

T.C. MALTEPE UNIVERSITY FACULTY OF MEDICINE
UNDERGRADUATE PROGRAM
2025-2026 ACADEMIC YEAR
EDUCATIONAL INFORMATION PACKAGE

COURSE INFORMATION					
Course Name	Cardiology Diseases			Course Code	MED 408
Phase	4	Level of the Course	Undergraduate	Language of the Course	English
Mode of Delivery	Face to face			Lesson Type	Compulsory
Practice/Laboratory Site	Maltepe University Medical Faculty Hospital,			Suggested Courses	None
Prerequisite	1. MED 100 2. MED 200 3. MED 300			Concurrent Requirements: None	

ECTS			
ECTS Credits	Theoretical Lecture Hours	Practical Hours	Course Duration
7	32	48	3 weeks

COURSE COORDINATORS AND INSTRUCTORS
Course Coordinator, contact information and office hours: Mustafa Serdar YILMAZER, MD., Assist. Prof., Maltepe University, Faculty of Medicine drserdaryilmazer@gmail.com Phone Ext: 2032 Office hours: Monday:13:00-14:00 Lecturers, contact information and office hours: Bekir Yılmaz CİNGÖZBAY, MD., Prof., Maltepe University, Faculty of Medicine yilmaz.cingozbay@maltepe.edu.tr Phone Ext: 2034 Office hours: Monday:10:00-11:00 Mustafa Serdar YILMAZER, MD., Assist. Prof., Maltepe University, Faculty of Medicine drserdaryilmazer@gmail.com Phone Ext: 2032 Office hours: Monday:13:00-14:00 Merve KUMRULAR,MD.,Assist Prof., Maltepe University, Faculty of Medicine merve.kumrular@maltepe.edu.tr Phone Ext: 2123 Office hours: Monday:10:00-11:00

GENERAL OBJECTIVE AND CATEGORY OF THE COURSE										
To educate the students in the aim of understanding the epidemiology and pathophysiology of cardiological diseases in which students frequently encounter in everyday practice, combining symptom and clinical findings, differential diagnosis, treatment and follow-up on diseases										
<table><tr><th colspan="2">COURSE CATEGORY</th></tr><tr><td>• Basic vocational course</td><td>x</td></tr><tr><td>• Specialization / Field Course</td><td></td></tr><tr><td>• Support lectures</td><td></td></tr><tr><td>• Transferable skill courses</td><td></td></tr></table>	COURSE CATEGORY		• Basic vocational course	x	• Specialization / Field Course		• Support lectures		• Transferable skill courses	
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• Basic vocational course	x									
• Specialization / Field Course										
• Support lectures										
• Transferable skill courses										

	Humanities, Communication and Management skill courses	
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COURSE LEARNING OUTCOMES, SUB-SKILLS and COMPETENCIES			
Students completing this course;			
Sequence No.	Learning Output / Sub - Skills / Competencies	Education method	MR Method
1	Students are encouraged to obtain information on complaints from the patients and can sort, apply and associate with diseases.	EM1,EM2,EM5	ME2
2	Students are able to tell and perform physical examination of cardiovascular system and correlate them with the diseases	EM1,EM2,EM5	ME2
3	Students are able to summarize the clinical and laboratory characteristics,diagnostic methods and treatment modalities of dyspnea, chest pain and syncope	EM1,EM2,EM5	ME1
4	Students are able to summarize the clinical and laboratory characteristics, diagnostic methods and treatment modalities in patients with hypertension	EM1,EM2,EM5	ME1
5	Students are able to summarize the clinical and laboratory characteristics, diagnostic methods and treatment modalities of acute coronary syndrome	EM1,EM2,EM3	ME1
6	Students are able to summarize the clinical and laboratory characteristics, diagnostic methods and treatment modalities of heart failure and heart valve diseases	EM1,EM2,EM5	ME4
7	Students are able to summarize the clinical and laboratory characteristics, diagnostic methods and treatment modalities of tachyarrhythmias and bradyarrhythmia	EM1,EM2,EM3	ME4
8	Students are able to summarize the clinical and laboratory characteristics, diagnostic methods and treatment modalities of infective endocarditis	EM1,EM2	ME4
9	Students are able to recognize cardiac emergencies and summarize the clinical and laboratory characteristics, diagnostic methods and treatment modalities	EM1,EM3,EM5	ME4
10	Students can summarize the principles of approach to pulmonary embolism and pulmonary hypertension.	EM1,EM2	ME4
11	Students can summarize the principles of approach to aortic diseases	EM1,EM2	ME4
12	Students can summarize the principles of approach to congenital heart disease in adults	EM1,EM2	ME4
13	Students can take and interpret electrocardiograms.	EY3,EY5	ME2
14	Students are able to use the defibrillator device	EM2,EM3,EM4	ME2

GENERAL COMPETENCIES:
- Productive - Rational - Creative - Ethical - Respectful to differences - Sensitive to social issues - able to use own language effectively - Sensitive to environment - Able to use a foreign language effectively - Able to adapt to different social roles in various situations - Able to work as a team member - Able to use time effectively - Having a critical mind

COURSE CONTENTS
Hypertension as a Cardiovascular Risk Factor; Stable Angina Pathophysiology, Clinic and Treatment Approach; Noninvasive Assessment Methods in Cardiology; Acute Coronary Syndrome: Unstable Angina / Myocardial Infarction without ST segment elevation Pathophysiology, Clinic, Treatment; Approach to Patient with Dyspnea, Acute Coronary

Syndrome: Myocardial Infarction with ST Segment Elevation, Physiopathology, Clinic, Treatment; Protective Medical Treatment Approaches in Atherosclerosis; Clinical ECG; Heart Valve Diseases; Infective endocarditis; Tachyarrhythmias; Pulmonary Embolism and Pulmonary Hypertension; Heart failure; Cardiomyopathy and Myocarditis; Pericardial Diseases; Congenital Heart Diseases in Adults; Aortic Diseases; Cardiological Emergencies and Approach Principles

COURSE TEXTBOOKS AND SUPPLEMENTARY READINGS

Textbooks:

- 1-Temel Kardiyoloji Kalbin Fizik Muayenesi: Tekniği ve Klinik İpuçları. Editör: Enar R. Nobel Tıp Kitabevleri. 2012
- 2- Braunwald Kalp Hastalıkları Kardiyovasküler Tıp Kitabı. Çeviri Editör: Sezer M. Nobel Tıp Kitabevi. 2015
- 3-Hurst's Kalp Cilt 1-2. Çeviri Editörü: Kozan Ö. Nobel Tıp Kitabevi. 2014

Supplementary Readings:

- 1- Goldman-Cecil Medicine, 2-Volume Set, 25e. Ed.: Goldman L. 2016

COURSE ASSESSMENT AND EVALUATION SYSTEM

Studies during the year	Percent grade
Clerkship Examination	%50
Structured Oral Examination	%50
ICE (İş Başı Değerlendirme)	%0
OSCE (Structured Subjective Clinical Examination)	%0
Attendance	%0
Laboratory	%0
Clinical Practice	%0
Field study	%0
Lesson Specific Internship (if there is)	%0
Homework	%0
Presentation	%0
Project	%0
Seminar	%0
Problem Based Learning	%0
Others	%0
TOTAL	100

NOTES:

Assessment and Evaluation System is organized according to T.C. Maltepe University Faculty of Medicine Education and Training Regulations.

ECTS STUDENT WORKLOAD TABLE

Activities	Number	Duration (hours)	Total work load
Lectures	32	1	32
Laboratory	8	2	16
Practice	32	1	32

Lesson specific internship (if there is)	-	-	-
Field study	-	-	-
Lesson study time out of class (pre work, strengthen, etc)	15	2	30
Presentation / Preparing seminar	-	-	-
Project	-	-	-
Homework	1	10	10
Interval examinations	-	-	-
Clerkship Examination	1	20	20
Total work load			140

RELATIONSHIP BETWEEN CARDIOLOGY CLERKSHIP LEARNING OUTCOMES AND MEDICAL EDUCATION PROGRAMME KEY LEARNING OUTCOMES						
No	Program Competencies/ Outcomes	Level of Contribution				
		1	2	3	4	5
1	Able to explain the normal structure and functions of the organism.					x
2	Able to explain the pathogenesis, clinical and diagnostic features of psychiatric disorders					x
3	Able to take history and perform mental status examination.					x
4	Able to perform first step interventions and refer and transfer cases in life threatening emergency situations.					x
5	Able to perform necessary basic medical interventions for the diahnosis and treatment of mental					x
6	Able to perform preventive measures and forensic practices.				x	
7	Having sufficient knowledge about the structure and process of the National Health System.		x			
8	Able to define legal responsibilities and ethical principles.			X		
9	Able to perform first step care of most prevalent disorders in the community with effective evidence based medical methods.					x
10	Able to organize and implement scientific meetings and projects	x				
11	Able to use a major foreign language sufficient enough for follow up of literature and update of medical knowledge; able to use computer and statistical skills for the evaluation of scientific studies.	x				

PHASE 4 MED 408 CARDIOLOGY CLERKSHIP COURSE LIST AND RANKING		
No.	Subject/Competence	Instructor
1	Vertical integration	Prof. MD. Barış Çakır
2	Non-Invasive Tests and Procedures in Cardiology	Assistant. Prof., MD. Merve Kumrular

3	Acute Coronary Syndrome: Unstable angina and non-ST elevation myocardial infarction. Definition, Pathophysiology, Clinical Manifestations, Treatment	Assistant. Prof., MD. M. Serdar Yilmazer
4	Hypertension as a Risk Factor for Cardiovascular disease	Assistant. Prof., MD. Merve Kumrular
5	Stable Angina: Definition, Pathophysiology, Clinical manifestations, Treatment	Assistant. Prof., MD. Merve Kumrular
6	Infective Endocarditis	Assistant. Prof., MD. Merve Kumrular
7	Acute Coronary Syndrome: ST elevation myocardial infarction. Definition, Pathophysiology, Clinical manifestations, Treatment	Assistant. Prof., MD. M. Serdar Yilmazer
8	Prevention of Atherosclerosis	Assistant. Prof., MD. M. Serdar Yilmazer
9	Clinical Electrocardiography (ECG)	Assistant. Prof., MD. M. Serdar Yilmazer
10	Tachyarrhythmias (Supraventricular and Ventricular arrhythmias)	Assistant. Prof., MD. M. Serdar Yilmazer
11	Valvular Heart Diseases	Assistant. Prof., MD. Merve Kumrular
12	Congenital Heart Diseases in Adults	Assistant. Prof., MD. M. Serdar Yilmazer
13	Aortic Diseases	Assistant. Prof., MD. M. Serdar Yilmazer
14	Cardiomyopathies and myocarditis	Assistant. Prof., MD. Merve Kumrular
15	Pericardial disease	Assistant. Prof., MD. Merve Kumrular
16	Heart Failure	Assistant. Prof., MD. Merve Kumrular
17	Pulmonary Embolism and Pulmonary Hypertension	Assistant. Prof., MD. Merve Kumrular
18	Cardiac Emergencies (acute pulmonary edema,cardiogenic shock,cardiac arrest) and Management	Assistant. Prof., MD. M. Serdar Yilmazer

PHASE 5 MED 408 CARDIOLOGY CLERKSHIP SCHEDULE					
1. Week					
Days	Monday	Tuesday	Wednesday	Thursday	Friday
09.00-09:50	Theoretical Lesson: Introduction to Cardiology and review exam	Theoretical Lesson: Tachyarrhythmias (Supraventricular and Ventricular arrhythmias)	Theoretical Lesson: Pericardial disease	Theoretical Lesson: Aortic Diseases	Theoretical Lesson: Pulmonary Embolism and Pulmonary Hypertension
10.00-10:50	Theoretical Lesson: Primary Prevention of Atherosclerosis	Theoretical Lesson: Tachyarrhythmias (Supraventricular and Ventricular arrhythmias)	Theoretical Lesson: Valvular Heart Diseases	Theoretical Lesson: Cardiac Emergencies (acute pulmonary edema,cardiogenic shock,cardiac arrest) and Management	Theoretical Lesson: Pulmonary Embolism and Pulmonary Hypertension
11.00-11:50	Theoretical Lesson: Acute Coronary Syndrome: Unstable angina and non-ST elevation myocardial infarction. Definition, Pathophysiology, Clinical	Theoretical Lesson: Tachyarrhythmias (Supraventricular and Ventricular arrhythmias)	Theoretical Lesson: Valvular Heart Diseases	Theoretical Lesson: Cardiac Emergencies (acute pulmonary edema,cardiogenic shock,cardiac arrest) and Management	Theoretical Lesson: Cardiomyopathies and myocarditis

	Manifestations, Treatment				
12.00-13.30	Lunch Break	Lunch Break	Lunch Break	Lunch Break	Lunch Break
13.30-14.20	Theoretical Lesson: Acute Coronary Syndrome: Unstable angina and non-ST elevation myocardial infarction. Definition, Pathophysiology, Clinical Manifestations, Treatment	Theoretical Lesson: Stable Angina: Definition, Pathophysiology, Clinical manifestations, Treatment	Theoretical Lesson: Congenital Heart Diseases in Adults	Theoretical Lesson: Non-Invasive Tests and Procedures in Cardiology	Theoretical Lesson: Peripheral Arterial Disease
14.30-15.20	Theoretical Lesson: Acute Coronary Syndrome: ST elevation myocardial infarction. Definition, Pathophysiology, Clinical manifestations, Treatment	Theoretical Lesson: Heart Failure	Theoretical Lesson: Congenital Heart Diseases in Adults	Theoretical Lesson: Infective Endocarditis	Theoretical Lesson: Clinical Electrocardiography (ECG)
15.30-16.20	Theoretical Lesson: Acute Coronary Syndrome: ST elevation myocardial infarction. Definition, Pathophysiology, Clinical manifestations, Treatment	Theoretical Lesson: Heart Failure	Theoretical Lesson: Tumors of the heart	Theoretical Lesson: Hypertension as a Risk Factor for Cardiovascular disease	Theoretical Lesson: Clinical Electrocardiography (ECG)
16.30-17.30	Study Hours	Study Hours	Study Hours	Study Hours	Theoretical Lesson: Clinical Electrocardiography (ECG)
2. Week					
8.30-9.30	visit	visit	visit	visit	visit
9.30-10.30	Cardiology polyclinics	Cardiology polyclinics	Cardiology polyclinics	Cardiology polyclinics	Cardiology polyclinics
10.30-11.30	Echocardiography lab	Echocardiography lab	Echocardiography lab	Echocardiography lab	Echocardiography lab
11.30-12.30	Cardiology polyclinics	Cardiology polyclinics	Cardiology Polyclinics		Study hours
12.30-13.30	Lunch Break	Lunch Break	Lunch Break	Lunch Break	Lunch Break
13.30-14.30	Cardiology polyclinics	Practice: ECG interpretation	Angiography lab	Angiography lab	Cardiology Polyclinics
14.30-15.30	Cardiology polyclinics	Cardiology polyclinics	Cardiology Polyclinics	Cardiology polyclinics	Cardiology Polyclinics
15.30-16.30	Cardiology polyclinics	Cardiology polyclinics	Cardiology polyclinics	Cardiology polyclinics	Cardiology Polyclinics

16.30-17.30	Study Hours	Study Hours	Study Hours	Study Hours	Study Hours
3. Week					
8.30-9.30	Visit	Visit	visit		
9.30-10.30	Cardiology Polyclinics	Cardiology Polyclinics	Cardiology Polyclinics	Sumative Exam	Verbal Exam
10.30-11.30	Cardiology Polyclinics	Cardiology Polyclinics	Cardiology Polyclinics	Sumative Exam	Verbal Exam
11.30-12.30	Study Hours	Study Hours	Study hours		Verbal Exam
12.30-13.30	Lunch break	Lunch break	Lunch break		
14.30-15.30	Study Hours	Study Hours	Study Hours		Verbal Exam
15.30-16.30	Study Hours	Study Hours	Study Hours		
16.30-17.30					

EDUCATIONAL METHODS GUIDE		
COD E	METHOD NAME	EXPLANATION
EM1	Amphitheatre lesson	These are the courses applied in preclinical education where the whole class is together.
EM2	Class lesson	These are courses applied in small groups during the clinical period.
EM3	Lab application	These are laboratory courses applied in the preclinical period.
EM4	Skill Training App	It is the work that the student does on a model or mannequin before meeting with the real patient, which will be done in the Virtual Clinic or other environment.
EM5	Clinic Education	These are activities that provide clinical competence by applying bedside training with real patients or models under the supervision of trainers.
EM6	Independent Study Hours	These are the periods in the curriculum for the student to repeat what they have learned and to prepare for new lesson sessions.
EM7	Community Based Education Application	Field practices, non-unit professional practices, etc. includes.
EM8	Problem Based Learning	Problem based learning.
EM9	Private Study module	These are applications that will enable the student to gain in-depth knowledge about a subject individually or as a group.
EM10	Scientific Research study	These are applications aimed at improving the scientific research competence of the student.
EM11	Other	If this code is used, the training method should be written in detail.
MEASUREMENT EVALUATION METHODS GUIDE		

COD E	METHOD NAME	EXPLANATION
ME1	Theoretical Exam (Multiple Elective , Multiple Optional etc Questions containing)	The committee is the exam used in the final exams.
ME2	Practical exam	It should be used for laboratory applications.
ME3	Classical Verbal	
ME4	Structured Oral	It is an oral exam in which questions and answers are prepared on a form beforehand.
ME5	OSCE	Objective Structured Clinical Examination
ME6	CORE	Clinical Act Execution Exam
ME7	ICE (Business head Evaluation)	It is the evaluation made by the trainer on the student at the bedside or during the practice.
ME8	Other	A statement must be made.