| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ001 | Human Anatomy: Lecture | 1 | 2.0 | 1 | SprAB | Wed1,2 | 4F204 | Takashi Shiga,Michito Hamada | 1.肉眼解剖学ー人体についての骨学、筋学、脈管学、神経学、内臓学の基礎を学び、それらの知識が臨床分野にどのように応用されているかを理解する。<br>2.顕微鏡解剖学ー人体各器官の組織学・微細構造学を学び、各器官の機能する有様を細胞、更には分子レベルにおいて理解する。 | 【医物必修】電子・物理工学専攻「医工学コース」 |
| 01EQ002 | Human Anatomy: Laboratory Course | 3 | 1.0 | 1, 2 | Sum Vac | Intensive | 4A111 | Takashi Shiga,Tomoyuki Masuda | 人体構造を解剖標本の見学実習により正確に把握する。人体構造学概論を受講することを、履修の要件とする。 | |
| 01EQ045 | Lecture in Human Physiology | 1 | 1.0 | 1 | SprA | Thu4,5 | | Tadachika Koganezawa,Masayuki Matsumoto,Hiroshi Yamada,Jun Kunimatsu | Systematic understanding of human physiological functions.<br>Goal: Upon completion of this course, students will be able to discuss functional mechanisms on various human functions. | Lectures are conducted in English. |
| 01EQ046 | Topics in Biochemistry | 1 | 1.0 | 1 | SprAB | Mon1 | 4F204 | Aya Fukuda,Kenji Irie,Koji Hisatake,Kazuhiko Uchida,Tomoaki Mizuno,Kensuke Shiomi,Kazuko Keino-Masu | ヒトの生理機能とその異常である疾患を分子レベルで研究する為に必要な生化学の基本的事項を学習する。 | Lectures are conducted in English. |
| 01EQ004 | Clinical Medicine | 1 | 2.0 | 1 | FallAB | Tue1,2 | 4F204 | Junichi Shoda,Tetsuaki Arai,Yasushi Kawakami,Takeji Sakae,Kazuhiro Takekoshi,Akira Tamaoka,Shigeru Chiba,Hiroyuki Nishiyama,Hideo Suzuki,Isao Matsumoto,Kensaku Mori,Kazumasa Isobe,Yusuke Ohara | 臨床医学の実践とは病める人を対象として、その人の持つ問題点を抽出し、それを把握した上で、その人の価値観と決定に従って治療することである。そしてその患者に満足してもらい幸せになってもらうことを目指している。このような臨床医学の基本的事項と分化した各専門分野の現状についても理解する。 | 【橋必修】電子・物理工学専攻「医工学コース」 |
| 01EQ005 | Introduction to Social Medicine | 1 | 2.0 | 1 | SprAB | Thu1,2 | | Masao Ichikawa,Mizuho Fukushige,Nanako Tamiya,Nobuaki Morita,Tamaki Saito,Yasukazu Ogai,Kazumasa Yamagishi,Masahide Kondo,Yukiko Wagatsuma,Masahiko Gosho,Ganchimeg Togoobaatar,Tomoko Ito,Shinichiro Sasahara,Reiko Okubo,Ai Hori,Daisuke Hori,Katsuya Honda,Yukiko Sugano | 人びとの健康に寄与する要因が多岐にわたること、人びとの健康を増進するには学際的な取り組みが欠かせないことを理解することを目標とする。社会医学の今日的課題をさまざまな観点から論じることができる。 | 【橋必修】【公必修】【ヒ必修】電子・物理工学専攻「医工学コース」<br>Identical to 0AS0507.<br>Lectures are conducted in English. |

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|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ007 | Introduction to Epidemiology | 1 | 1.0 | 1, 2 | SprAB | Tue3 | 4F204 | Yukiko Wagatsuma | Epidemiology is the study of factors affecting the health and illness of populations, and serves as the foundation and logic of interventions made in the interest of public health and preventive medicine. The aim of this course is to learn the fundamental concepts and uses of epidemiology, and its role in formulating principles. | 【公必修】電子・物理工学専攻「医工学コース」<br>Lectures are conducted in English. |
| 01EQ008 | Topics in Medical Science | 1 | 1.0 | 1, 2 | Sum Vac | by appointment | | Kenji Irie | 医学研究の最先端や基礎医学・臨床医学、社会医学の境界を超えた学際的なテーマについてトピックスを取り上げ希望によりコースを選択して学習する。各教員が研究者としてどの様なテーマに取り組んでいるかを学びながら、問題点を的確にとらえ、解決するための方法論、その議評価法、現代医学の限界や今後の展望について学習する。 | 9/7-9/11 |
| 01EQ010 | Applied Medical Information Technology: Lecture | 1 | 1.0 | 1 | SprAB | Fri6 | 4F204 | Makoto Ohara | Goal: Get an overview of the "electronic health record"(EHR) system. Understand medical information and an overview of the EHR system. Then, after understanding how medical information and its processing technology support scare in modern Japan and support the functions of hospitals, we consider how we can develop medical care in the future, and consider the ideal medical practice plan. The latest knowledge will also be introduced. | |
| 01EQ011 | Biostatistics | 1 | 1.0 | 1 | SprAB | Wed3 | 4F204 | Masahiko Gosho,Kazushi Maruo | This course aims to equip students with understanding basic statistical methods and with interpreting the analysis results, and with applying them for their medical studies. Students will learn statistical test, estimate, correlation, regression, analysis of variance, multivariate analysis, survival analysis. | 【橋必修】【公必修】電子・物理工学専攻「医工学コース」<br>Lectures are conducted in English. |
| 01EQ012 | Biostatistics in Practice | 3 | 1.0 | 1 | SprAB | Wed5,6 | 4F305 | Kazushi Maruo,Masahiko Gosho | The goal of this course is for students to acquire skills in biostatistical practice. Using SAS OnDemand for Academics, students will learn how to analyze the actual data and to implement the statistical methods in medical researches. | Lectures are conducted in English. |
| 01EQ013 | English in Medical Science and Technology I | 1 | 1.0 | 1 | SprAB | Mon2 | 4F305, 4F204 | Flaminia Miyamasu,Thomas David Mayers,Bryan James Mathis | The goal of this course is for students to develop the English proficiency they need to effectively and energetically communicate their professional achievements within the international scientific community. To this end, students will be divided into three classes and will take four modules. In the first module, they will study the basics of scientific communication. Thereafter, they will rotate through three modules on scientific writing, scientific presentation, and multimedia communication. Classes will be conducted entirely in English, so students will also hone their listening skills. Upon completion of the course, students will have a foundation for sharing their knowledge and ideas with other scientists in English. | 【医必修】<br>Lectures are conducted in English. |
| 01EQ014 | English in Medical Science and Technology II | 1 | 1.0 | 1 | FallAB | Mon5 | 4F305, 4F204 | Flaminia Miyamasu,Thomas David Mayers,Bryan James Mathis | Dependent on the module they took in the English in Medical Science and Technology I course, students will rotate through two of the following modules: Scientific Writing, Scientitific Presentation, Scientific Multimedia Communication. As in the spring semester, classes will be conducted entirely in English, so students will also hone their listening skills. Upon completion of the course, students will have a foundation for sharing their knowledge and ideas with other scientists in English. | 【医必修】<br>Lectures are conducted in English. |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
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| 01EQ016 | Lecture and Seminar on Research Management (Basic) | 1 | 1.0 | 1 | SprC | by appointment | 4F204 | Koichi Hashimoto | This course aims to equip students with an acquiring of the basic knowledge and skill to be needed for the promotion of various research and development projects. | 【医必修】【橋必修】 |
| 01EQ018 | Dissertation in Medical Sciences | 2 | 8.0 | 2 | Annual | by appointment | | Chair of Medical Sciences | 医科学の各専門領域に関連する実験、調査、解析、分析などの手法を取得させ、修士論文の作成の指導を行う。 | 【全必修】<br>Lectures are conducted in English. |
| 01EQ019 | Internship I | 3 | 1.0 | 1, 2 | Annual | by appointment | | Chair of Medical Sciences | This course offers opportunities for internship at hospitals, national institutes, private companies, etc. The internship is performed in the authorized institutions, or other institutions after getting permission of the internship committee. Through this internship program, future role expected for the students in Medical Science Program is understood. | 【医必修】【医物必修】【橋必修】 |
| 01EQ020 | Internship II | 3 | 1.0 | 1, 2 | Annual | by appointment | | Chair of Medical Sciences | This course offers opportunities for internship at hospitals, national institutes, private companies, etc. The internship is performed in the authorized institutions, or other institutions after getting permission of the internship committee. Through this internship program, future role expected for the students in Medical Science Program is understood. | |
| 01EQ023 | Seminar on Basic Medical Sciences | 2 | 3.0 | 1 | Annual | by appointment | | Chair of Medical Sciences | 医科学の各研究分野では、それぞれの分野に応じた独創的な研究が展開されている。 修士論文研究の遂行上必要となる先端的な研究テーマを各自選び、紹介すると共に討論することによって自身の研究戦略を明確にする。 | 【医物必修】<br>Lectures are conducted in English. |
| 01EQ047 | International Medical Sciences Exchange Program I | 1 | 1.0 | 1, 2 | Annual | by appointment | | Kazuya Morikawa,Kiong Ho,Tadachika Koganezawa | Students are required to go abroad and attend International meetings or International internship to discuss with many scientists to broaden their view and understand own place in the world. | Lectures are conducted in English. |
| 01EQ048 | International Medical Sciences Exchange Program II | 1 | 2.0 | 1, 2 | Annual | by appointment | | Kazuya Morikawa,Kiong Ho,Tadachika Koganezawa | Students are required to go abroad and attend International meetings or International internship to discuss with many scientists to broaden their view and understand own place in the world. | Lectures are conducted in English. |
| 01EQ049 | International Medical Sciences Exchange Program III | 1 | 3.0 | 1, 2 | Annual | by appointment | | Kazuya Morikawa,Kiong Ho,Tadachika Koganezawa | Students are required to go abroad and attend International meetings or International internship to discuss with many scientists to broaden their view and understand own place in the world. | Lectures are conducted in English. |
| 01EQ025 | Seminar for International Students | 1 | 1.0 | 1, 2 | | | | | This course provides international students with an opportunity to get prepared for disasters they might face in Japan. | 【留学生対象】<br>Lectures are conducted in English.<br>Not open in 2020. |
| 01EQ038 | Medical Science Seminar I: Brain Science Seminar | 1 | 1.0 | 1, 2 | Annual | by appointment | | Masayuki Matsumoto | 分子レベルから形態・機能・臨床医学、社会医学にまでおよぶ神経科学のさまざまな分野で活躍する第一線の研究者が行う最新のトピックスに関するセミナーに出席し、討論に参加する。 | (第2または第3火曜) |
| 01EQ039 | Medical Science Seminar II: Biochemistry and Molecular Biology | 1 | 1.0 | 1, 2 | Annual | by appointment | | Kenji Irie | 医学生物学研究の最前線にいる研究者によるセミナーに出席し、最新の知識を学び、研究の進んでいく過程を具体的に理解する。 | |
| 01EQ040 | Medical Science Seminar III: Immunology | 1 | 1.0 | 1, 2 | Annual | by appointment | | Kazuko Shibuya | 免疫学および関連科学分野における最新のトピックスに関するセミナーに出席し、専門研究者の討論に参加する。学んだ内容や印象をレポートにまとめる。 | |
| 01EQ041 | Medical Science Seminar IV: Primary care | 1 | 1.0 | 1, 2 | Annual | by appointment | | Hisako Yanagi,Tetsuhiro Maeno | プライマ・ケアや保健医療福祉の現場で活躍する第一線の研究者が行う最新のトピックスに関する講義に参加し、現場の最前線を知るとともに、プライマ・ケアや保健医療福祉ののの最新の研究成果について、自分自身の研究分野との関連で議論する。<br>トピック:プライマ・ケア、保健医療福祉 | Identical to 0AS0504. |

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| 01EQ042 | Medical Science Seminar V: Career Path | 1 | 1.0 | 1, 2 | Annual | by appointment | 4F204 | Makoto Kobayashi, Kenji Irie, Takashi Matsuzaka, Seiya Mizuno, Keiko Ookawa, Satoko Tahara, Michito Hamada, Yukihide Watanabe | Visiting lecturers including alumni, from a variety of medical fields will make lecture about their business, life, future and school days story. You will also have opportunity to make a group discussion and/or interview with them, and to improve your presentation skills.<br>1. Experiences of Alumni (Career Path Development): Lecture<br>2. Group discussion with alumni, seniors, faculties and classmates<br>3. Writing and speaking practice | 【医必修】【橋必修】<br>3 or 4 lecture times in Saturday afternoon or weekday night. Lectures are conducted in both English and Japanese. |
| 01EQ053 | Medical Science Seminar VI: epidemiology and biostatistics | 1 | 2.0 | 1, 2 | Annual | Tue6 | 4G121 | Yukiko Wagatsuma, Masahiko Gosho | This course assists students in learning steps through the discussions over textbooks and articles in epidemiology and biostatistics. We encourage students majoring in epidemiology and biostatistics should attend the course. | Subject to the enrolled students in or after 2015.Conducted in the classroom 4G121. Lectures are conducted in English. |
| 01EQ060 | Medical Science Seminar VII:Seminar of Clinical Study | 1 | 1.0 | 1, 2 | Annual | by appointment | | Koichi Hashimoto | 疫学や生物統計学に関する講義の補完として、疫学や生物統計学分野で活躍する第一線の研究者が行う最新のトピックスに関する講義に参加し、現場の最前線を知るとともに、疫学や生物統計学の最新の研究成果について、自分自身の研究分野との関連で議論する。また、原著論文を担当を決めて紹介し、セミナー形式にてディスカッションすることで学習効果を高める。<br>トピック:疫学、生物統計学 | 【橋必修】<br>Identical to OAS0505. |

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| 01EQ031 | Outline of Internal Medicine | 1 | 2.0 | 1 | FallAB | Wed7 Thu6 | 4F204 | Kunihiro Yamagata, Kazutaka Aonuma, Tatsuyuki Ohto, Yasushi Kawakami, Keisuke Kuga, Hitoshi Shimano, Hidetoshi Takada, Akira Tamaoka, Shigeru Chiba, Nobuyuki Hizawa, Yuji Mizokami, Chie Saito, Mamiko Sakata-Yanagimoto, Hidekazu Nishikii, Yayoi Miyazono, Akiko Ishii, Yuya Kondo, Naoyuki Hasegawa, Yosuke Matsuno, Kazuko Tajiri | 内科学、小児科学の概要について、特に成人、小児の基本的疾患について疾患概念、発症機序、診断、治療の概要について学ぶ。 | |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
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| 01EQ032 | Outline of Surgical Disorders | 1 | 1.0 | 1 | FallAB | Thu5 | 4F204 | Yukio Sato,Yoshiaki Inoue,Masanao Kurata,Yuji Hiramatsu,Koji Masumoto,Eiichi Ishikawa,Shinichi Inomata,Hideo Tsurushima,Hajime Mishima,Tetsuro Wada,Hiroshi Kamada | 外科学の概要を、各科の基本的疾患を中心にそれらの疾患概念、発症機序、診断、治療について学ぶ。 | |
| 01EQ033 | Innovative Clinical Biochemistry in Life Science | 1 | 2.0 | 1 | FallAB | Wed3,4 | 4F204 | Hitoshi Shimano,Yasushi Kawakami,Akira Tamaoka,Shigemi Hitomi,Shigeru Yatoh,Hiroaki Suzuki,Hiroyuki Suzuki,Motohiro Sekiya,Yoshimi Nakagawa,Naoya Yahagi | The object of this class is to learn basics of metabolism and enodocrinology such as etiology, pathology, diagnosis, therapy, and updated topics in the light of biochemistry. You will see the deep secrets of gene expression, metabolism, hormones, and signalings at the mocecular levels to understand physiology and pathophysiology in life science. | |
| 01EQ034 | Laboratory Medicine | 1 | 1.0 | 1, 2 | FallAB | Fri3 | 4F204 | Yasushi Kawakami,Kazuhiro Takekoshi,Kazuyoshi Yamauchi,Tomoko Ishizu,Kazumasa Isobe,Takayasu Kato | 分子生物学の進歩に伴い臨床検査分野でも遺伝子解析技術などの新しい技術が導入され、分子レベルでの"疾患の病態生理学"が構築されようとしている。本検査総論では、実際に疾患をとりあげ、最新の臨床検査医学を概説する。 | |
| 01EQ050 | English Discussion & Presentation on Medical Sciences I | 2 | 2.0 | 1, 2 | SprAB | Fri1,2 | | Kenji Irie,Tomoaki Mizuno,Hiroyuki Suzuki,Yasuyuki Suda | Boosting scientific communication in English, exploring biological sciences, and promoting international long-distance academic and research exchanges. | Lectures are conducted in English. |
| 01EQ051 | English Discussion & Presentation on Medical Sciences II | 2 | 2.0 | 1, 2 | FallAB | Wed1,2 | | Kenji Irie,Mitsuyasu Kato,Atsushi Kawaguchi,Satoru Takahashi,Hiroyuki Suzuki,Tomoaki Mizuno,Yasuyuki Suda,Yuji Funakoshi | Boosting scientific communication in English, exploring biological sciences, and promoting international long-distance academic and research exchanges. | Lectures are conducted in English. |
| 01EQ052 | Prominent Discoveries in Neuroscience | 1 | 1.0 | 1, 2 | SprA | Tue/Thu 7 | | Masashi Yanagisawa,Takeshi Sakurai,Hiroshi Nagase,Takashi Abe,Masanori Sakaguchi,Yu Hayashi,Michael Lazarus,Sakiko Honjoh | The goal of this omnibus course is to learn advanced principles in neuroscience, by reading "landmark" papers of historical significance in the broad area of neurobiology chosen by each instructor. | Code share with HBP Lectures are conducted in English. |

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| 01EQ054 | Scientific English for Neuroscience | 1 | 2.0 | 1 | FallAB | by appointment | | Tadachika Koganezawa | Communication skills in Neuroscience Rsearch | The class is held at University of Bordeaux. Lectures are conducted in English. |
| 01EQ055 | Neural Network | 1 | 3.0 | 1 | FallAB | by appointment | | Tadachika Koganezawa | Systematic understanding of the basic functioning of the networks of the central nervous system | The class is held at University of Bordeaux. Lectures are conducted in English. |
| 01EQ056 | Cognitive Neuroscience | 1 | 3.0 | 1 | FallAB | by appointment | | Tadachika Koganezawa | Understanding of the overarching relationships between cognition and biology. | The class is held at University of Bordeaux. Lectures are conducted in English. |
| 01EQ057 | Cellular and Molecular Neyrobiology | 1 | 3.0 | 1 | FallAB | by appointment | | Tadachika Koganezawa | Systematic understanding of the cellular and molecular aspects of Neuroscience | The class is held at University of Bordeaux. Lectures are conducted in English. |
| 01EQ061 | Scientific Ethics | 1 | 1.0 | 1, 2 | SprAB | Wed4 | 4F204 | Bryan James Mathis | This course will use traditional lectures and interactive presentations in the Socratic method for didactic learning. Students will also convene into groups for intensive discussion and reaction papers will be issued as homework to carry the learning outside of the classroom. Digital learning through iTunes modules will reinforce concepts using interactive technology. | Required for 1st-year students of the Ph.D. Program in Human Biology Lectures are conducted in English. |
| 01EQ062 | Scientific Critical Reading & Analysis | 1 | 1.0 | 1, 2 | SprAB | Tue1 | | Bryan James Mathis | After an initial lecture series on diagramming and presenting papers, students will take over as they each present a paper with an in-depth presentation. Didactic instruction will take place as discussion of the paper under the supervision of the instructor. Use of Powerpoint will reinforce basic presentation skills. Only English shall be used to present the paper and the language of data will be solely in English. A final exam will test student skill on unknown papers. | Lectures are conducted in English. |

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|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ101 | Human Pathology: Lecture | 1 | 2.0 | 1 | SprAB | Wed5,6 | 4F204 | Masayuki Noguchi,Mitsuyasu Kato,Michio Nagata,Hiroyuki Suzuki,Norio Takayashiki,Junko Kano | This subject is aiming to understand disease entity, etiology, morphological changes of the representative human diseases at molecular and clinical levels and to study the importance of pathology findings for diagnosis and treatment of the diseases. | 電子・物理工学専攻「医工学コース」 Lectures are conducted in English. |
| 01EQ102 | Laboratory Animal Science and Animal Experimentation | 5 | 2.0 | 1 | SprAB | Fri3-5 | 4F204 | Fumihiro Sugiyama,Seiya Mizuno | The course aims to equip students with understanding proper conduct of animal experiment and generation of gene-modified mice. Students also acquire basic skills for mouse handling, embryo manipulation and in vivo imaging.<br>Upon completion of this course, students will be able to discuss the use of gene-modified mice for studying human diseases. | Lectures are conducted in English. |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
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| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
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| 01EQ103 | Functional Structure and Laboratory Course | 5 | 2.0 | 1 | SprAB | Tue4-6 | 4F305 | Yosuke Takei, tetsuya sasaki, Fumihiro Shutoh, Michito Hamada | 組織学、特に、超微形態学の理論と実際について学ぶ。形態の研究法について様々な角度から紹介し、実習で組織の電子顕微鏡観察を行う。 | |
| 01EQ106 | Oncology | 1 | 2.0 | 1 | FallAB | Mon/Tue 4 | 4F204 | Masayuki Noguchi, Kenji Irie, Mitsuyasu Kato, Hideyuki Sakurai, Yukio Sato, Ikuo Sekine, Shigeru Chiba, Koji Hisatake, Koji Masumoto, Hiroyuki Suzuki, Norio Takayashiki, Yuji Mizokami, Takeo Minaguchi, Kensaku Mori, Takahiro Kojima, Kosuke Kato, Yuji Funakoshi | This subject is aiming to understand disease entity, etiology, and the progression mechanism of malignant tumor at the molecular level. The topics of the latest tumor research (basic) and diagnostic treatment (clinical) are also covered while aiming at acquiring basic knowledge. | Lectures are conducted in English. |
| 01EQ107 | Pharmacology | 1 | 1.0 | 1 | SprAB | Mon5 | 4F204 | Masayuki Masu, Takeshi Sakurai, Norihiko Ohbayashi, Kensuke Shiomi, Kazuko Keino-Masu, Takuya Okada, Yuji Funakoshi | The objective of this course is to learn the basic knowledge of pharmacology in the medical field. The students will study the interaction between the living body and endogenous or exogenous biological substances at the genetic, cellular, and individual levels and learn basic principles of drugs and toxins. | Lectures are conducted in English. |
| 01EQ131 | Human Infection and Immunology | 1 | 2.0 | 1 | SprAB | Mon3, 4 | 4F204 | Akira Shibuya, Kazuko Shibuya, Kazuya Morikawa, Atsushi Kawaguchi, Kiong Ho, Isao Matsumoto, Satoko Tahara, Hiroto Tsuboi, Chigusa Oda, TUKASA NABEKURA | To understand infection biology and immunology is the basis to develop a strategy for control of infectious diseases all over the world. In this course, students study the molecular mechanism of replication and pathogenicity of infectious microbes such as viruses and bacteria, and the structure and function of microbes-encoded factors and host cell-derived factors involved in the replication and pathogenicity. In addition, students also study the immune system, including adaptive and innate immunities, which is crucial for human health and survival. | Code share with HBP Lectures are conducted in English. |
| 01EQ109 | Genome Medicine | 1 | 2.0 | 1, 2 | FallAB | Tue5, 6 | 4F204 | Emiko Noguchi, Kazuhiro Takekoshi, Naoyuki Tsuchiya, Masayuki Noguchi, Masato Homma, Masafumi Muratani, Kazuya Morikawa, Koji Kawai, Ikuo Sekine, Hiroko Fukushima, Hiroko Miyadera | ゲノム科学の基本原理とその医学への応用方法を修得する。このために、人類遺伝学、遺伝医学、ゲノム疫学に関する主要な原理について解説を受けた後、診断・治療におけるゲノム診断とパーソナルゲノム情報の臨床応用に言及して、ゲノム情報を疾患の診断・予防・治療に役立てるための方法と課題について学習する。 | Lectures are conducted in English. |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ111 | Biomedical Engineering | 1 | 1.0 | 1 | SprAB | Tue2 | 4F204 | Hirotoshi Miyoshi, Keiko Ookawa, Yukio Nagasaki | The aim of this subject is to learn principles, mechanisms and applications of biological information measurement devices. This subject also aims to acquire knowledge of dynamic characteristic and biomechanics of blood circulation system. | Only for students who can understand Japanese. |
| 01EQ132 | Stem Cell Therapy | 1 | 1.0 | 1 | SprAB | Thu3 | 4F204 | Osamu Ohneda, Toshiharu Yamashita | The objective of this class is to learn basic knowledge and the latest research progress on regenerative medicine and stem cell biology fields by reading original articles. In addition, this class aims to improve individual ability to extract the point at issue of the article and discuss with other participants. Students read the latest original articles on regenerative medicine and stem cell biology and perform presentation. Students are expected to understand research purpose, methods, results, and to have a discussion about significance or problem of the article. | Code share with HBP Lectures are conducted in English. |
| 01EQ114 | Radiological Science | 1 | 2.0 | 1 | FallAB | Fri1, 2 | 4F204 | Takeji Sakae, Tomonori Isobe, Hideyuki Sakurai, Hiroaki Kumada, Hideyuki Takei, Yutaro Mori | 放射線医学を基礎および臨床の両面から理解する。基礎は放射線物理工学と生物学に関し、臨床は画像診断学、放射線腫瘍学および核医学を含め、その現状を学習する。また、放射線管理についても習得する。 | |
| 01EQ115 | Psychiatry | 1 | 1.0 | 1 | FallAB | Mon3 | 4F204 | Tetsuaki Arai, Shinji Sato, Hirokazu Tachikawa, Miho Ota, Sho Takahashi, Kiyotaka Nemoto, Yuki Shiratori | The objective of this course is to educate students for understanding the basic knowledge of both biological and psychological aspects of psychiatric disorders. The main themes of our research are dementia, depression, schizophrenia, eating disorder, perinatal psychiatric disorders, suicide prevention, disaster psychiatry, using the methods such as intervention, radiology, social psychiatry, neuropathology, and molecular biology. | |
| 01EQ117 | Clinical Gerontology | 1 | 1.0 | 1 | FallAB | Fri7 | 4F204 | Hisako Yanagi, Akira Tamaoka, Akiko Ishii, Hirofumi Matsui | 老年者に多発する疾患について学び、老年病の特異性を理解する。また、高齢社会を迎えた現在、老年病対策の現状を分析し、今後を展望する。 | |
| 01EQ118 | Pharmaceutical Sciences | 1 | 1.0 | 1 | FallAB | Wed6 | 4F204 | Masato Homma, Kentaro Hatano, Kosuke Doki | This course aims to lean pharmacokinetics for understanding drug efficacy and adverse effects in several aspects: 1) basic consideration of pharmacokinetic analysis, 2) pharmaceutical formulation for regulating drug disposition, 3) drug metabolizing enzymes and transporters. | 【橋必修】 |
| 01EQ119 | Critical Path Research Management | 1 | 2.0 | 1 | FallAB | Mon6, 7 | 4F204 | Koichi Hashimoto, Satoshi Matsusaka, Masafumi Muratani, Hideo Tsurushima, Takahiro Kojima, Takeshi Machino, Takeshi Yamada | This course aims to equip students with an aquiring of the basic knowledge and skill to be needed for the promotion of verious research and development projects. | 【橋必修】 Lectures are conducted in English. |
| 01EQ133 | Regulatory Science of Medical Products | 1 | 1.0 | 1 | FallC | by appointment | | Koichi Hashimoto | This course aims to equip students with an understanding of regulatory framework of medical products under the pharmaceuticals and medical devices act (PMD act).<br>Upon completion of this course, students will be able to explain regulatory framework of medical products, applications for marketing approval, review process and post marketing safety under the PMD act, National Health Insurance (NHI) pricing formula in Japan and relief services for adverse health effects. | 【橋必修】 |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
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| 01EQ134 | Appropriate Technology | 1 | 3.0 | 1, 2 | Annual | by appointment | | Kenji Irie | ″現地(途上国、国内過疎地域)のニーズ、文化、環境、人などを考慮したうえで、現地の人に必要とされる最善の技術を創出する。それにより、これからの社会で必要とされる問題解決力、現場対応力、起業力を身につける。<br>1. 適正技術の科目の履修に必要な基礎知識(適正技術教育、途上国や過疎地域の現状、フィールド活動等)について、講義と討論により学修する。<br>2. 現地(途上国、国内過疎地域)のニーズ、文化、環境、人などを考慮したうえで、現地の人に必要とされる最善の技術を創出する。<br>授業項目:<br>(1) 適正技術教育入門の受講<br>(2) 現地(途上国、国内過疎地域)へのフィールドトリップ<br>(3) 途上国向けの製品開発と討議、最終報告会での発表<br>(4) (1)~(3)のレポートの提出″ | Lectures are conducted in English. |
| 01EQ120 | Frontier Science in Drug Discovery | 1 | 1.0 | 1, 2 | FallAB | Wed5 | 4F204 | Satoru Takahashi | Scientific advancements during the past two decades have created a paradigm shift in drug discovery process from the traditional approach including long experiences and contingencies to innovative methods, which are based on logical approach utilizing the latest in computational simulation technology. The recent progress includes genome-wide identification of successful drug-target proteins and in silico designing and screening of lead compounds with the techniques of combinatorial chemistry. In addition, there has been remarkable progress in the field of ADME assessment and drug delivery system. This program will be focused on the fundamentals of the process of the drug discovery and development and strengthening of medical-pharmaceutical relations. | Code share with HBP<br>Lectures are conducted in English. |
| 01EQ420 | Environmental Health Perspective | 1 | 2.0 | 1, 2 | FallAB | Fri2 Fri3 | 4E608 | Yoshito Kumagai,Shinkai Yasuhiro | There are numerous chemical substances in the environment, resulting in some serious effects on the body. However, current molecular studies suggest that illnesses caused by exposure to environmental chemicals are, at least in part, attributable to the interaction with macromolecules like proteins in the organism. This lecture offers an opportunity to learn about a variety of symptoms caused by exposure of humans to environmental chemical and initial response and cellular protection against such chemicals. | 2018年度まで開講の01EQ406「予防環境医学」と同一。<br>Identical to 01AD605.<br>Lectures are conducted in English. |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ001 | Human Anatomy: Lecture | 1 | 2.0 | 1 | SprAB | Wed1,2 | 4F204 | Takashi Shiga,Michito Hamada | 1.肉眼解剖学ー人体についての骨学、筋学、脈管学、神経学、内臓学の基礎を学び、それらの知識が臨床分野にどのように応用されているかを理解する。<br>2.顕微鏡解剖学ー人体各器官の組織学・微細構造学を学び、各器官の機能する有様を細胞、更には分子レベルにおいて理解する。 | 【医物必修】電子・物理工学専攻「医工学コース」 |
| 01EQ023 | Seminar on Basic Medical Sciences | 2 | 3.0 | 1 | Annual | by appointment | | Chair of Medical Sciences | 医科学の各研究分野では、それぞれの分野に応じた独創的な研究が展開されている。 修士論文研究の遂行上必要となる先端的な研究テーマを各自選び、紹介すると共に討論することによって自身の研究戦略を明確にする。 | 【医物必修】<br>Lectures are conducted in English. |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
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| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ201 | Medical Physics IA: Lecture | 1 | 2.0 | 1 | SprAB | Wed7,8 | | Takeji Sakae,Tomonori Isobe,Hiroaki Kumada,Hideyuki Takei,Yutaro Mori | To learn radiation physics in the field of medical physics.<br>Purpose:To be able to understand properties of radiation and to apply knowledge and technologies obtained from both medical and technological fields to clinical medicine. | 【医物必修】 |
| 01EQ208 | Medical Physics IB: Lecture | 1 | 2.0 | 1 | FallAB | Fri5,6 | | Takeji Sakae,Tomonori Isobe,Hiroaki Kumada,Toshiyuki Okumura,Hideyuki Takei,Yutaro Mori | Radiation measurement is learned in the field of medical physics.<br>Purpose:To understand the principle of radiation measurement, and dosimeters and its usage suitable to purpose. | 【医物必修】 |
| 01EQ202 | Medical Physics II: Lecture | 1 | 2.0 | 1 | FallAB | Fri7,8 | | Takeji Sakae,Tomonori Isobe,Hiroaki Kumada,Hideyuki Takei,Yutaro Mori | Physics in radiation therapy and health physics/radiation protection are learned as clinical application of medical physics.<br>Purpose:<br>1. To be able to explain overall technology in radiation therapy.<br>2. To be able to direct the quality assurance of equipment used in radiation therapy.<br>3. To be able to make treatment planning with minimized risks in radiation therapy.<br>4. To be able to explain radiation protection. | 【医物必修】 |
| 01EQ203 | Medical Physics III: Lecture | 1 | 2.0 | 1 | FallC | by appointment | | Takeji Sakae,Tomonori Isobe,Hiroaki Kumada,Hideyuki Takei,Yutaro Mori | Physics and diagnostics in diagnostic radiology and nuclear medicine are learned as a clinically-applied technology in the field of medical physics.<br>Purpose:<br>1. To be able to explain the principle of equipment in image diagnosis.<br>2. To be able to explain the imaging acquisition and analysis method in image diagnosis.<br>3. To understand properties of radioactive medicines and direct safety management.<br>4. To understand properties of equipment used in image diagnosis and select suitable modality for each disease. | 【医物必修】 |
| 01EQ204 | Medical Physics IV: Lecture | 1 | 2.0 | 1 | FallC | by appointment | | Takeji Sakae,Tomonori Isobe,Hiroaki Kumada,Hideyuki Takei,Yutaro Mori | Data processing and image engineering are learned as a clinically-applied technology in the field of medical physics. Also learned about radiation-related laws / recommendations, medical ethics, and research ethics necessary for conducting radiotherapy and research.<br>Purpose:<br>1. To be able to explain various theories necessary for computer system.<br>2. To be able to explain medical information systems.<br>3. To be able to propose an operational plan for medical information system.<br>4. To be able to formulate and execute research plans based on medical ethics and research ethics. | 【医物必修】 |
| 01EQ205 | Medical Physics V: Lecture | 1 | 2.0 | 1 | FallC | by appointment | | Takeji Sakae,Tomonori Isobe,Toshiyuki Okumura,Hideyuki Sakurai,Hideyuki Takei,Kentaro Mori | Radiation biology and radiation oncology are learned as an application of medical physics. Also learned about application to radiation therapy physics.<br>Purpose:<br>1. To be able to explain radiation damages and their recovery in irradiation, interaction and sensitizing effects of medicine used in chemo therapy or hyperthermia.<br>2. To be able to explain origin and mechanism of tumor.<br>3. To be able to explain an outline of methods in radiation therapy. | 【医物必修】 |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ206 | Medical Physics Seminar | 2 | 1.0 | 1 | SprABC | Thu7,8 | | Takeji Sakae,Tomonori Isobe,Hiroaki Kumada,Toshiyuki Okumura,Hideyuki Takei,Yutaro Mori | Medical physics is a scientific field that applies knowledge and outcomes of physical engineering to medical science. Researchers who work in this field must have ability to find out solution when problems arise. You would be able to develop your ability to settle various problems by learning how to solve problems provided in this seminar. | 【医物必修】 |
| 01EQ207 | Medical Physics Practice | 3 | 1.0 | 1 | FallABC | Thu7,8 | | Takeji Sakae,Tomonori Isobe,Toshiyuki Okumura,Hiroaki Kumada,Hideyuki Takei,Yutaro Mori | Medical physics is a scientific field that applies knowledge and outcomes of physical engineering to medical science. Researchers who work in this field must have ability to find out solution when problems arise. You would be able to develop your ability to settle various problems by learning how to solve problems provided as a possible clinical situation in this practice. | 【医物必修】 |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ004 | Clinical Medicine | 1 | 2.0 | 1 | FallAB | Tue1,2 | 4F204 | Junichi Shoda,Tetsuaki Arai,Yasushi Kawakami,Takeji Sakae,Kazuhiro Takekoshi,Akira Tamaoka,Shigeru Chiba,Hiroyuki Nishiyama,Hideo Suzuki,Isao Matsumoto,Kensaku Mori,Kazumasa Isobe,Yusuke Ohara | 臨床医学の実践とは病める人を対象として、その人の持つ問題点を抽出し、それを把握した上で、その人の価値観と決定に従って治療することである。そしてその患者に満足してもらい幸せになってもらうことを目指している。このような臨床医学の基本的事項と分化した各専門分野の現状についても理解する。 | 【橋必修】電子・物理工学専攻「医工学コース」 |
| 01EQ005 | Introduction to Social Medicine | 1 | 2.0 | 1 | SprAB | Thu1,2 | | Masao Ichikawa,Mizuho Fukushige,Nanako Tamiya,Nobuaki Morita,Tamaki Saito,Yasukazu Ogai,Kazumasa Yamagishi,Masahide Kondo,Yukiko Wagatsuma,Masahiko Gosho,Ganchimeg Togoobaatar,Tomoko Ito,Shinichiro Sasahara,Reiko Okubo,Ai Hori,Daisuke Hori,Katsuya Honda,Yukiko Sugano | 人びとの健康に寄与する要因が多岐にわたること、人びとの健康を増進するには学際的な取り組みが欠かせないことを理解することを目標とする。社会医学の今日的課題をさまざまな観点から論じることができる。 | 【橋必修】【公必修】【ヒ必修】電子・物理工学専攻「医工学コース」<br>Identical to 0AS0507.<br>Lectures are conducted in English. |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
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| 01EQ508 | Health Economics | 1 | 1.0 | 1, 2 | FallC | Intensive | 4F204 | Masahide Kondo, Reiko Okubo | As a foundation of health economics, application of microeconomics, welfare economics, and new institutional economics in health care are explained.<br>Goal: To be able to view the health system as a market for health care. To be able to appraise economic evaluations.<br>(1) Introduction: health care, money and economic growth, (2) Microeconomics of health insurance, (3) Law of demand, (4) Theory of production, (5) Market mechanism, (6) Behaviour of health care provider, (7) Basics of welfare economics, (8) Economic evaluation of health care programme, (9) Equity: justice and fairness, (10) Overall discussion. | 【橋必修】【公必修】<br>国際地域研究専攻とコードシェア<br>Lectures are conducted in English. |
| 01EQ011 | Biostatistics | 1 | 1.0 | 1 | SprAB | Wed3 | 4F204 | Masahiko Gosho, Kazushi Maruo | This course aims to equip students with understanding basic statistical methods and with interpreting the analysis results, and with applying them for their medical studies. Students will learn statistical test, estimate, correlation, regression, analysis of variance, multivariate analysis, survival analysis. | 【橋必修】【公必修】<br>電子・物理工学専攻「医工学コース」<br>Lectures are conducted in English. |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
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| 01EQ119 | Critical Path Research Management | 1 | 2.0 | 1 | FallAB | Mon6, 7 | 4F204 | Koichi Hashimoto, Satoshi Matsusaka, Masafumi Muratani, Hideo Tsurushima, Takahiro Kojima, Takeshi Machino, Takeshi Yamada | This course aims to equip students with an aquiring of the basic knowledge and skill to be needed for the promotion of verious research and development projects. | 【橋必修】<br>Lectures are conducted in English. |
| 01EQ133 | Regulatory Science of Medical Products | 1 | 1.0 | 1 | FallC | by appointment | | Koichi Hashimoto | This course aims to equip students with an understanding of regulatory framework of medical products under the pharmaceuticals and medical devices act (PMD act).<br>Upon completion of this course, students will be able to explain regulatory framework of medical products, applications for marketing approval, review process and post marketing safety under the PMD act, National Health Insurance (NHI) pricing formula in Japan and relief services for adverse health effects. | 【橋必修】 |
| 01EQ403 | Clinical Trials | 1 | 1.0 | 1, 2 | FallAB | Tue7, 8 | 4F204 | Yukiko Wagatsuma, Masahiko Gosho | Clinical trial is a comparison test of a medical treatment, versus a placebo, or the standard medical treatment for a patient's condition. Good Clinical Practice (GCP) guidelines include the standards on how clinical trials should be conducted, define the roles and responsibilities of clinical trial sponsors, clinical research investigators and monitors. The aim of this course is to learn about the outline of clinical trials and GCP. | Lectures are conducted in English. |
| 01EQ409 | Biostatistics Advanced | 1 | 2.0 | 1, 2 | FallAB | Wed4, 5 | 4F305 | Masahiko Gosho, Kazushi Maruo | The goal of this course is for students to acquire skills in advanced biostatistical approaches. Using Applied Survival Analysis, students will learn survival analysis methods and their applications. | 【公必修】<br>Lectures are conducted in English. |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
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| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ401 | Lecture on Health Behavioral Science | 1 | 1.0 | 1, 2 | FallAB | Wed3 | 4E608 | Shinichiro Sasahara, Tamaki Saito, Ichiyo Matsuzaki, Nobuaki Morita, Yuichi Oi, Yasukazu Ogai, Syotaro Doki, Daisuke Hori | This course aims to equip students with an understanding of the concept of health promotion, and theory and methodology of health behavior change through the real example in each field. | 【公必修】<br>Lectures are conducted in English. |
| 01EQ517 | Health Care Policy and Management | 1 | 1.0 | 1, 2 | FallAB | Thu3 | 4F204 | Masahide Kondo, Reiko Okubo | 1 To understand basic theories of health care policy science and challenges of health systems worldwide.<br>2 To understand health systems and challenges in Japan.<br>Goal: To be able to argue issues of health systems based on basic theories from the viewpoint of health policy sciences.<br><br>(1) Introduction: health, health care and policy, (2) Determinants of health and policy, (3) Role of state and health system, (4) Japan's health care provision system, (5) Japan's health care financing system, (6) Practice of health policy sciences, (7) Topics in global health policy, (8) Health policy process, (9) Health planning and management, (10) Health policies beyond health care policy. | 【公必修】Code share with GIP-TRIAD.<br>Lectures are conducted in English. |
| 01EQ518 | Health Service Administration | 1 | 1.0 | 1, 2 | FallAB | Thu4 | 4F204 | Nanako Tamiya, Takehiro Sugiyama, Takahiro Mori, Masao Iwagami | To understand the approach of health service administration and management in various fields of health care. | 【公必修】<br>Lectures are conducted in English. |
| 01EQ508 | Health Economics | 1 | 1.0 | 1, 2 | FallC | Intensive | 4F204 | Masahide Kondo, Reiko Okubo | As a foundation of health economics, application of microeconomics, welfare economics, and new institutional economics in health care are explained.<br>Goal: To be able to view the health system as a market for health care. To be able to appraise economic evaluations.<br>(1) Introduction: health care, money and economic growth, (2) Microeconomics of health insurance, (3) Law of demand, (4) Theory of production, (5) Market mechanism, (6) Behaviour of health care provider, (7) Basics of welfare economics, (8) Economic evaluation of health care programme, (9) Equity: justice and fairness, (10) Overall discussion. | 【橋必修】【公必修】国際地域研究専攻とコードシェア<br>Lectures are conducted in English. |
| 01EQ511 | Introduction of Health Services Research | 1 | 1.0 | 1, 2 | SprAB | Thu4 | 4F305 | Nanako Tamiya, Takehiro Sugiyama, Takahiro Mori, Masao Iwagami, Tomoko Ito | This course is designed for students to understand the basic concept of "Health Services Research" that scientifically evaluates and analyzes the quality of service (including hospitals, facility care and in-home care) in the field of public health and welfare. | 【公必修】国際地域研究専攻とコードシェア<br>Lectures are conducted in English. |
| 01EQ411 | Critical Appraisal in Quantitative Health and Social Sciences Research | 1 | 1.0 | 1 | SprC | Mon/Thu 3, 4 | | Ganchimeg Togoobaatar, Masao Ichikawa | The goal of this course is for students to acquire skills in critically appraising epidemiological research methods and biostatistical approaches. Students will use a variety of frameworks to critically appraise literature from their chosen field of study and examine and discuss the implications for evidence-based practice. | Lectures are conducted in English. |
| 01EQ412 | Systematic reviews and Introduction to Meta-analysis | 1 | 2.0 | 1 | FallAB | Mon2, 3 | 4F305 | Ganchimeg Togoobaatar | The goal of this course is students to acquire knowledge and skills to conduct systematic review and meta-analysis. This course will provide a detailed description of the systematic review process, discuss the strengths and limitations of the method, and provide step-by-step guidance on how to perform a systematic review and meta-analysis. | Lectures are conducted in English. |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
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|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ402 | Epidemiology | 1 | 2.0 | 1, 2 | FallAB | Tue3,4 | 4F305 | Yukiko Wagatsuma | The fundamental concepts and uses of epidemiology, and its role in formulating principles, are examined. The uses of information science and statistics in epidemiological and clinical researches are studied, and the role that these fields can play in EBM (Evidence-Based Medicine) are also examined. Exercises are conducted in which epidemiological methods are utilized, to promote understanding of the practice of this discipline. | 【公必修】<br>Lectures are conducted in English. |
| 01EQ403 | Clinical Trials | 1 | 1.0 | 1, 2 | FallAB | Tue7,8 | 4F204 | Yukiko Wagatsuma,Masahiko Gosho | Clinical trial is a comparison test of a medical treatment, versus a placebo, or the standard medical treatment for a patient's condition. Good Clinical Practice (GCP) guidelines include the standards on how clinical trials should be conducted, define the roles and responsibilities of clinical trial sponsors, clinical research investigators and monitors. The aim of this course is to learn about the outline of clinical trials and GCP. | Lectures are conducted in English. |
| 01EQ404 | Health Promotion | 1 | 1.0 | 1, 2 | FallAB | Tue2 | 4F305 | Tokie Anme | This course explores the theory and practice on health promotion, advocacy, communication, and empowerment, using transdisciprinary research outcomes. | Lectures are conducted in English. |
| 01EQ420 | Environmental Health Perspective | 1 | 2.0 | 1, 2 | FallAB | Fri2<br>Fri3 | 4E608 | Yoshito Kumagai,Shinkai Yasuhiro | There are numerous chemical substances in the environment, resulting in some serious effects on the body. However, current molecular studies suggest that illnesses caused by exposure to environmental chemicals are, at least in part, attributable to the interaction with macromolecules like proteins in the organism. This lecture offers an opportunity to learn about a variety of symptoms caused by exposure of humans to environmental chemical and initial response and cellular protection against such chemicals. | 2018年度まで開講の01EQ406「予防環境医学」と同一。<br>Identical to 01AD605.<br>Lectures are conducted in English. |
| 01EQ409 | Biostatistics Advanced | 1 | 2.0 | 1, 2 | FallAB | Wed4,5 | 4F305 | Masahiko Gosho,Kazushi Maruo | The goal of this course is for students to acquire skills in advanced biostatistical approaches. Using Applied Survival Analysis, students will learn survival analysis methods and their applications. | 【公必修】<br>Lectures are conducted in English. |
| 01EQ513 | Mental Health | 1 | 1.0 | 1 | SprAB | Mon5 | 4F305 | Tamaki Saito,Nobuaki Morita,Yasukazu Ogai | ライフサイクルの各段階での心理的課題と危機、ストレスのメカニズム、心理的ケア、心理的側面の評価法、社会精神医学、精神保健対策について学ぶ。 | Lectures are conducted in English. |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ501 | Lecture on Human Care Science I | 1 | 1.0 | 1, 2 | SprC | Intensive | | Tamaki Saito,Yoshikazu Hamaguchi,Nobuaki Morita,Yasukazu Ogai | 対人援助にかかわる諸問題を、さまざまな学問分野から交叉的かつ体系的に把握し、基礎的な知識および研究方法を学ぶ。すなわち、対人援助の基本として対象の対人的理解、援助方法の策定と介入、そして対象の置かれている状況の社会的制度的理解と援助について、社会精神保健学、発達臨床心理学、共生教育学の分野から論じるとともに、研究法を解説する。 | 【必修】<br>Identical to 0BTJ002.<br>7/18,7/19 |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ502 | Lecture on Human Care Science II | 1 | 1.0 | 1, 2 | FallA | Intensive | | Fumi Takeda, Tetsuji Yokoyama, Tomohiro Okura, Naomi Omi, 貴史 門間 | 公衆衛生学は学際的な領域であるため、健康問題の要因とその解決・支援方法、それに係る社会的制度等について、基本分野に加えてさまざまな関連分野から、基礎的知識と研究方法を習得する必要がある。そこで本科目では、公衆衛生の基本分野と関連分野から、健康社会学、生涯健康学、運動・栄養学について論じるとともに研究法を解説する。 | 【必修】<br>Identical to 0BTK002.<br>10/3, 10/4 |
| 01EQ503 | Lecture on Human Care Science III | 1 | 1.0 | 1, 2 | FallB | Intensive | | Katsumi Tokuda, Nanako Tamiya, Akira Ushiyama, Takehiro Sugiyama, Tomoko Ito | 公衆衛生学は学際的な領域であるため、健康問題の要因とその解決・支援方法、それに係る社会的制度等について、基本分野に加えてさまざまな関連分野から、基礎的知識と研究方法を習得する必要がある。そこで本科目では、公衆衛生の基本分野と関連分野から、生活支援学、環境保健学、ヘルスサービスリサーチについて論じるとともに研究法について解説する。 | 【必修】<br>Identical to 0BTK003.<br>12/5, 12/6 |
| 01EQ504 | Methodology of Human Care Science I | 1 | 1.0 | 1, 2 | SprA | Intensive | | Yoshiyuki Kawano, Yoko Sawamiya, Masashi Sugie, Sanae Aoki | 対人援助にかかわる諸問題を、さまざまな学問分野から交叉的かつ体系的に把握し、基礎的な知識および研究方法を学ぶ。すなわち、対人援助の基本として対象の対人的理解、援助方法の策定と介入、そして対象の置かれている状況の社会的制度的理解と援助について、共生教育学、臨床心理学の分野から論じるとともに、研究法を概説する。 | 【必修】<br>Identical to 0BTJ001.<br>5/2, 5/3 |
| 01EQ505 | Methodology of Human Care Science II | 1 | 1.0 | 1, 2 | FallB | Intensive | | Hisako Yanagi, Katsuyoshi Mizukami, Tomomi Mizuno, Yumi Hashizume | 対人援助にかかわる諸問題を、さまざまな学問分野から交叉的かつ体系的に把握し、基礎的な知識および研究方法を学ぶ。すなわち、対人援助の基本として対象の対人的理解、援助方法の策定と介入、そして対象の置かれている状況の社会的制度的理解と援助について、福祉医療学、福祉社会学、ストレスマネジメント、高齢者ケアリング学の分野から論じるとともに、研究法を解説する。 | 【必修】<br>Identical to 0BTJ003.<br>11/14, 11/15 |
| 01EQ506 | Methodology of Human Care Science III | 1 | 1.0 | 1, 2 | SprB | Intensive | | Masao Ichikawa, Masahide Kondo, Hideto Takahashi, Reiko Okubo, Ai Hori | 公衆衛生学は学際的な領域であるため、健康問題の要因とその解決・支援方法、それに係る社会的制度等について、基本分野に加えてさまざまな関連分野から、基礎的知識と研究方法を習得する必要がある。そこで本科目では、公衆衛生の基本分野と関連分野から、国際保健学、疫学・統計学、医療経済学について論じるとともに研究法を解説する。 | 【必修】<br>Identical to 0BTK001.<br>5/30, 5/31 |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ517 | Health Care Policy and Management | 1 | 1.0 | 1, 2 | FallAB | Thu3 | 4F204 | Masahide Kondo, Reiko Okubo | 1 To understand basic theories of health care policy science and challenges of health systems worldwide.<br>2 To understand health systems and challenges in Japan.<br>Goal: To be able to argue issues of health systems based on basic theories from the viewpoint of health policy sciences.<br><br>(1) Introduction: health, health care and policy, (2) Determinants of health and policy, (3) Role of state and health system, (4) Japan's health care provision system, (5) Japan's health care financing system, (6) Practice of health policy sciences, (7) Topics in global health policy, (8) Health policy process, (9) Health planning and management, (10) Health policies beyond health care policy. | 【公必修】Code share with GIP-TRIAD.<br>Lectures are conducted in English. |
| 01EQ518 | Health Service Administration | 1 | 1.0 | 1, 2 | FallAB | Thu4 | 4F204 | Nanako Tamiya, Takehiro Sugiyama, Takahiro Mori, Masao Iwagami | To understand the approach of health service administration and management in various fields of health care. | 【公必修】<br>Lectures are conducted in English. |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ508 | Health Economics | 1 | 1.0 | 1, 2 | FallC | Intensive | 4F204 | Masahide Kondo,Reiko Okubo | As a foundation of health economics, application of microeconomics, welfare economics, and new institutional economics in health care are explained.<br>Goal: To be able to view the health system as a market for health care. To be able to appraise economic evaluations.<br>(1) Introduction: health care, money and economic growth, (2) Microeconomics of health insurance, (3) Law of demand, (4) Theory of production, (5) Market mechanism, (6) Behaviour of health care provider, (7) Basics of welfare economics, (8) Economic evaluation of health care programme, (9) Equity: justice and fairness, (10) Overall discussion. | 【橋必修】【公必修】国際地域研究専攻とコードシェア<br>Lectures are conducted in English. |
| 01EQ509 | Medical Science and Health Care for Elderly People | 1 | 1.0 | 1, 2 | | | | | 高齢者は複数の慢性疾患を持つことが多いが、症状・経過が非典型的で個人差が大きく、不安、抑うつ、痴呆などの精神症状を呈しやすい。高齢者が疾病・障害を負った場合、病院内での治療・管理で治癒することは少なく、地域での医療ケアが必要となる例が多い。高齢者に発症しやすい疾病の病態・治療・管理について学習し、地域における医療ケアを支える保健・医療・福祉の仕組みについて理解を深める。 | 【選択必修】<br>Not open in 2020. |
| 01EQ510 | Palliative Medicine | 1 | 1.0 | 1 | FallAB | Intensive | 4F305 | Jun Hamano | This course aims to equip students with an understanding of core concepts of palliative care as well as knowledge and skills to provide essential palliative care as health care provider such as communication skill, cancer pain control, other symptom management and spiritual care. | |
| 01EQ511 | Introduction of Health Services Research | 1 | 1.0 | 1, 2 | SprAB | Thu4 | 4F305 | Nanako Tamiya,Takehiro Sugiyama,Takahiro Mori,Masao Iwagami,Tomoko Ito | This course is designed for students to understand the basic concept of “Health Services Research” that scientifically evaluates and analyzes the quality of service (including hospitals, facility care and in-home care) in the field of public health and welfare. | 【公必修】国際地域研究専攻とコードシェア<br>Lectures are conducted in English. |
| 01EQ513 | Mental Health | 1 | 1.0 | 1 | SprAB | Mon5 | 4F305 | Tamaki Saito,Nobuaki Morita,Yasukazu Ogai | ライフサイクルの各段階での心理的課題と危機、ストレスのメカニズム、心理的ケア、心理的側面の評価法、社会精神医学、精神保健対策について学ぶ。 | Lectures are conducted in English. |
| 01EQ514 | Gerontological Nursing and Caring | 1 | 1.0 | 1, 2 | SprAB | Wed7 | 5Z310 | Yumi Hashizume | 高齢者と家族、彼らに関わる専門職や地域社会を対象にしたヒューマン・ケアリングの意味と効果を探求するために、その研究方法として質的研究の理論と実際を学ぶ。 | |

General Foundation Subjects

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ005 | Introduction to Social Medicine | 1 | 2.0 | 1 | SprAB | Thu1,2 | | Masao Ichikawa,Mizuho Fukushige,Nanako Tamiya,Nobuaki Morita,Tamaki Saito,Yasukazu Ogai,Kazumasa Yamagishi,Masahide Kondo,Yukiko Wagatsuma,Masahiko Gosho,Ganchimeg Togoobaatar,Tomoko Ito,Shinichiro Sasahara,Reiko Okubo,Ai Hori,Daisuke Hori,Katsuya Honda,Yukiko Sugano | 人びとの健康に寄与する要因が多岐にわたること、人びとの健康を増進するには学際的な取り組みが欠かせないことを理解することを目標とする。社会医学の今日的課題をさまざまな観点から論じることができる。 | 【橋必修】【公必修】【ヒ必修】電子・物理工学専攻「医工学コース」<br>Identical to 0AS0507.<br>Lectures are conducted in English. |
| 01EQ007 | Introduction to Epidemiology | 1 | 1.0 | 1, 2 | SprAB | Tue3 | 4F204 | Yukiko Wagatsuma | Epidemiology is the study of factors affecting the health and illness of populations, and serves as the foundation and logic of interventions made in the interest of public health and preventive medicine. The aim of this course is to learn the fundamental concepts and uses of epidemiology, and its role in formulating principles. | 【公必修】電子・物理工学専攻「医工学コース」<br>Lectures are conducted in English. |
| 01EQ011 | Biostatistics | 1 | 1.0 | 1 | SprAB | Wed3 | 4F204 | Masahiko Gosho,Kazushi Maruo | This course aims to equip students with understanding basic statistical methods and with interpreting the analysis results, and with applying them for their medical studies. Students will learn statistical test, estimate, correlation, regression, analysis of variance, multivariate analysis, survival analysis. | 【橋必修】【公必修】電子・物理工学専攻「医工学コース」<br>Lectures are conducted in English. |
| 01EQ012 | Biostatistics in Practice | 3 | 1.0 | 1 | SprAB | Wed5,6 | 4F305 | Kazushi Maruo,Masahiko Gosho | The goal of this course is for students to acquire skills in biostatistical practice. Using SAS OnDemand for Academics, students will learn how to analyze the actual data and to implement the statistical methods in medical researches. | Lectures are conducted in English. |
| 01EQ013 | English in Medical Science and Technology I | 1 | 1.0 | 1 | SprAB | Mon2 | 4F305, 4F204 | Flaminia Miyamasu,Thomas David Mayers,Bryan James Mathis | The goal of this course is for students to develop the English proficiency they need to effectively and energetically communicate their professional achievements within the international scientific community. To this end, students will be divided into three classes and will take four modules. In the first module, they will study the basics of scientific communication. Thereafter, they will rotate through three modules on scientific writing, scientific presentation, and multimedia communication. Classes will be conducted entirely in English, so students will also hone their listening skills. Upon completion of the course, students will have a foundation for sharing their knowledge and ideas with other scientists in English. | 【医必修】<br>Lectures are conducted in English. |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ014 | English in Medical Science and Technology II | 1 | 1.0 | 1 | FallAB | Mon5 | 4F305, 4F204 | Flaminia Miyamasu, Thomas David Mayers, Bryan James Mathis | Dependent on the module they took in the English in Medical Science and Technology I course, students will rotate through two of the following modules: Scientific Writing, Scientitific Presentation, Scientific Multimedia Communication. As in the spring semester, classes will be conducted entirely in English, so students will also hone their listening skills. Upon completion of the course, students will have a foundation for sharing their knowledge and ideas with other scientists in English. | 【医必修】<br>Lectures are conducted in English. |
| 01EQ018 | Dissertation in Medical Sciences | 2 | 8.0 | 2 | Annual | by appointment | | Chair of Medical Sciences | 医科学の各専門領域に関連する実験、調査、解析、分析などの手法を取得させ、修士論文の作成の指導を行う。 | 【全必修】<br>Lectures are conducted in English. |
| 01EQ029 | Advanced Exercise on Public Health | 1 | 4.0 | 1 | | | | | This is compulsory in the Accelerated MPH program (instead of 01EQ018) | Lectures are conducted in English.<br>Not open in 2020.<br>2018/10/24 開講中止決定 |
| 01EQ023 | Seminar on Basic Medical Sciences | 2 | 3.0 | 1 | Annual | by appointment | | Chair of Medical Sciences | 医科学の各研究分野では、それぞれの分野に応じた独創的な研究が展開されている。 修士論文研究の遂行上必要となる先端的な研究テーマを各自選び、紹介すると共に討論することによって自身の研究戦略を明確にする。 | 【医物必修】<br>Lectures are conducted in English. |
| 01EQ025 | Seminar for International Students | 1 | 1.0 | 1, 2 | | | | | This course provides international students with an opportunity to get prepared for disasters they might face in Japan. | 【留学生対象】<br>Lectures are conducted in English.<br>Not open in 2020. |
| 01EQ401 | Lecture on Health Behavioral Science | 1 | 1.0 | 1, 2 | FallAB | Wed3 | 4E608 | Shinichiro Sasahara, Tamaki Saito, Ichiyo Matsuzaki, Nobuaki Morita, Yuichi Oi, Yasukazu Ogai, Syotaro Doki, Daisuke Hori | This course aims to equip students with an understanding of the concept of health promotion, and theory and methodology of health behavior change through the real example in each field. | 【公必修】<br>Lectures are conducted in English. |
| 01EQ517 | Health Care Policy and Management | 1 | 1.0 | 1, 2 | FallAB | Thu3 | 4F204 | Masahide Kondo, Reiko Okubo | 1 To understand basic theories of health care policy science and challenges of health systems worldwide.<br>2 To understand health systems and challenges in Japan.<br>Goal: To be able to argue issues of health systems based on basic theories from the viewpoint of health policy sciences.<br><br>(1) Introduction: health, health care and policy, (2) Determinants of health and policy, (3) Role of state and health system, (4) Japan's health care provision system, (5) Japan's health care financing system, (6) Practice of health policy sciences, (7) Topics in global health policy, (8) Health policy process, (9) Health planning and management, (10) Health policies beyond health care policy. | 【公必修】Code share with GIP-TRIAD.<br>Lectures are conducted in English. |
| 01EQ518 | Health Service Administration | 1 | 1.0 | 1, 2 | FallAB | Thu4 | 4F204 | Nanako Tamiya, Takehiro Sugiyama, Takahiro Mori, Masao Iwagami | To understand the approach of health service administration and management in various fields of health care. | 【公必修】<br>Lectures are conducted in English. |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ508 | Health Economics | 1 | 1.0 | 1, 2 | FallC | Intensive | 4F204 | Masahide Kondo, Reiko Okubo | As a foundation of health economics, application of microeconomics, welfare economics, and new institutional economics in health care are explained.<br>Goal: To be able to view the health system as a market for health care. To be able to appraise economic evaluations.<br>(1) Introduction: health care, money and economic growth, (2) Microeconomics of health insurance, (3) Law of demand, (4) Theory of production, (5) Market mechanism, (6) Behaviour of health care provider, (7) Basics of welfare economics, (8) Economic evaluation of health care programme, (9) Equity: justice and fairness, (10) Overall discussion. | 【橋必修】【公必修】国際地域研究専攻とコードシェア<br>Lectures are conducted in English. |
| 01EQ511 | Introduction of Health Services Research | 1 | 1.0 | 1, 2 | SprAB | Thu4 | 4F305 | Nanako Tamiya, Takehiro Sugiyama, Takahiro Mori, Masao Iwagami, Tomoko Ito | This course is designed for students to understand the basic concept of “Health Services Research” that scientifically evaluates and analyzes the quality of service (including hospitals, facility care and in-home care) in the field of public health and welfare. | 【公必修】国際地域研究専攻とコードシェア<br>Lectures are conducted in English. |
| 01EQ411 | Critical Appraisal in Quantitative Health and Social Sciences Research | 1 | 1.0 | 1 | SprC | Mon/Thu 3, 4 | | Ganchimeg Togoobaatar, Masao Ichikawa | The goal of this course is for students to acquire skills in critically appraising epidemiological research methods and biostatistical approaches. Students will use a variety of frameworks to critically appraise literature from their chosen field of study and examine and discuss the implications for evidence-based practice. | Lectures are conducted in English. |
| 01EQ412 | Systematic reviews and Introduction to Meta-analysis | 1 | 2.0 | 1 | FallAB | Mon2, 3 | 4F305 | Ganchimeg Togoobaatar | The goal of this course is students to acquire knowledge and skills to conduct systematic review and meta-analysis. This course will provide a detailed description of the systematic review process, discuss the strengths and limitations of the method, and provide step-by-step guidance on how to perform a systematic review and meta-analysis. | Lectures are conducted in English. |

Major Subjects

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ109 | Genome Medicine | 1 | 2.0 | 1, 2 | FallAB | Tue5, 6 | 4F204 | Emiko Noguchi, Kazuhiro Takekoshi, Naoyuki Tsuchiya, Masayuki Noguchi, Masato Homma, Masafumi Muratani, Kazuya Morikawa, Koji Kawai, Ikuo Sekine, Hiroko Fukushima, Hiroko Miyadera | ゲノム科学の基本原理とその医学への応用方法を修得する。このために、人類遺伝学、遺伝医学、ゲノム疫学に関する主要な原理について解説を受けた後、診断・治療におけるゲノム診断とパーソナルゲノム情報の臨床応用に言及して、ゲノム情報を疾患の診断・予防・治療に役立てるための方法と課題について学習する。 | Lectures are conducted in English. |
| 01EQ402 | Epidemiology | 1 | 2.0 | 1, 2 | FallAB | Tue3, 4 | 4F305 | Yukiko Wagatsuma | The fundamental concepts and uses of epidemiology, and its role in formulating principles, are examined. The uses of information science and statistics in epidemiological and clinical researches are studied, and the role that these fields can play in EBM (Evidence-Based Medicine) are also examined. Exercises are conducted in which epidemiological methods are utilized, to promote understanding of the practice of this discipline. | 【公必修】<br>Lectures are conducted in English. |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ404 | Health Promotion | 1 | 1.0 | 1, 2 | FallAB | Tue2 | 4F305 | Tokie Anme | This course explores the theory and practice on health promotion, advocacy, communication, and empowerment, using transdisciprinary research outcomes. | Lectures are conducted in English. |
| 01EQ420 | Environmental Health Perspective | 1 | 2.0 | 1, 2 | FallAB | Fri2 Fri3 | 4E608 | Yoshito Kumagai,Shinkai Yasuhiro | There are numerous chemical substances in the environment, resulting in some serious effects on the body. However, current molecular studies suggest that illnesses caused by exposure to environmental chemicals are, at least in part, attributable to the interaction with macromolecules like proteins in the organism. This lecture offers an opportunity to learn about a variety of symptoms caused by exposure of humans to environmental chemical and initial response and cellular protection against such chemicals. | 2018年度まで開講の01EQ406「予防環境医学」と同一。<br>Identical to 01AD605.<br>Lectures are conducted in English. |
| 01EQ409 | Biostatistics Advanced | 1 | 2.0 | 1, 2 | FallAB | Wed4,5 | 4F305 | Masahiko Gosho,Kazushi Maruo | The goal of this course is for students to acquire skills in advanced biostatistical approaches. Using Applied Survival Analysis, students will learn survival analysis methods and their applications. | 【公必修】<br>Lectures are conducted in English. |
| 01EQ513 | Mental Health | 1 | 1.0 | 1 | SprAB | Mon5 | 4F305 | Tamaki Saito,Nobuaki Morita,Yasukazu Ogai | ライフサイクルの各段階での心理的課題と危機、ストレスのメカニズム、心理的ケア、心理的側面の評価法、社会精神医学、精神保健対策について学ぶ。 | Lectures are conducted in English. |
| 01EQ053 | Medical Science Seminar VI: epidemiology and biostatistics | 1 | 2.0 | 1, 2 | Annual | Tue6 | 4G121 | Yukiko Wagatsuma,Masahiko Gosho | This course assists students in learning steps through the discussions over textbooks and articles in epidemiology and biostatistics. We encourage students majoring in epidemiology and biostatistics should attend the course. | Subject to the enrolled students in or after 2015.Conducted in the classroom 4G121.<br>Lectures are conducted in English. |

General Foundation Subjects

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ045 | Lecture in Human Physiology | 1 | 1.0 | 1 | SprA | Thu4,5 | | Tadachika Koganezawa,Masayuki Matsumoto,Hiroshi Yamada,Jun Kunimatsu | Systematic understanding of human physiological functions.<br>Goal: Upon completion of this course, students will be able to discuss functional mechanisms on various human functions. | Lectures are conducted in English. |
| 01EQ046 | Topics in Biochemistry | 1 | 1.0 | 1 | SprAB | Mon1 | 4F204 | Aya Fukuda,Kenji Irie,Koji Hisatake,Kazuhiko Uchida,Tomoaki Mizuno,Kensuke Shiomi,Kazuko Keino-Masu | ヒトの生理機能とその異常である疾患を分子レベルで研究する為に必要な生化学の基本的事項を学習する。 | Lectures are conducted in English. |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ005 | Introduction to Social Medicine | 1 | 2.0 | 1 | SprAB | Thu1,2 | | Masao Ichikawa,Mizuho Fukushige,Nanako Tamiya,Nobuaki Morita,Tamaki Saito,Yasukazu Ogai,Kazumasa Yamagishi,Masahide Kondo,Yukiko Wagatsuma,Masahiko Gosho,Ganchimeg Togoobaatar,Tomoko Ito,Shinichiro Sasahara,Reiko Okubo,Ai Hori,Daisuke Hori,Katsuya Honda,Yukiko Sugano | 人びとの健康に寄与する要因が多岐にわたること、人びとの健康を増進するには学際的な取り組みが欠かせないことを理解することを目標とする。社会医学の今日的課題をさまざまな観点から論じることができる。 | 【橋必修】【公必修】【ヒ必修】電子・物理工学専攻「医工学コース」<br>Identical to 0AS0507.<br>Lectures are conducted in English. |
| 01EQ007 | Introduction to Epidemiology | 1 | 1.0 | 1, 2 | SprAB | Tue3 | 4F204 | Yukiko Wagatsuma | Epidemiology is the study of factors affecting the health and illness of populations, and serves as the foundation and logic of interventions made in the interest of public health and preventive medicine. The aim of this course is to learn the fundamental concepts and uses of epidemiology, and its role in formulating principles. | 【公必修】電子・物理工学専攻「医工学コース」<br>Lectures are conducted in English. |
| 01EQ011 | Biostatistics | 1 | 1.0 | 1 | SprAB | Wed3 | 4F204 | Masahiko Gosho,Kazushi Maruo | This course aims to equip students with understanding basic statistical methods and with interpreting the analysis results, and with applying them for their medical studies. Students will learn statistical test, estimate, correlation, regression, analysis of variance, multivariate analysis, survival analysis. | 【橋必修】【公必修】電子・物理工学専攻「医工学コース」<br>Lectures are conducted in English. |
| 01EQ012 | Biostatistics in Practice | 3 | 1.0 | 1 | SprAB | Wed5,6 | 4F305 | Kazushi Maruo,Masahiko Gosho | The goal of this course is for students to acquire skills in biostatistical practice. Using SAS OnDemand for Academics, students will learn how to analyze the actual data and to implement the statistical methods in medical researches. | Lectures are conducted in English. |
| 01EQ013 | English in Medical Science and Technology I | 1 | 1.0 | 1 | SprAB | Mon2 | 4F305, 4F204 | Flaminia Miyamasu,Thomas David Mayers,Bryan James Mathis | The goal of this course is for students to develop the English proficiency they need to effectively and energetically communicate their professional achievements within the international scientific community. To this end, students will be divided into three classes and will take four modules. In the first module, they will study the basics of scientific communication. Thereafter, they will rotate through three modules on scientific writing, scientific presentation, and multimedia communication. Classes will be conducted entirely in English, so students will also hone their listening skills. Upon completion of the course, students will have a foundation for sharing their knowledge and ideas with other scientists in English. | 【医必修】<br>Lectures are conducted in English. |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ014 | English in Medical Science and Technology II | 1 | 1.0 | 1 | FallAB | Mon5 | 4F305, 4F204 | Flaminia Miyamasu, Thomas David Mayers, Bryan James Mathis | Dependent on the module they took in the English in Medical Science and Technology I course, students will rotate through two of the following modules: Scientific Writing, Scientitific Presentation, Scientific Multimedia Communication. As in the spring semester, classes will be conducted entirely in English, so students will also hone their listening skills. Upon completion of the course, students will have a foundation for sharing their knowledge and ideas with other scientists in English. | 【医必修】<br>Lectures are conducted in English. |
| 01EQ023 | Seminar on Basic Medical Sciences | 2 | 3.0 | 1 | Annual | by appointment | | Chair of Medical Sciences | 医科学の各研究分野では、それぞれの分野に応じた独創的な研究が展開されている。 修士論文研究の遂行上必要となる先端的な研究テーマを各自選び、紹介すると共に討論することによって自身の研究戦略を明確にする。 | 【医物必修】<br>Lectures are conducted in English. |
| 01EQ018 | Dissertation in Medical Sciences | 2 | 8.0 | 2 | Annual | by appointment | | Chair of Medical Sciences | 医科学の各専門領域に関連する実験、調査、解析、分析などの手法を取得させ、修士論文の作成の指導を行う。 | 【全必修】<br>Lectures are conducted in English. |
| 01EQ101 | Human Pathology: Lecture | 1 | 2.0 | 1 | SprAB | Wed5, 6 | 4F204 | Masayuki Noguchi, Mitsuyasu Kato, Michio Nagata, Hiroyuki Suzuki, Norio Takayashiki, Junko Kano | This subject is aiming to understand disease entity, etiology, morphological changes of the representative human diseases at molecular and clinical levels and to study the importance of pathology findings for diagnosis and treatment of the diseases. | 電子・物理工学専攻「医工学コース」<br>Lectures are conducted in English. |
| 01EQ102 | Laboratory Animal Science and Animal Experimentation | 5 | 2.0 | 1 | SprAB | Fri3-5 | 4F204 | Fumihiro Sugiyama, Seiya Mizuno | The course aims to equip students with understanding proper conduct of animal experiment and generation of gene-modified mice. Students also acquire basic skills for mouse handling, embryo manipulation and in vivo imaging.<br>Upon completion of this course, students will be able to discuss the use of gene-modified mice for studying human diseases. | Lectures are conducted in English. |

Major Subjects

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 01EQ050 | English Discussion & Presentation on Medical Sciences I | 2 | 2.0 | 1, 2 | SprAB | Fri1, 2 | | Kenji Irie, Tomoaki Mizuno, Hiroyuki Suzuki, Yasuyuki Suda | Boosting scientific communication in English, exploring biological sciences, and promoting international long-distance academic and research exchanges. | Lectures are conducted in English. |
| 01EQ051 | English Discussion & Presentation on Medical Sciences II | 2 | 2.0 | 1, 2 | FallAB | Wed1, 2 | | Kenji Irie, Mitsuyasu Kato, Atsushi Kawaguchi, Satoru Takahashi, Hiroyuki Suzuki, Tomoaki Mizuno, Yasuyuki Suda, Yuji Funakoshi | Boosting scientific communication in English, exploring biological sciences, and promoting international long-distance academic and research exchanges. | Lectures are conducted in English. |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
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| 01EQ106 | Oncology | 1 | 2.0 | 1 | FallAB | Mon/Tue 4 | 4F204 | Masayuki Noguchi, Kenji Irie, Mitsuyasu Kato, Hideyuki Sakurai, Yukio Sato, Ikuo Sekine, Shigeru Chiba, Koji Hisatake, Koji Masumoto, Hiroyuki Suzuki, Norio Takayashiki, Yuji Mizokami, Takeo Minaguchi, Kensaku Mori, Takahiro Kojima, Kosuke Kato, Yuji Funakoshi | This subject is aiming to understand disease entity, etiology, and the progression mechanism of malignant tumor at the molecular level. The topics of the latest tumor research (basic) and diagnostic treatment (clinical) are also covered while aiming at acquiring basic knowledge. | Lectures are conducted in English. |
| 01EQ107 | Pharmacology | 1 | 1.0 | 1 | SprAB | Mon5 | 4F204 | Masayuki Masu, Takeshi Sakurai, Norihiko Ohbayashi, Kensuke Shiomi, Kazuko Keino-Masu, Takuya Okada, Yuji Funakoshi | The objective of this course is to learn the basic knowledge of pharmacology in the medical field. The students will study the interaction between the living body and endogenous or exogenous biological substances at the genetic, cellular, and individual levels and learn basic principles of drugs and toxins. | Lectures are conducted in English. |
| 01EQ131 | Human Infection and Immunology | 1 | 2.0 | 1 | SprAB | Mon3, 4 | 4F204 | Akira Shibuya, Kazuko Shibuya, Kazuya Morikawa, Atsushi Kawaguchi, Kiong Ho, Isao Matsumoto, Satoko Tahara, Hiroto Tsuboi, Chigusa Oda, TUKASA NABEKURA | To understand infection biology and immunology is the basis to develop a strategy for control of infectious diseases all over the world. In this course, students study the molecular mechanism of replication and pathogenicity of infectious microbes such as viruses and bacteria, and the structure and function of microbes-encoded factors and host cell-derived factors involved in the replication and pathogenicity. In addition, students also study the immune system, including adaptive and innate immunities, which is crucial for human health and survival. | Code share with HBP Lectures are conducted in English. |
| 01EQ109 | Genome Medicine | 1 | 2.0 | 1, 2 | FallAB | Tue5, 6 | 4F204 | Emiko Noguchi, Kazuhiro Takekoshi, Naoyuki Tsuchiya, Masayuki Noguchi, Masato Homma, Masafumi Muratani, Kazuya Morikawa, Koji Kawai, Ikuo Sekine, Hiroko Fukushima, Hiroko Miyadera | ゲノム科学の基本原理とその医学への応用方法を修得する。このために、人類遺伝学、遺伝医学、ゲノム疫学に関する主要な原理について解説を受けた後、診断・治療におけるゲノム診断とパーソナルゲノム情報の臨床応用に言及して、ゲノム情報を疾患の診断・予防・治療に役立てるための方法と課題について学習する。 | Lectures are conducted in English. |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
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| 01EQ132 | Stem Cell Therapy | 1 | 1.0 | 1 | SprAB | Thu3 | 4F204 | Osamu Ohneda,Toshiharu Yamashita | The objective of this class is to learn basic knowledge and the latest research progress on regenerative medicine and stem cell biology fields by reading original articles. In addition, this class aims to improve individual ability to extract the point at issue of the article and discuss with other participants. Students read the latest original articles on regenerative medicine and stem cell biology and perform presentation. Students are expected to understand research purpose, methods, results, and to have a discussion about significance or problem of the article. | Code share with HBP<br>Lectures are conducted in English. |
| 01EQ119 | Critical Path Research Management | 1 | 2.0 | 1 | FallAB | Mon6,7 | 4F204 | Koichi Hashimoto,Satoshi Matsusaka,Masafumi Muratani,Hideo Tsurushima,Takahiro Kojima,Takeshi Machino,Takeshi Yamada | This course aims to equip students with an aquiring of the basic knowledge and skill to be needed for the promotion of verious research and development projects. | 【橋必修】<br>Lectures are conducted in English. |
| 01EQ120 | Frontier Science in Drug Discovery | 1 | 1.0 | 1, 2 | FallAB | Wed5 | 4F204 | Satoru Takahashi | Scientific advancements during the past two decades have created a paradigm shift in drug discovery process from the traditional approach including long experiences and contingencies to innovative methods, which are based on logical approach utilizing the latest in computational simulation technology. The recent progress includes genome-wide identification of successful drug-target proteins and in silico designing and screening of lead compounds with the techniques of combinatorial chemistry. In addition, there has been remarkable progress in the field of ADME assessment and drug delivery system. This program will be focused on the fundamentals of the process of the drug discovery and development and strengthening of medical-pharmaceutical relations. | Code share with HBP<br>Lectures are conducted in English. |
| 01EQ402 | Epidemiology | 1 | 2.0 | 1, 2 | FallAB | Tue3,4 | 4F305 | Yukiko Wagatsuma | The fundamental concepts and uses of epidemiology, and its role in formulating principles, are examined. The uses of information science and statistics in epidemiological and clinical researches are studied, and the role that these fields can play in EBM (Evidence-Based Medicine) are also examined. Exercises are conducted in which epidemiological methods are utilized, to promote understanding of the practice of this discipline. | 【公必修】<br>Lectures are conducted in English. |
| 01EQ420 | Environmental Health Perspective | 1 | 2.0 | 1, 2 | FallAB | Fri2 Fri3 | 4E608 | Yoshito Kumagai,Shinkai Yasuhiro | There are numerous chemical substances in the environment, resulting in some serious effects on the body. However, current molecular studies suggest that illnesses caused by exposure to environmental chemicals are, at least in part, attributable to the interaction with macromolecules like proteins in the organism. This lecture offers an opportunity to learn about a variety of symptoms caused by exposure of humans to environmental chemical and initial response and cellular protection against such chemicals. | 2018年度まで開講の01EQ406「予防環境医学」と同一。<br>Identical to 01AD605.<br>Lectures are conducted in English. |

| urse Numb | Course Name | 授業方法 | Credits | Standard Academic Year | Course Offering Term | Weekday and Period | Classroom | Instructor | Course Overview | Remarks |
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| 01EQ517 | Health Care Policy and Management | 1 | 1.0 | 1, 2 | FallAB | Thu3 | 4F204 | Masahide Kondo,Reiko Okubo | 1 To understand basic theories of health care policy science and challenges of health systems worldwide.<br>2 To understand health systems and challenges in Japan.<br>Goal: To be able to argue issues of health systems based on basic theories from the viewpoint of health policy sciences.<br><br>(1) Introduction: health, health care and policy, (2) Determinants of health and policy, (3) Role of state and health system, (4) Japan's health care provision system, (5) Japan's health care financing system, (6) Practice of health policy sciences, (7) Topics in global health policy, (8) Health policy process, (9) Health planning and management, (10) Health policies beyond health care policy. | 【公必修】Code share with GIP-TRIAD.<br>Lectures are conducted in English. |
| 01EQ518 | Health Service Administration | 1 | 1.0 | 1, 2 | FallAB | Thu4 | 4F204 | Nanako Tamiya,Takehiro Sugiyama,Takahiro Mori,Masao Iwagami | To understand the approach of health service administration and management in various fields of health care. | 【公必修】<br>Lectures are conducted in English. |
| 01EQ511 | Introduction of Health Services Research | 1 | 1.0 | 1, 2 | SprAB | Thu4 | 4F305 | Nanako Tamiya,Takehiro Sugiyama,Takahiro Mori,Masao Iwagami,Tomoko Ito | This course is designed for students to understand the basic concept of "Health Services Research" that scientifically evaluates and analyzes the quality of service (including hospitals, facility care and in-home care) in the field of public health and welfare. | 【公必修】国際地域研究専攻とコードシェア<br>Lectures are conducted in English. |
| 01EQ039 | Medical Science Seminar II: Biochemistry and Molecular Biology | 1 | 1.0 | 1, 2 | Annual | by appointment | | Kenji Irie | 医学生物学研究の最前線にいる研究者によるセミナーに出席し、最新の知識を学び、研究の進んでいく過程を具体的に理解する。 | |
| 01EQ040 | Medical Science Seminar III: Immunology | 1 | 1.0 | 1, 2 | Annual | by appointment | | Kazuko Shibuya | 免疫学および関連科学分野における最新のトピックスに関するセミナーに出席し、専門研究者の討論に参加する。学んだ内容や印象をレポートにまとめる。 | |
| 01EQ053 | Medical Science Seminar VI: epidemiology and biostatistics | 1 | 2.0 | 1, 2 | Annual | Tue6 | 4G121 | Yukiko Wagatsuma,Masahiko Gosho | This course assists students in learning steps through the discussions over textbooks and articles in epidemiology and biostatistics. We encourage students majoring in epidemiology and biostatistics should attend the course. | Subject to the enrolled students in or after 2015.Conducted in the classroom 4G121.<br>Lectures are conducted in English. |