials	Remarks		
		N/A	The location of the class will be announced on a case-by-case basis.		

Subject	Advanced Lectures on Clinical Hematology	Prof. Kenji Ikebuchi	Compulsory	<input checked="" type="checkbox"/> Selective	2 credit
Course goals and Summary					
<p>Course goals: Students will acquire practical skills through practices of blood tests, bone marrow tests and blood transfusion tests.</p> <p>Hands-on learning: Students will learn the meaning of the tests necessary for the diagnosis of hematologic diseases, the test items and combinations necessary for differential diagnosis, and will become able to interpret the test results. Students will also learn how to read peripheral blood and bone marrow hemograms to some extent.</p>					
Course Plan					
<div> <div> 1) Blood counts (leukocytes, erythrocytes, Hb, Ht, MCV, MCH, MCHC, reticulocytes, differential leukocyte counts) 2) Microscopic observation of peripheral blood smear image (i) (Keywords: leukocyte classification, immature myelocyte, toxic granule, hypersegmented neutrophil, left shift) 3) Microscopic observation of peripheral blood smear image (ii) (Keywords: spherocyte, schistocyte, giant platelet) 4) Anemia tests (Keywords: iron, total iron binding capacity (TIBC), ferritin, vitamin B12, folic acid, haptoglobin, bilirubin) 5) Bone marrow examination (Keywords: hypercellular bone marrow, hypoplastic marrow, M:E ratio, megakaryocyte count) 6) Microscopic observation of myelograms (i) (Keywords: blasts, immature myelocyte mature neutrophil, erythroblast, megakaryocyte) 7) Microscopic observation of myelograms (ii) (Keywords: plasma cell, lymphocyte, abnormal lymphocyte) </div> <div> 8) Myelography and special staining (Keywords: peroxidase stain, esterase stain, PAS stain, iron stain) 9) Hematopoietic stem cell transplantation (i) (Keywords: bone marrow transplantation, peripheral blood stem cell transplantation, CD34 positive cell) 10) Hematopoietic stem cell transplantation (ii) (Keywords: umbilical cord blood transplantation, umbilical cord blood banking) 11) Hands-on learning (i) (Keyword: iron deficient anemia) 12) Hands-on learning (ii) (Keywords: myelodysplastic syndrome) 13) Hands-on learning (iii) (Keywords: acute leukemia) 14) Summary </div> </div>					
Work to be done outside of class (preparation, etc.)					
Review the handouts used in class and check your own understanding of the class. Approximately 200 minutes per week.					
Grading criteria		Textbooks	References		
Participation in class and a simple oral examination during class will be used to check for understanding.		Handouts will be distributed as needed.	「病気が見える vol.5 血液」医療情報科学研究所編、メディックメディア		
		Materials	Remarks		
		N/A	N/A		

Subject	Advanced Lectures on School Health Nursing	Prof. Nobuko Endo	Compulsory	<input checked="" type="checkbox"/>	Selective	2 credit
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Course goals and Summary

Based on the significance and purpose of school health, students will be able to recognize the current physical and mental health problems and developmental issues of children, as well as the actual conditions and various issues surrounding school health, and to explore and understand what is desired of school health, how to improve it, and approaches to problem-solving.

Students will learn about the reality of children growing up under the influence of changing societies and families through changes in politics, culture, economy, education, etc. The course will also cover the various problems and issues that school health is currently facing; in relation to the roles of school nurse teachers who are central to school health, school education and school health organization activities, school health and safety planning, and cooperation between families, local communities, and specialized institutions. The course will also consider how the school works as a team and how to cooperate with other actors in school health to solve problems.

Course Plan

The first and the last sessions will be face-to-face lectures, but the second and subsequent sessions will be held online depending on the number of students enrolled and the circumstances.

1) Meaning and purpose of school health, domain and structure (common lecture with nutrition science course): Students will learn about the significance and purpose of school health in light of contemporary health issues and health needs. In addition, students will learn about the domain and structure of school health and the relationship between school education and school health. (Keywords: health issues, health education, health management)

2) History and transition of school health (common lecture with nutrition science course): Students will learn about the historical changes in school health and associated changes in the role of the school nurse teacher. (Keywords: school health, history, school nurse guidance, school nurse teacher)

3) 4) 5) Trends in pupils' health issues and school health: Students will research and discuss the changes in pupils' health issues and recent trends and issues in school health, then explore possible ways to solve such issues. (Keywords: truancy, bullying, abuse, Council for the Implementation of Education Rebuilding)

6) – 10) Research methods in the field of school health: Students will examine literature adopting different research designs for investigation of actual conditions and problem-solving in school health to learn about various research methods. (Keywords: research plan, research design)

11) 12) Collaboration and partnership between school nurse teachers and nutrition teachers (common lecture with nutrition science course): Students will choose one issue on school health or pupils' health common to both school nurse teachers and nutrition teachers and come up with a collaborative scheme (research project, education program, policy proposal, etc.) to address the issue. (Keywords: problem identification, assessment)

13) 14) Presentation and critique (common lecture with nutrition science course): Students will make a presentation on the current situation analysis and their scheme (solution, research plan, etc.) to each other and engage in discussion and critique. (Keywords: presentation, peer review)

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

For preparation, read the specified materials and do the assignments presented (about 100 minutes). For review, students will review the materials distributed during the lecture (about 100 minutes).

Grading criteria	Textbooks	References
<ul style="list-style-type: none"> Performance on assignments (70%) Report (30%) <p>The theme of the report will be the medium of the presentation and the manuscript of the presentation that each student gave in the 14th session.</p>	Textbooks will be assigned in the first class.	References will be assigned in the first class.
	Materials	Remarks
	Materials will be distributed as needed.	Students must participate at least once in a meeting of the Japanese Association of School Health or other related academic societies or attend a research class held at schools and submit a report on what they learned. Classes will be comprised of various forms, including lectures, discussions, hands-on tasks, and student presentations. As part of the graduate program, students are expected to invest all the knowledge and experience they currently have and independently engage in problem-solving.

Subject	Advanced Lectures on Mental Health at School	Prof. Tsukasa Sasaki	Compulsory	<input checked="" type="checkbox"/> Selective	2 credit		
Course goals							
The goal of this course is to help students acquire basic knowledge about children’s psychological development and disabilities and mental health and disabilities. Also, it aims to raise skills of students for the management of school nurse’s rooms and health consultation activities pertaining to mental issues to the professional’s level using the knowledge.							
Course Summary							
First, the knowledge on mental health learned in the undergraduate programs will be reviewed and more accurate knowledge will be acquired. Then, students will obtain knowledge and skills needed at school, including how to evaluate children’s mental health and disabilities, as well as developmental disabilities, response to children and their parents when they suspect problems, collaboration with other teachers and staff, how to improve knowledge of children, parents, teachers and staff members on mental health, and collaboration with physicians and other specialists. All issues will be covered in the forms of lectures, literature readings, and discussions.							
Course Plan							
<table><tr><td>1) General theory of school mental health 2) Child development, disability and related factors 3) Age of onset, frequency, course, and major symptoms of mental disorders 4) Assessment of mental health 5) Sleep, sleep disorder and orthostatic regulation disorder 6) Hyperventilation syndrome, anxiety, and adjustment disorder 7) Depression, bipolar disorder and related disorders 8) Schizophrenia, autism spectrum disorder and ADHD</td><td>9) Eating disorders and addictions 10) Early detection, early response and education on mental illness 11) Doing what you can: dealing with parents and teachers 12) Management of Health Office and Cooperation with School Counselor 13) How to continue sharing information with psychiatrists 14) Overview of school mental health: Confirmation of the contents of study</td></tr></table>						1) General theory of school mental health 2) Child development, disability and related factors 3) Age of onset, frequency, course, and major symptoms of mental disorders 4) Assessment of mental health 5) Sleep, sleep disorder and orthostatic regulation disorder 6) Hyperventilation syndrome, anxiety, and adjustment disorder 7) Depression, bipolar disorder and related disorders 8) Schizophrenia, autism spectrum disorder and ADHD	9) Eating disorders and addictions 10) Early detection, early response and education on mental illness 11) Doing what you can: dealing with parents and teachers 12) Management of Health Office and Cooperation with School Counselor 13) How to continue sharing information with psychiatrists 14) Overview of school mental health: Confirmation of the contents of study
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Work to be done outside of class (preparation, etc.)							
Students will be required to read articles related to the class theme as homework in order to improve their understanding of the class.							
Grading criteria			Textbooks	References			
<ul style="list-style-type: none">In-class performance (40%)Reports (30%)Exam during the final class session (30%)			N/A	佐々木 司・竹下君枝: 著、精神科医と養護教諭がホンネで語る思春期の精神疾患(少年写真新聞社)			
			Materials	Remarks			
			Other materials will be announced (or distributed) on a case-by-case basis.	The class will be a combination of lectures, discussions, and simulated practice. In all cases, be sure to take notes.			

Subject	Advanced Lectures on Gender Education	Prof. Toshimi Marui	Compulsory	<input checked="" type="checkbox"/> Selective	2 credit
Course goals and Summary					
<ul style="list-style-type: none"> •Students will become able to understand and explain the significance and necessity of sexuality education in school education. •Students will become able to understand that comprehensive sexuality education in school is structured based on facts and scientific evidence regarding sexual and reproductive health, sexuality, behavior, and attitude. •Students will become able to examine the current state of sexuality education in Japan in comparison with the situation in other countries and to specifically consider issues of sexuality education in Japan. 					
<p>Global trends in sexuality education are to see sexuality from the perspectives of human rights and science and to aim at ensuring the sexual health of all children. Meanwhile, in Japan, due in part to the sexuality education bashing which has continued since 2002, educators have tended to express a cautious attitude toward guidance on sexuality in school. Even now problems regarding sex related to youth continue to exist, highlighting that there remain issues due to the lack of appropriate sexuality education. In light of these circumstances, this course will examine the current state of sexuality education in Japan in comparison with the situation in other countries and consider issues of sexuality education in Japan and comprehensive sexuality education in school.</p>					
Course Plan					
<div> <div> 1) <u>Subject Orientation, the current status of sexuality education in other countries</u> (a) Orientation, sexuality education in other countries: Subject orientation and explanation of how students will be evaluated. Understand the differences between sexuality education in Japan and other countries from the perspectives of the lecturer, the subject, and the content, and think about issues in Japan. 2) <u>Understanding of sexual diversity</u> (b) Sexual diversity, SOGIE: Understand why it is important to learn about sexual diversity, learn how it is positioned in global organizations, and think about issues in Japanese school education. 3) <u>Understanding comprehensive sexuality education</u> (c) Comprehensive Sexuality Education (CSE): Based on the International Technical Guidance on Sexuality Education, which was revised in 2018, the lecture explains the purpose, target audience, and contents of CSE. 4) <u>Effective implementation of a CSE program</u> (d) Key concepts and curriculum development: The lecture explains key concepts, topics, and learning objectives of CSE as described in the International Technical Guidance on Sexuality Education. Elements necessary for the development of a CSE program will be discussed. 5) <u>Current status and issues surrounding sex and sexuality education in Japan</u> (e) Gender and young people's sexual behavior: The reality of gender equality in Japan and efforts thereof will be explained. Learn about the current state of sexual behavior among young people in Japan, and understand that sexual behavior is related to a variety of socio-environmental factors. 6) <u>Sexuality-related guidance in schools</u> (f) Sexuality-related guidance and government educational guidelines: The actual status of sexuality-related guidance provided at primary, secondary, high, and special-needs schools will be explained using sexuality guidance manuals issued by respective local governments and other reference materials. Based on educational guidelines, measures to enhance the effectiveness of sexuality-related instruction and matters necessary to achieve the objectives will be discussed. 7) <u>Prevention of sexually transmitted diseases</u> (i) Counseling and testing: Learn that sexually transmitted diseases, including HIV, can be prevented, treated, and managed, and discuss various skills for negotiating with a partner for safer sex and ensuring consent. </div> <div> 8) HIV/AIDS and our lives (h) Testing and treatment, employment of HIV-positive people: Understand domestic and international trends in HIV infection, and think about the lives of HIV-positive people. Think about our society living with HIV/AIDS, and learn about pep and prep. 9) <u>Pregnancy, childbirth and abortion as reproductive health/rights (1)</u> (i) Reproductive Health and Rights: Learn the knowledge necessary to take an autonomous approach to pregnancy, childbirth, and abortion from the perspective of reproductive health and rights. 10) <u>Pregnancy, childbirth, and abortion as reproductive health/rights (2)</u> (j) Contraceptive methods, self-determination: Various contraceptive methods will be explained. Consider support and sexuality education to help young people make independent choices about contraceptive methods. 11) <u>Responding to and preventing sexual violence through education</u> (k) Understanding sexual violence and prevention education: The reality of sexual abuse, sexual violence, partner violence and bullying will be explained. Students will think about ways to improve communication skills required of professionals who deal with sexual health and attitudes as a supporter. 12) <u>Partnership System and Same-Sex Marriage Litigation</u> (l) Local government initiatives and same-sex marriage lawsuits: This lecture explains the partnership ordinances and guidelines that are being implemented by local governments. Lawsuits for state compensation regarding same-sex marriages will be introduced, to examine why it is a violation of the Constitution and infringement of rights for two people of the same sex to be unable to marry. 13) <u>Sexuality Education Workshop (1)</u> (m) Presentation and group discussion Presentations and group discussions on the issues presented in the class to summarize the course. 14) <u>Sexuality education workshop (2)</u> (n) Presentation and group discussion Presentations and group discussions on the issues presented in the class to summarize the course. </div> </div>					
Work to be done outside of class (preparation, etc.)					
A list of literature related to the lecture will be distributed at the beginning of the course, so please study it beforehand.					
Grading criteria			Materials/References		
50% of the evaluation will be based on contribution to the progress of the class development (ordinary points) and 50% on submission of reports.			<p>参考書として、橋本紀子、池谷壽夫、田代美江子 編著『教科書にみる世界の性教育』かもがわ出版、2018 年、橋本紀子、田代美江子、関口久志編著『ハタチまでに知っておきたい性のこと』改訂版、大月書店、2017 年を使用するが、その他、資料を配付し、適宜、他の参考書を紹介する。</p>		

Subject	Advanced Lectures on Human Growth and Health	Prof. Shigeho Tanaka	Compulsory	<input checked="" type="checkbox"/> Selective	2 credit
Course goals					
The course aims to help students scientifically understand the evaluation methods and importance of nutrition status (obesity and thinness) and lifestyle habits, and to help students recognize their own awareness and solving methods of problems.					
Course Summary					
Nutritional status and the lifestyle habits such as diet, physical activity, sedentary behavior and sleep as the determinants are often discussed in children, but to truly understand them requires scientific interpretation based on appropriate assessment and investigation methods and experimental and research results for each. Therefore, based on the collection and interpretation of scientific findings and an understanding of evaluation methods and experimental design, we will explore issues and solutions related to lifestyle and nutritional status.					
Course Plan					
<div><div>1) Introduction: Importance of scientific evidence and thinking from the perspective of the discrepancy between "common knowledge" and scientific knowledge 2) 3) Method of collecting and reading literature 4) 5) Current status of obesity and thinness in children and evaluation methods 6) 7) Causes of obesity in children and countermeasures</div><div>8) 9) Current status and evaluation methods of physical activity and sedentary behavior in children 10) 11) Evaluation of lifestyle in general, including sleep 12) 13) 14) Conclusion and report writing</div></div>					
Work to be done outside of class (preparation, etc.)					
Students are expected to make a habit of organizing information obtained in class and from various media, etc., and investigating it on their own, not accepting information without questioning. In addition, students are expected to prepare reports on issues raised in class (e.g., review of papers) before attending each class. These self-studies will take about twice as much time as the class time.					
Grading criteria			Textbooks	References	
<div><div>In-class performance (50%)</div><div>Presentation (50%)</div></div>			N/A	N/A	
			Materials	Remarks	
			Materials will be prepared as needed.	N/A	

Subject	Advanced Lectures on Pedagogy in Nursing	Prof. Kumiko Ohnuma	Compulsory	<input checked="" type="checkbox"/> Selective	2 credit
Course goals					
Students will become able to explain the roles of yogo-teachers (school nursing teachers), who play a central role in school health activities, from various perspectives. In addition, they will become able to visualize and write about planning, operation, evaluation, and improvement processes based on the expertise of school nurse teachers and tangible examples of these through on-site observations at a school, etc.					
Course Summary					
The history and historical facts of Japanese yogo-teachers (school nursing teachers) will be examined from international perspectives. Based on the philosophy of health promotion, recent trends in educational reforms, and trends surrounding the physical and mental health of children and schools, discussions will be made on roles of yogo-teachers (school nursing teachers), who play a central role in school health activities, and how to plan, operate, evaluate, and improve the roles based on the expertise of nursing teachers in reference to actual conditions at schools and what are described in literatures.					
Course Plan					
<div> <div> 1) 2) The essence and concept of nursing; history of the school nurse system, and changes in the duties and roles of a yogo-teacher (a school nurse teacher) 3) 4) Curriculum and the yogo-teacher (school nurse teacher); school health activities and the school nurse teacher 5) 6) Cooperation with other teachers and staff on school health; special needs education and the school nurse teacher </div> <div> 7) 8) Qualities and abilities required of a yogo-teacher (a school nurse teacher); education for school nurse teachers (training at educational institutions, recruitment, in-service training) 9) 10) Adjacent research areas related to school nursing; challenges to promoting the work of yogo-teachers (school nurse teachers) 11) 12) Fieldwork in sectors related to school nursing 13) 14) Student presentations based on literature and fieldwork related to the duties, roles, and expertise of yogo-teachers (school nurse teachers). </div> </div>					
Work to be done outside of class (preparation, etc.)					
Collect and read the relevant literature. Students are expected to prepare for about twice as much time as the class time.					
Grading criteria			Textbooks	References	
Based on class participation (20%) and reports (80%). Breakdown of criteria for evaluating submitted reports are as follows: • Achievement of assignment objectives (40%) • Materiality to nursing practice (30%) • Supporting materials (10%)			新訂版 養護概説(ぎょうせい) * 事前に購入すること		
			Materials	Remarks	
			Materials will be distributed as needed.	Participation in seminars for school nurses may require payment of a fee. Some classes may be conducted online. In such cases, students will be notified in advance.	

Subject	Research Methods in Health Sciences I (Information Processing)	Prof. Hiromitsu Ogata	Compulsory	<input checked="" type="checkbox"/> Selective	1 credit								
Course goals													
<p>The topic of the course is basic methods of quantitative research. The objectives of the course are as follows.</p> <p>(1) Understand the basic methods of statistical surveys and be able to process the data obtained.</p> <p>(2) To be able to explain the basic theories of statistics necessary for data analysis.</p> <p>(3) To be able to explain the significance and calculation methods of various statistical indicators derived from data.</p> <p>(3) Explain the significance and calculation methods of various statistical indicators derived from data (4) Explain the outline of published health statistics</p>													
Course Summary													
<p>Students will learn the basic theories of statistics, significance and calculation methods of statistical indices, basic statistical survey methods, and statistical analysis methods necessary for conducting quantitative research in the fields of health and nutrition. In particular, students will learn the scientific concepts of data collection, analysis, and interpretation, with the aim of being able to conduct research that will provide scientific evidence in the fields of health and nutrition.</p>													
Course Plan													
<table><tr><td>1) Significance of statistics (Introduction)</td><td>5) Correlation and regression analysis</td></tr><tr><td>2) Methods of descriptive statistics</td><td>6) Statistical inference about frequency</td></tr><tr><td>3) Fundamentals of statistical estimation and testing</td><td>7) Interpretation and application of statistical analysis results</td></tr><tr><td>4) Statistical inference about mean value</td><td></td></tr></table>						1) Significance of statistics (Introduction)	5) Correlation and regression analysis	2) Methods of descriptive statistics	6) Statistical inference about frequency	3) Fundamentals of statistical estimation and testing	7) Interpretation and application of statistical analysis results	4) Statistical inference about mean value	
1) Significance of statistics (Introduction)	5) Correlation and regression analysis												
2) Methods of descriptive statistics	6) Statistical inference about frequency												
3) Fundamentals of statistical estimation and testing	7) Interpretation and application of statistical analysis results												
4) Statistical inference about mean value													
Work to be done outside of class (preparation, etc.)													
<p>Students are expected to prepare and review about 400 minutes per week for the assignments presented in each class.</p>													
Grading criteria		Textbooks	References										
<p>• In-class performance (30%)</p> <p>• Reports (70%)</p> <p>Report assignments will be presented in class.</p>		Handouts will be distributed as needed.	緒方裕光編著. 疫学・健康統計学. 建帛社; 2021										
		Materials	Remarks										
		N/A	N/A										

Subject	Research Methods in Health Sciences II (Experiments)	Prof. Akiko Fukushima	Compulsory	<input checked="" type="checkbox"/> Selective	1 credit
Course goals and Summary					
Based on the knowledge learned through Advanced Lectures on Molecular Biology, students will understand specific molecular biological techniques, such as nucleic acid extraction, gene amplification methods, and genetic transformation, and will become able to conduct simple operation. This contributes to students’ research competence in nutritional science and health science, as stated in the Diploma Policy.					
Course Plan					
1) 2) Preparation of genomic DNA 3) 4) Amplification of DNA by the PCR			5) 6) Recombinant DNA Experiments 7) Conclusion		
Work to be done outside of class (preparation, etc.)					
It is recommended that students spend at least 200 minutes in total for preparation and review for each class.					
Grading criteria		Textbooks	References		
Evaluation will be based on reports. Feedback will be given on the submitted reports.		N/A	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 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 3. 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		
		Materials	Remarks		
		Handouts will be distributed as needed.	N/A		

Subject	Research Methods in Health Sciences III (Surveying)	A/Prof.Masaharu Kagawa	Compulsory	<input checked="" type="checkbox"/> Selective	1 credit
Course goals and Summary					
<p>In order to conduct a meaningful research, appropriate research design based on research objectives and adequate data management are essential. The goal of this course is to provide the Master of Health Sciences student with an understanding of the procedures for conducting appropriate research and the construction of a basic research design.</p>					
<p>This course is designed to provide an overview of research methods used in the health sciences, especially in surveying, through reading and discussion of research papers</p>					
Course Plan					
1) Conducting research (research, misconduct) 2) Deciding on a research theme: literature search and formulation of research hypotheses (research topic, literature search, hypothesis) 3) Cross-sectional and longitudinal (research study design, level of evidence) 4) Preparation and understanding of research methods (data collection, sample size)			5) Statistical analysis (descriptive statistics, inferential statistics) 6) Preparation of the research plan and submission to the Ethical Review Committee (ethics, ethical review) 7) Publication of research outcomes (poster presentation, oral presentation, paper writing)		
Work to be done outside of class (preparation, etc.)					
<p>Since the lecture will be related to actual research, students are expected to prepare their own research and participate in the discussion with their progress. It is desirable that students devote at least twice as many hours as the class hours to learning outside the class.</p>					
Grading criteria		Textbooks	References		
<ul style="list-style-type: none">In-class performance and comments in class (25%)Report assignments after each lecture (35%)Final report assignment (40%).		Handouts will be distributed as needed in advance.	N/A		
		Materials	Remarks		
		As a rule, lectures will be given using PowerPoint. Papers will be used in some cases.	The content may be changed depending on the number of students. In some cases, the lecture will be held as an online lecture using Microsoft Teams.		

Subject	Advanced Common Lectures on Research Methods in Health Sciences I ~IV	Prof. Hiromitsu Ogata	Compulsory	<input checked="" type="checkbox"/> Selective	1 credit
Course goals and Summary					
<p>The Graduate School of Kagawa Nutrition University and the the National Institute of Public Health have concluded a partnership agreement on human resource development and cooperation in research. Under this agreement, students are able to take some of the short-term training courses and, as special students, the courses offered in the specialized courses for long-term training by the National Institute of Public Health. By taking courses offered at the National Institute of Public Health, students will acquire skills necessary to play a leading role in the health sciences and social welfare through acquiring a wide range of knowledge and specialized skills in the fields of public health.</p> <p>Students can earn credits for the course of Advanced Common Lectures on Research Methods in Health Sciences I-IV, according to the number of hours for the course taken.</p>					
Course Plan					
<p>For more information on the training programs offered by the National Institute of Public Health, please visit the following website. https://www.niph.go.jp/entrance/r5/index.html</p>					
Work to be done outside of class (preparation, etc.)					
Read the related materials indicated in class, and prepare for and review the class.					
Grading criteria		Textbooks		References	
Evaluation will be based on a report assigned after the course at the National Institute of Public Health.		Refer to the class outline published by the National Institute of Public Health.		Refer to the class outline published by the National Institute of Public Health.	
		Materials		Remarks	
		Refer to the class outline published by the National Institute of Public Health.		Since the training courses offered by the National Institute of Public Health are originally intended for local government officials, graduate students of the university may not always be able to attend the training courses or class subjects of their choice if they do not meet the course requirements or if there are restrictions on the number of participants.	

Subject	Comprehensive Lectures on Health Sciences	Prof. Hiromitsu Ogata	Compulsory	<input checked="" type="checkbox"/> Selective	4 credit
Course goals and Summary					
<p>Comprehensive Lectures on Health Sciences is a compulsory course for the Health Science Program offered at the first semester of the first year prior to other courses. In principle, all of the full-time faculty members of the Health Science Program will provide 100 minutes lectures in turn. The course aims at providing students with opportunities to further understand the issues addressed in the three areas of health sciences and broaden the perspective to make good use in their own research.</p>					
Course Plan					
<p>1) 2) <u>Prof. Ken Kawamura</u>: One of the risk assessments of environmental substances is the assessment of human health. It is often assessed based on the results of epidemiological studies and animal experiments on humans. To be able to explain the outline of risk assessment using the relationship between environmental factors, including food, and cancer as an example.</p> <p>3) 4) <u>Prof. Shoji Shinkai</u>: Knowing healthy life expectancy and its related factors is essential for developing community health activities based on scientific evidence. To understand the outline of the "New Guidelines for Healthy Longevity" derived from long-term longitudinal epidemiological studies, and to learn about the latest good practices in community health activities.</p> <p>5) 6) <u>Prof. Hiromitsu Ogata</u>: Scientific prediction of the effects of risk factors on health and appropriate countermeasures are one of the important issues in health science. Quantitative risk assessment and its application based on scientific data analysis and theory will be explained with specific examples.</p> <p>7) 8) <u>A/Prof. Masaharu Kagawa</u>: What is "kin anthropometry", and the current status and issues of its use in the fields of health and sports medicine and public health.</p> <p>9) 10) <u>Prof. Yoshinori Kaneko</u>: Development, dissemination, and evaluation of exercise methods and equipment that can be easily implemented by individuals, local governments, and NPOs to promote health, as well as the possibility of using parks as places for health promotion, based on past practical activities and research.</p> <p>11) 12) <u>Prof. Naoko Igoshi</u>: This lecture will explore the current situation and problems related to medical care through field experience and consider the future image, with the task of pursuing the ideal way of a clinical laboratory technician who has studied nutrition.</p> <p>15) 16) <u>Prof. Ken-ichi Ishibashi</u>: Immunity is one of the biological systems involved in homeostasis, and is involved in health maintenance and disease development. We will learn about the function of immunity in the onset and prevention of diseases, and introduce the relationship between immunity and health maintenance and medicine.</p>			<p>17) 18) <u>Prof. Shunichi Yamashita</u>: This lecture will introduce research papers on exercise physiology and sports medicine that have been published, and explain how to identify research topics, and how to conduct research using experimental materials and human subjects.</p> <p>19) 20) <u>Prof. Nobuko Endo</u>: To discuss school health from multiple perspectives, including what school health is, and the changes in school health, students, and social needs. Current issues and future policies and measures related to school health will also be discussed.</p> <p>21) 22) <u>Prof. Shigeo Tanaka</u>: To summarize the findings on the effects of lifestyle assessment methods such as physical activities, sedentary behaviors, sleep, and meals on various health issues in children, and to learn how to think scientifically and present future issues.</p> <p>23) 24) <u>Prof. Kumiko Onuma</u>: To discuss the unique system of nurse teachers in Japan, the historical background of nurse teachers, the duties and roles of nurse teachers as school educators, and the future role of nurse teachers in team schools, based on the research on nurse practice.</p> <p>27) 28) Survey & Utilization of Literature Survey</p> <p>29) 30) Presentation Skills Seminar</p> <p>31) 32) Lecture on the new ethical guidelines and guidelines</p>		
Work to be done outside of class (preparation, etc.)					
<p>Pay attention to news in newspapers and other media so that you can understand various aspects of society in a more scientific and objective manner, be aware of global trends, and try to deepen your understanding of a wide range of fields.</p>					
Grading criteria			Remarks		
<p>Evaluation will be made on the basis of participation in class and submission of reports.</p>			<p>Students must also attend the literature search/utilization and presentation skill improvement seminar, and lectures on new ethical guidelines and other guidelines (research ethics education workshop).</p>		

Subject	Comprehensive Seminars on Health Sciences	Prof. Kenichi Ishibashi	Compulsory	<input checked="" type="checkbox"/>	Selective	2 credit
Course goals and Summary						
<p>This course is offered in the second semester of the first year and the first semester of the second year with the attendance of all concerned faculty members and students.</p> <p>In the Comprehensive Seminars in the second semester of the first year, students shall select literatures in the international academic journals relevant to their research themes under the guidance of their supervisors and explain what are described in the literatures. Further, faculty members and students will discuss what can be used as a reference for the research of the student, as well as the limitations and possible improvement of research in the selected papers. The course aims to help students read and fully understand the overseas literatures. In the first semester of the second year, students will make presentations on the original plans, progress, future plans, and challenges of their research and get a chance to have advice toward the completion of their master's thesis. As this comprehensive seminar will be a valuable opportunity to learn about various fields of health sciences, students are requested to proactively participate in the discussion.</p>						
Course Plan						
<div> <div> <p>It will be held in the second semester of the first year (November–December) and the first semester of the second year (June–July).</p> <p>The schedule will be decided separately, but one to three students will give presentations per day during the 5th and 6th periods on weekdays.</p> </div> <div></div> </div>						
Work to be done outside of class (preparation, etc.)						
<p>This exercise is the milestone of the two-year master's course. Each student is expected to prepare systematically according to the theme of his/her master's thesis so that he/she can give a presentation that meets the purpose of the general seminar.</p>						
Grading criteria			Textbooks	References		
<p>Students will make one presentation each in the second semester of the first year and the first semester of the second year, and will be evaluated based on the content of their presentations and their participation in discussions.</p>			N/A	N/A		
			Materials	Remarks		
			Materials will be prepared by students and distributed.	N/A		