Category (科目区分)	Basic subjects		
Course Title (授業科目名)	Basic medicine General remarks		
Instructors (担当者名)	Academic Affairs Chair	Academic Year (配当年次)	1
Required Course / Elective Course (必修/選択)	Required Course	Credits (単位数)	4
Class Format (授業形態)	WebClass(on demand)		
Schedule (開講期間)	From around late April 2024 to December 31, 2024		
Class Date/Period (開講曜日・時間)	—		

Course Outline/ Course Objectives (授業の概要・到達目標)

To provide students with a basic knowledge of biology, life sciences, and the structure of the human body as a basis for understanding clinical medicine and applied medicine and for conducting medical research.
The origins of humans and other living organisms are explained and taught from a medical perspective at the cellular, tissue, organ, and individual level.

Course Planning (授業計画)

	Course Outline/ Course Objectives(授業の概要及び到達目標) (Contents of Class) ((授業内容))	Instructor (担当教員名)	Department (講座名) Class Room〔実施場所〕
1 2 3	The purpose of this lecture is to comprehensively understand the normal structure of the human body in terms of the organs and tissues that make up the individual body. The final goal of this lecture is to provide an integrated understanding of the human body, not just anatomical knowledge, because it is important for understanding the content of later lectures on histology, physiology and pathology.	Prof. Yoshio Bando Associate Prof. Ryoji Suzuki	Department of Anatomy 〔Webclass〕
4 5 6	You can explain the structure and function of the cell membrane, nucleus, cytoplasm, endoplasmic reticulum, Golgi apparatus, secretory granules, centriole, and cytoskeleton (actin, microtubules, intermediate filaments). You can understand that the cells form tissues by junctional complexs and each organ is constructed by combining each tissue. Each organ, which is connected by connective tissues in a broad sense, forms an individual. We always explain them in the relationship with human diseases.	Professor Yasukazu Hozumi, Professor Masakazu Yamazaki Lecturer Tomonori Ayukawa Assistant Professor Kiwamu Yoshikawa,	Department of Cell Biology and Morphology 〔Webclass〕
7	The goal of our lecture series is to understand immune responses against microoraganisms. We will discuss three aspests of the immune responses: acuired immunity, innate immunity, and innate lymphoid cells. Lectures are given in English through Webclass. Acuired immune responses against microorganisms	Professor Takashi Ebihara	Department of Medical Biology 〔Webclass〕

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8	Innate immune responses against microorganisms		
9	Innate lymphoid cell responses against microorganisms		
10 11 12	The purpose is to deepen the understanding of diseases by clarifying biological phenomena at the molecular level. Here, we will explain how to elucidate the cause of onset by understanding the structure and function of proteins and protein-chemical and enzymatic-chemical methods. In addition, learn the metabolism of amino acids, sugars, and lipids, and learn the causes of these inborn errors of metabolism from the viewpoint of genetic abnormalities.	Professor Yoshihiro Matsumura Assistant Professor Yukio Koizumi Assistant Professor Jianbo An	Department of Biochemistry and Metabolic Science 〔Webclass〕
13 14 15	The course is about the Membrane transport within the cells. We would like to explain historic consequence of the reserch and the disease caused by the defects in intracellular transport	Professor Kota Saito Assistant Professor Miharu Maeda	Department of Biological Informatics and Experimental Therapeutics, 〔Webclass〕
16 17 18	The aim of the lecture is to understand the mechanism of neurotransmission, which is essential for brain function, and to understand the process of information processing in the brain from the perspective of the hierarchical structure of the brain. This includes molecules, synapses, neurons, neuronal circuits, brain regions and individuals.	Professor Takafumi Miki	Department of Cell Physiology 〔Webclass〕
19 20 21	Pathlogy is a science on the mechanism of human disease development and is considered to consist in the basis of medicine. Every human disease results from functional and structural disorders of normal cells and from bioreaction to normalize such disorders, which can be observed as macroscopic or microscopic lesions in each organ. In this series of lectures, various lesions being the basis of diseases will be presented and explained.	Professor Yasufumi Omori Assistant Professor Yuko Hiroshima Assistant Professor Maya Suzuki	Department of Molecular Pathology and Tumor Pathology 〔WebClass〕
22 23 24	In this course, basic pathologies in the cardiovascular, respiratory, and renal systems will be taught. Comprehensive and case-specific education will be provided, especially on autopsy cases of lung cancer. The students will learn about myocardial infarction, atherosclerosis, and glomerulonephritis, among others. The goal is to be able to explain the pathological findings of the major diseases that occur in these organs at the gross, tissue, and molecular levels.	Professor Akiteru Goto, Lecturer Makoto Yoshida,	Department of Cellular and Organ Pathology 〔Webclass〕

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25 26 27	To understand typical signaling pathways in ontogeny, tumor development and progression, and cell interactions based on tissue morphogenesis.	Professor Masamitsu Tanaka Associate Professor Sei Kuriyama Assistant Professor Go Itoh	Department of Molecular Biochemistry Reserch Building for Basic Medicine 〔Webclass〕
28 29 30	Since the development of the small pox vaccine by Jenner, immunology has progressed by solving the problems of why the immune system can have great diversity and why it does not respond to self. In this lecture, we will study the history of the great researches of pioneers, including the experimental methods that led to breakthroughs.	Professor: Satoshi ISHII	Department of Immunology 〔Web Class〕

Grading Criteria (成績評価の基準と方法)

Grading is based on the viewing of lectures and reports.

Contact Information (問い合わせ先(氏名, メールアドレス等))

Name: Academic Affairs Chair / E-mail: gakumu-in@jimu.akita-u.ac.jp

Coment (その他特記事項)

Information about the course of study : Please watch the lectures by yourself via WebClass.
Viewing period: Late April – December 31
Textbooks and references: None in particular
Study content during self-study time: It is advisable to conduct preparatory study according to the achievement objectives and class content.