

(3) School of Medicine and Medical Sciences(School of Medical Sciences)
International Undergraduate-Education Program for Medical Scientists

Major Subjects (Required Courses)

Course Number	Course Name	Course Type	Credits	Standard Academic Year	Course Offering Term	Weekday and Period	Classroom	Instructor	Course Overview	Remarks
HE33081	International Infectious Diseases	1	1.0	3	SprAB	Intensive		Kaoru Takeuchi	In the modern world certain infectious diseases have become human threats, by spreading in a short period of time, with more morbidity and severity. In this course, important international infectious diseases are explained on the aspects from microbiology, clinical medicine and disease control.	医療科学類生に限る 4/12-6/20 この期間内(揭示参照)
HE40001	Medical Science Seminar	1	1.0	3	FallAB	by request		Aya Fukuda	This course offers advice on studying in this program for medical scientists and living in Tsukuba.	Offered exclusively for students in the Medical Scientists Program Lectures are conducted in English.
HE40011	Medical Microbiology	1	2.0	3, 4	FallAB	Intensive		Kazuya Morikawa	This course offers a series of lectures and discussions regarding the molecular mechanisms underlying in bacterial pathogens. Students will learn hot topics and techniques in molecular bacteriology fields.	国際医療科学主専攻630コース学生に限る。英語で授業。Lectures are conducted in English. 10/1-12/15 予定(揭示参照)
HE40031	Microbiology	1	1.0	3, 4	Annual	by request		Kazuya Morikawa	細菌、ウイルス、真菌などの微生物についてその違いを解説し、細胞の構造、代謝生理、遺伝や変異などの生物学的な特徴を理解させる。また、自然界には有用微生物と有害微生物があり、ヒト及び環境において微生物が及ぼす影響を理解させる。	国際医療科学主専攻学生に限る。Lectures are conducted in English.
HE40052	Research Seminar	2	4.0	3	Annual	by request		Ken Nishimura	The students will select their theme from a variety of fields in medical sciences based on their own interests, and participate in research seminar and actual research activity in the laboratory.	Offered exclusively for students in the Medical Scientists Program Lectures are conducted in English.
HE40061	English Communication for Medical Sciences I	1	3.0	3	SprAB	Intensive	4B119	Satoru Takahashi, Koji Hisatake, Kenji Irie, Ryusuke Koshida, Norihiko Ohbayashi, Takashi Matsuzaka, Shoko Saito, Hidekazu Nishikii	This course covers a variety of medical science research topics. Students will learn basic concepts, methodology, and scientific thinking through each research topic.	医療科学類国際医療科学主専攻学生に限る。Lectures are conducted in English. 4/10-6/25 予定(揭示参照)
HE40071	English Communication for Medical Sciences II	1	3.0	3	FallA FallB	Fri5,6 Intensive	4B119	Satoru Takahashi, Mizuho Fukushige, Kazumasa Kanemaru, Hiroyuki Suzuki, Masafumi Muratani, Osamu Ohneda, Naoyuki Tsuchiya, Takeji Sakae	This course covers a variety of medical science research topics. Students will learn basic concepts, methodology, and scientific thinking through each research topic.	医療科学類国際医療科学主専攻学生に限る。Lectures are conducted in English. 11/10-12/15 予定(揭示参照)
HE40081	Topics in Medical Sciences I	1	1.0	3	FallAB	Intensive	4B119	Kiong Ho, Koji Hisatake	This course provides students with the opportunity to make presentations and discussions on medical science topics.	医療科学類国際医療科学主専攻学生に限る。Lectures are conducted in English. 10/1-12/15 予定(揭示参照)
HE40091	Topics in Medical Sciences II	1	1.0	4	SprAB	Tue4	4B119	Koji Hisatake, Kiong Ho	This course provides students with the opportunity to make presentations and discussions on medical science topics.	医療科学類国際医療科学主専攻学生に限る。Lectures are conducted in English.

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HE40102	Seminar on Medical Sciences	2	1.0	3	Annual	by request		Ken Nishimura	医科学に関する演習課題について主体的に調査、解答を行い、医科学の理解をさらに深める。	医療科学類国際医療科学専攻学生に限る。Lectures are conducted in English.
HE40113	Graduation Research	3	8.0	4	SprABC, FallAB	by request		Ken Nishimura	The aim of this course is to learn the knowledge of medical sciences and problem-solving skills through a research in laboratories. The students can select their theme from a variety of fields in medical sciences based on their own interests.	医療科学類国際医療科学専攻学生に限る。Lectures are conducted in English.
HE40123	Clinical Practice in Laboratories	3	3.0	3	FallC, Spr Vac	Intensive		akira koike, Tomonori Isobe	大学病院と関連医療機関での臨床実習を通じて、医療の現場を支える臨床検査技術と医療人としての職業倫理観について習得する。特に、検査システム、検査技術、検査結果の評価、安全管理などを理解するとともに、他の医療職との連携(チーム医療)の重要性を体感し、医療の現場における臨床検査技師の使命について学ぶ。	医療科学類国際医療科学専攻学生に限る。1/10-2/13 予定(掲示参照), 2/14-3/10 予定(掲示参照)
HE40131	Clinical Hematology	1	2.0	3	FallAB	Mon4, 5	4B209	Haruhiko Ninomiya	血液の組成、血液の生理的機能、血球の産生とその調節機構、造血因子および造血微小循環などについて教授する。主要な血液疾患の病態生理とその診断のための血液学的検査法の原理と手法、血球の形態学的検査の原理と手法について教授する。白血球の病的診断(FAB分類)、リンパ腫の病的診断法を教授する。	英語で授業。医療科学類生に限る。Lectures are conducted in English.
HE40141	Coagulation and Fibrinolysis	1	1.0	3	FallC	Mon4, 5	4B209	Haruhiko Ninomiya, Yuichi Aita	血液の凝固・線溶系の生理的機構を教授し、その失調に伴う出血傾向や血栓症に関する基本的検査法について教授する。凝固・線溶系の検査法の原理と手法、血小板の機能検査の原理と手法について教授する。	英語で授業。医療科学類生に限る。Lectures are conducted in English.
HE40151	Clinical Pathophysiology	1	2.0	3	FallA FallB	Tue4, 5 Thu4, 5	4B209	Yuichi Aita, Haruhiko Ninomiya	様々な疾患についての病態生理について詳細に教授する。またそれらの病態と各種臨床検査の成績との関連について解説し、様々な病態において変化する血液酵素などの成分の変動の仕組みを理解させる。患者からもたらされる臨床検査の情報をいかに的確に診断や治療に応用したら良いのか、基本的なものの考え方を十分理解させる。	英語で授業。医療科学類生に限る。Lectures are conducted in English.
HE40161	Topics in Vascular Biology	1	1.0	3, 4	FallAB	Intensive		Hiroshi Yanagisawa	To provide basic knowledge and understanding of vascular biology, ranging from normal vascular development and physiology to molecular mechanisms of vascular diseases, as well as novel diagnostic and therapeutic approaches. The course aims to solicit active participation of students in lectures and journal clubs.	医療科学類学生に限る。Lectures are conducted in English. 10/1-12/15 予定(掲示参照)
HE40201	Immunology	1	2.0	3, 4	Annual	by request		Akira Shibuya, Kazuko Shibuya, Satoko Tahara, Chigusa Oda	免疫システムの基本を学ぶとともに、免疫学の最近のトピックスを紹介し、議論する。	国際医療科学専攻学生に限る。Lectures are conducted in English.
HE40231	Clinical pharmacology	1	1.0	3	SprC	Wed/Thu 3	4B119	Norihiko Ohbayashi, Yuji Funakoshi	臨床で用いられるいろいろな薬物について、特有の効果を発現するメカニズムについて学ぶ。薬物の適応症と禁忌について理解させる。これらを通じて生体機能についての理解を深める。	国際医療科学専攻学生に限る。英語で授業。Lectures are conducted in English.
HE40252	Research Seminar	2	4.0	3	Annual	by request		Ken Nishimura	指導教員の指導のもとにテーマを設定して研究を行う。これにより医科学研究遂行に必要な基礎的技術の修得および問題解決能力の体得を図る。	国際医療科学専攻G30コース学生に限る。Lectures are conducted in English.
HE40262	Research Seminar	2	4.0	3	Spring Semester	by appointment		Ken Nishimura	指導教員の指導のもとにテーマを設定して研究を行う。これにより医科学研究遂行に必要な基礎的技術の修得および問題解決能力の体得を図る。	Lectures are conducted in English. 医療科学類生に限る
HE40263	Seminar on Medical Sciences	3	1.0	3	Annual	by request		Ken Nishimura	医科学に関する演習課題について主体的に調査、解答を行い、医科学の理解をさらに深める。	国際医療科学専攻G30コース学生に限る。Lectures are conducted in English.
HE40273	Graduation Research	3	8.0	4	Annual	by request		Ken Nishimura	指導教員の指導のもとにテーマを設定して研究を行う。これにより医科学研究遂行に必要な基礎的技術の修得および問題解決能力の体得を図る。	国際医療科学専攻G30コース学生に限る。Lectures are conducted in English.

Course Number	Course Name	Course Type	Credits	Standard Academic Year	Course Offering Term	Weekday and Period	Classroom	Instructor	Course Overview	Remarks
HE41170	International Forum on Medical Biology Research	0	1.0	3, 4	Annual	by request		Kazuya Morikawa	Students will participate in international meeting in the field related to their own research, or participate in research activity in overseas laboratory.	Lectures are conducted in English.
HE41175	Training Abroad on Medical Biology	5	1.0	3, 4	Annual	by request		Kazuya Morikawa	Students study at foreign university or enroll in an approved international program regarding medical related field.	Lectures are conducted in English.
HE41182	Workshop for Medical Science Students	2	1.5	1, 2	Fall/A	Fri 5,6		Kiong Ho	英語環境で行う自主的な活動を通して積極的なコミュニケーションの姿勢を身につける。	医療科学類生に限る。平成30年度以前入学者用。英語で授業 Lectures are conducted in English.
HE41190	International Forum on Medical Biology Research II	0	1.0	3, 4	Annual	by request		Kazuya Morikawa	Students will participate in international meeting in the field related to their own research, or participate in research activity in overseas laboratory.	医療科学類生に限る Lectures are conducted in English.
HE41200	International Forum on Medical Biology Research III	0	1.0	3, 4	Annual	by request		Kazuya Morikawa	Students will participate in international meeting in the field related to their own research, or participate in research activity in overseas laboratory.	医療科学類生に限る Lectures are conducted in English.
HE41215	Training Abroad Medical Biology II	5	1.0	3, 4	Annual	by request		Kazuya Morikawa	Students study at foreign university or enroll in an approved international program regarding medical related field.	医療科学類生に限る。 Lectures are conducted in English.
HE41225	Training Abroad Medical Biology III	5	1.0	3, 4	Annual	by request		Kazuya Morikawa	Students study at foreign university or enroll in an approved international program regarding medical related field.	医療科学類生に限る。 Lectures are conducted in English.
HE41241	Genetic Testing and Chromosome Analysis	1	1.0	3	Spr/C	Intensive		Emiko Noguchi	Students will learn the basic knowledge of DNA, chromosome and genetics of the diseases through lectures and e-learning. The date of the classes will be announced. The instructor will provide materials (handout, text and e-learning materials) and students are expected to learn the materials prior to the class. At the class, the instructor and students will discuss the contents of the materials provided and students will take short tests.	医療科学類国際医療科学専攻学生に限る。 英語で授業。 Lectures are conducted in English.