

Category (科目区分)	Cluster of Biofunctional Systems		
Course Title (授業科目名)	Cardiology, practical training		
Instructors (担当者名)	Hiroyuki Watanabe	Academic Year (配当年次)	1
Required Course / Elective Course (必修/選択)	Elective Course	Credits (単位数)	1
Class Format (授業形態)	Lecture		
Schedule (開講期間)	October 2026 – March 2027		
Class Date/Period (開講曜日・時間)	The day of the class will be announced to students by e-mail after the course registration is completed. Class hours: 18:00 – 21:00		
Course Outline/ Course Objectives (授業の概要・到達目標)			
Course Objectives The objective of this course is to understand the pathophysiology of cardiovascular diseases and to acquire the knowledge and skills necessary for conducting cardiovascular research. Through basic and clinical research activities, students will develop a deeper understanding and insight into cardiovascular diseases and cultivate advanced leadership skills in the field of cardiovascular medicine.			
Course Outline This course covers fundamental and clinical aspects of cardiovascular medicine, including the history of cardiology, epidemiology, physiology, and molecular biology of the heart and blood vessels. Students will learn methods for evaluating cardiovascular diseases and the characteristics and relative advantages of various diagnostic techniques. The course also addresses the pathophysiology, classification, diagnosis, and treatment of heart failure, arrhythmias, hypertension, cardiomyopathies, valvular heart diseases, and atherosclerotic disorders, as well as related molecular mechanisms, regenerative medicine, and signaling networks involved in cardiovascular pathology.			
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	Fundamentals of Cardiovascular Disease	Professor Hiroyuki Watanabe	Cardiovascular Medicine [5S Conference Room]
2	Cardiovascular Disease Diagnosis and Evaluation	Lecturer Ken Terata	
3	Pathophysiology and mechanism of heart failure	Professor Hiroyuki Watanabe	
4	Approaches to arrhythmia and sudden cardiac death	Professor Hiroyuki Watanabe	
5	Coronary artery disease	Lecturer Ken Terata	
6	Hypertension	Lecturer Ken Terata	
7	Valvular heart disease	Professor Hiroyuki Watanabe	
8	Cardiomyopathy	Lecturer Ken Terata	
9	Risk of cardiovascular disease	Lecturer Ken Terata	
10	Cardiovascular signaling network	Professor Hiroyuki Watanabe	
Grading Criteria (成績評価の基準と方法)			
This course consists of a total of 45 hours, including 30 hours of lectures and 15 hours of self-study, and is worth one academic credit. Evaluation will be based on overall attendance, performance in oral and written examinations, and the quality of submitted reports.			

	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]
Contact Information (問い合わせ先(氏名, メールアドレス等))			
Name: Hiroyuki Watanabe / E-mail : hirow@doc.med.akita-u.ac.jp			
Name: Ken Terata / E-mail : kterata@med.akita-u.ac.jp			
Comment (その他特記事項)			
Information about the course: For working graduate students who are unable to attend practical training sessions due to professional commitments, the schedule will be adjusted as appropriate. Textbooks / References: Braunwald's Heart Disease, JCS Guidelines, and other relevant literature in specialized fields of cardiovascular medicine. Self-study requirements: Students are expected to engage in preparatory and review study in accordance with the learning objectives and course content.			