

Course Coding(科目番号)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-015-83-2	2025whole year	Graduate School of Medical Sciences (20160)	1, 2, 3, 4	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
Restorative Medicine(C7 Restorative Medicine)			FUKUSHIMA Satoshi, NISHIKAWA Takeshi, YASUNAGA Junichirou, KAWANO Hiroaki, NAKATA Hirotomo, FUKUI Toshihiro, MIYAMOTO Takeshi, MATSUMURA Takeshi		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……50% 2.Profound inter-disciplinary knowledge ……30% 3.Global perspective and ability to take initiative action ……10% 4.Social leadership drive ……10%					
Type of Class(授業の形態)	Lecture				
Teaching Method(授業の方法)	PowerPoint and/or OHP will be used in the lectures, and active participation in the discussion is encouraged. Extra classes or video lectures are considered for those who are regularly absent for unavoidable reasons.				
Course Goals(授業の目的)	The objectives of this course are for you to understand the following: (1) pathology and therapeutic strategies of sepsis, the mechanisms of organ failure developed from sepsis, (2) risk factors for coronary syndrome, the latest knowledge regarding cardiovascular diseases and their surgical treatment; (3) the latest knowledge regarding cardiovascular diseases and their surgical treatment; (4) the mechanisms of skin wound healing, differences in body surface blood flow distribution between anatomical locations, and plastic surgery procedures and regenerative medical techniques; (5) disorders of bone and joint function and the reconstruction thereof; (6) basic knowledge required to plan out and implement clinical studies.				
Course Learning goals(学修目標)	【A level (A水準)】 Who could understand and explain, (1) pathogenesis underlying and strategy to treat sepsis and organ failures due to sepsis; (2) risk factors for coronary syndrome; (3) latest knowledges regarding cardiovascular diseases and their surgical treatments; (4) mechanisms underlying dermal wound healing, distribution of body surface blood flow, techniques for plastic surgery and regenerative medicine; (5) mechanisms underlying and ways of treatment for bone and joint diseases; (6) basic knowledges for planning and conducting clinical studies.It is recommended for you to review the handout materials distributed in the lectures and your notebooks well. If you want to ask any questions to the lecturers, "Office Hour" is available for you. It is also recommended to review the lectures by using e-learning contents if available. 【C level (C水準)】 Who could understand, (1) pathogenesis underlying and strategy to treat sepsis and organ failures due to sepsis; (2) risk factors for coronary syndrome; (3) latest knowledges regarding cardiovascular diseases and their surgical treatments; (4) mechanisms underlying dermal wound healing, distribution of body surface blood flow, techniques for plastic surgery and regenerative medicine; (5) mechanisms underlying and ways of treatment for bone and joint diseases; (6) basic knowledges for planning and conducting clinical studies.				
Course Outline(授業の概要)	In this class, the current situation and problems of restorative medicine are explained in terms of both life support and vital function. With continued progress in the field of medicine, critical care medicine has produced a steady flow of successful results and its functional prognosis has also improved dramatically. We will introduce new definition and therapeutic strategies of international sepsis guidelines with outline of new clinical research. We will also provide the mechanisms of organ failure from sepsis in basic and clinical viewpoint. Moreover, we will provide lectures regarding risk factors for acute coronary syndrome, which needs urgent therapy, and the progress of surgical treatments for heart failure, ischemic heart diseases, and valvular heart diseases. Although disorders of the skin, bones, and joints are rarely directly life-threatening conditions, they greatly affect a patient's vital functions. We will explain the theory of skin wound healing and the latest molecular biological knowledge, and we will also provide lectures regarding the progress made in the area of skin flaps through studies of blood flow in human skin and discuss reconstructive medicine for the blood vessels, lymph vessels, and nerves in terms of the development of microsurgery.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		Satoshi Fukushima [eJ-0]	Mechanism of Wound healing		
2		Satoshi Fukushima [eJ-0]	Reconstruction by local frap		
3		Satoshi Fukushima [eJ-0]	Reconstruction with microsurgery		
4		Takeshi Miyamoto [eJ-0]	Pathophysiology of bone metabolism		
5		Takeshi Miyamoto [eJ-0]	Physiology and biology of articular cartilage		
6		Takeshi Miyamoto [eJ-0]	Inflammatory arthritis		
7		Takeshi Nishikawa [eJ-0]	Hypothesis and Design of Clinical Researches		
8		Junichiro Yasunaga [eJ-0]	Hematopoiesis in the bone marrow and hematopoietic stem cell transplantation therapy		
9		Hirotomo Nakata [eJ-0]			
10		Hiroaki Kawano [eJ-0]	Risk factors for acute coronary syndrome and gender difference		
11		Toshihiro Fukui [eJ-0]	Sugical treatment of heart failure		
12		Toshihiro Fukui [eJ-0]	Surgical treatment of ischemic heart disease		
13		Toshihiro Fukui [eJ-0]	Surgery of valvular heart disease		
14		Takeshi Matsumura [eJ-0]	Hypothesis and design from the perspective of diabetic complications researches		
15		Hiroaki Kawano [eJ-0]	X Y chromosome related disease		
Estimated out-of-class					

study time	
Required Textbook(テキスト)	Textbooks are not specified, and handouts will be distributed.
Reading List(参考文献)	
Enrollment Conditions(履修条件)	
Assessment Methods and Criteria(評価方法・基準)	Grading will be based on active class participation, paper summaries, and the final report. Grading will be based on the student's understanding of the course subject matter. The students' understanding will be evaluated on the basis of papers dealt with in class to be scored from 0 to 100. Final grades will be based on the average score of the papers as well as participation in class discussions.
Language Used in Instruction(使用言語)	Japanese
Textbook/Material Language(教科書・資料の言語)	Japanese
Course Based on Practical Work Experience(実務経験を活かした授業)	Not applicable