

COURSE INFORMATION					
Course Title	Code	Semester	Lecture+Practice+Labrotory Hour	Credits	ECTS
Cardiology (Clinical Clerkship)	MED 405	Phase 4/7-8	28+32	5	5*

* ECTS credits are the university credits of the courses in Yeditepe University, Faculty of Medicine, Undergraduate Medical Education Program

Prerequisites	The student that joins this course, should completed Phase 1, 2 and 3 courses of medical faculty.
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Language of Instruction	English
Course Level	Second Cycle including First Cycle Degree (One Tier Programme)
Course Type	Compulsory
Course Coordinator	Muzaffer Murat Değertekin, MD. Prof.
The instructors	<p><u>Yeditepe University Hospital</u> Muzaffer Murat Değertekin, MD. Prof. Olçay Özveren, MD. Assoc. Prof. Tolga Aksu , MD . Prof. Ayça Türer Cabbar , MD. Assist. Prof. Mustafa Aytek Şimşek, MD. Assist. Prof. Çiğdem Koca MD. Feri Onur Mutluer MD. Cansu Ebre MD.</p> <p><u>Kartal Koşuyolu Higher Education And Research Hospital</u> Ramazan Kargın, MD. Prof. Rezan Deniz Acar, MD. Prof. Ali Karagöz, MD. Assoc. Prof</p>
Assistants	-
Goals	The course aims to equip the clerkship attendees with the necessary knowledge and skills required to approach to cardiac patients, deliver healthcare measures, achieve diagnosis and differential diagnosis of cardiac diseases, apply primary care prophylaxis and treatment to cardiac patients and refer cardiac patients to advanced healthcare units upon indication.

Learning outcomes At the end of this clerkship, student should be able to;	Program Learning Outcomes	Teaching Methods	Assessment Methods
List required procedures and investigations for delivering preventive healthcare measures to cardiology patients	1.1.3, 1.1.5	1,2,3	B,C
Discuss diagnosis and differential diagnosis of cardiac diseases.	1.1.3, 1.1.6, 1.1.8	1,2,3	B,C,D
Describe the presentation, pathophysiology, clinical and laboratory features of common cardiologic acute and chronic disorders	1.1.3	1,2,3	A,B,C
List required procedures and investigations for primary care prophylaxis and treatment to cardiac patients	1.1.10, 1.1.11	1,2,3	A,B,C
List required procedures and investigations for the diagnosis, differential diagnosis and follow-up of cardiology patients	1.1.7	1,2,3	A,B,C
Describe the initial steps of cardiac echocardiography, Holter ECG monitoring, cardiac exercise test	1.1.8, 1.1.10	1,2,3	A,B,C
Describe the initial steps of cardiac catheterization and coronary angiography	1.1.8, 1.1.9	1,2,3	B,C
Describe the initial steps of pericardiocentesis	1.1.8, 1.1.9	1,2,3	A,B,C
Describe the management of common cardiac disorders	1.1.3, 1.1.5	1,2,3	A,B,C
Describe the procedures of ambulatory blood pressure monitoring	1.1.8, 1.1.10	1,2,3	A,B,C
Describe the electrophysiological study and pacemaker implantation	1.1.8, 1.1.9	1,2,3	A,B,C
Obtain an appropriate and detailed history of patients	1.1.2, 1.1.4	1,2,3	A,B,C

Perform detailed physical examination of cardiac patient	1.1.5	1,2,3	B,C
Provide basic life support to cardiac patient	1,1,11	1,2,3	B,C
Perform basic clinical procedures and interventions	1.1.7	1,2,3	A,B,C
Obtain required samples for laboratory investigations	1.1.7	1,2,3	A,B,C
Interpret clinical and laboratory data	1.1.7, 1.1.8	1,2,3	A,B,C
Evaluate blood pressure of patient	1.1.5, 1.1.7, 1.1.10	1,2,3	A,B,C
Evaluate peripheral pulses of patient	1.1.5, 1.1.7, 1.1.10	1,2,3	A,B,C
Provide a prioritized problem list	1.1.2, 1.1.3	1,2,3	B,C
Manage common cardiac disorders and emergency cases	1.1.9, 1.1.11	1,2,3	A,B,C
Present patients clearly by written and oral means	1.2.1	1,2,3	B,C
Ask for consultation when indicated	1.2.1, 1.2.2	1,2,3	B,C
Refer patients to advanced healthcare units when indicated	1.2.1, 1.2.2	1,2,3	B,C
Use written and online sources correctly and efficiently to access evidence-based information	3.1.1, 3.1.2	1,2,3	B,C
Communicate and collaborate effectively with colleagues, teaching staff and other members of the healthcare team	1.2.1, 1.2.2	1,2,3	B,C
Assess and diagnose electrocardiographic findings	1.1.1, 1.1.5, 1.1.6	1,2,3	A,B,C

Evaluate serum electrolytes, renal function tests, hepatic function tests and thyroid function tests, cardiac biomarkers	1,1,6	1,2,3	B,C
Diagnose acute cardiac disorders	1,1,3	1,2,3	A,B,C
Practice cardiac auscultation	1,1,5	1,2,3	B,C
Measure blood pressure with sphygmomanometry	1,1,5	1,2,3	B,C
Assess cardiac monitorization and ECG	1,1,5	1,2,3	B,C
Use written and on-line sources correctly	3.1.1, 3.1.2	1,2,3	B,C
Respect and understand of the roles, responsibilities and relationship of primary care and specialty care providers	1.2.2	1,2,3	B,C
Demonstrate interpersonal skills and professionalism in relations with patients, families and healthcare staff, being analytical and research orientated	1.2.2, 1.2.3	1,2,3	B,C
Show respect for patient rights, communicate appropriately with patient and families and provide clear and concise information about the patient's condition	2,5,2	1,2,3	B,C
Obey infection control regulations when working at inpatient and outpatient clinics	2.1.1, 2.2.1	1,2,3	B,C
Communicate and collaborate effectively with colleagues, teaching staff and other members of the healthcare team	1.2.1, 1.2.2	1,2,3	B,C

Teaching Methods:

1: Lecture, 2: Bedside Teaching, 3: Small Group Discussion

Assessment Methods:

A: MCQ B: OE C: SOE D:EMQ

COURSE CONTENT		
Week	Topics	Study Materials
1	Introductory Session (Introduction to Cardiology Training Program)	Materials for the course provided by the the instructor
1	Lecture History taking	Materials for the course provided by the instructor
1	Lecture Basic Electrocardiography	Materials for the course provided by the instructor
1	Lecture Approach to the Patient with Chest Pain	Materials for the course provided by the instructor
1	Lecture ST Elevation Myocardial Infarction I	Materials for the course provided by the instructor
1	Lecture ST Elevation Myocardial Infarction II	Materials for the course provided by the instructor
1	Lecture Non-ST Elevation Myocardial Infarction/Unstable Angina	Materials for the course provided by the instructor
1	Lecture Chronic Coronary Artery Disease	Materials for the course provided by the instructor
1	Lecture Percutaneous Coronary and Valvular Interventions	Materials for the course provided by the instructor
1	Lecture Heart Failure I	Materials for the course provided by the instructor
1	Lecture Heart Failure II	Materials for the course provided by the instructor
1	Lecture Dilated, Restrictive and Hypertrophic Cardiomyopathies	Materials for the course provided by the instructor
1	Lecture Mitral Valve Diseases	Materials for the course provided by the instructor
1	Lecture Aortic Valve Diseases	Materials for the course provided by the instructor
1	Lecture Tricuspid and Pulmonary Valve Diseases	Materials for the course provided by the instructor
2	Lecture Hypertension	Materials for the course provided by the instructor
2	Lecture Infective Endocarditis	Materials for the course provided by the instructor
2	Lecture Pericardial Diseases	Materials for the course provided by the instructor

2	Lecture Tachyarrhythmias	Materials for the course provided by the instructor
2	Lecture Tachyarrhythmias	Materials for the course provided by the instructor
2	Lecture Bradyarrhythmias and Heart Blocks	Materials for the course provided by the instructor
2	Lecture Syncope	Materials for the course provided by the instructor
2	Lecture Sudden Cardiac Death	Materials for the course provided by the instructor
2	Lecture Cardiac Pacemakers and Implantable Cardiac Defibrillators	Materials for the course provided by the instructor
2	Lecture Pulmonary Vascular Disease	Materials for the course provided by the instructor
2	Cardiology Practice (Kartal Koşuyolu Higher Education and Research Hospital) Echo-lab	Materials for the course provided by the instructor
2	Cardiology Practice (Kartal Koşuyolu Higher Education and Research Hospital) Outpatient	Materials for the course provided by the instructor
2	Cardiology Practice (Kartal Koşuyolu Higher Education and Research Hospital) Intensive Care	Materials for the course provided by the instructor
2	Cardiology Practice (Kartal Koşuyolu Higher Education and Research Hospital) Emergency	Materials for the course provided by the instructor
2	Assessment Session Written Examination	Materials for the course provided by the instructor
2	Assessment Session Oral Examination	Materials for the course provided by the instructor

RECOMMENDED SOURCES	
Textbook	1- Braunwald's Heart Disease: A Textbook of Cardiovascular Medicine, Volume Set, 10th Edition 2- Marriott's Practical Electrocardiography
Additional Resources	Lecture notes

ASSESSMENT		
Questions Types (Pencil-Paper Tests)	Proportion (in Pass/Fail Decision)	Questions Types (Pencil-Paper Tests)
Multiple Choice Questions	%100	Multiple Choice Questions
Total	%100	Total
Other Assessment Methods and Tools	Proportion (in Pass/Fail Decision)	Other Assessment Methods and Tools
Oral Exam (OE)	%40	Oral Exam (OE)
Evaluation of Preparation Skills of Patient's File	%10	Evaluation of Preparation Skills of Patient's File
	Total %50	Total
Pass/Fail Decision	Proportion (in Pass/Fail Decision)	Pass/Fail Decision
Pencil-Paper Tests	%50	Pencil-Paper Tests
Other Assessment Methods and Tools	%50	Other Assessment Methods and Tools
	Total %100	Total

MATERIAL SHARING	
Documents	Photocopy shareable.
Assignments	Not Shareable
Exams	Not shareable

COURSE CATEGORY	Expertise/Field Courses
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COURSE'S CONTRIBUTION TO PROGRAM						
	PODG.1. Basic Professional Competencies	Contribution				
	POD.1.1. Clinical Competencies	1	2	3	4	5
PO.1.1.1.	values preventive health services, offers primary prevention (i.e. prevention of diseases for the protection of health), secondary prevention (i.e. early diagnosis and treatment) tertiary prevention (i.e. rehabilitation) and quaternary prevention (i.e. prevention of excessive and unnecessary diagnosis and treatment) services, provides consultancy on these issues.					
PO.1.1.2.	employs a patient-centered approach in patient management.					X
PO.1.1.3.	recognizes most frequently occurring or significant clinical complaints, symptoms, signs, findings and their emergence mechanisms in clinical conditions.				X	
PO.1.1.4.	takes medical history from the applicant himself/herself or from the individual's companions.					
PO.1.1.5.	does general and focused physical and mental examination.				X	
PO.1.1.6.	interprets findings in medical history, physical and mental examination.				X	
PO.1.1.7.	employs diagnostic procedures that are used frequently at the primary health care level.		X			
PO.1.1.8.	selects tests that have evidence-based high efficacy at the primary health care level and interprets results.					
PO.1.1.9.	makes clinical decisions using evidence-based systematic data in health care service.		X			
PO.1.1.10.	performs medical interventional procedures that are used frequently at the primary health care level.					
PO.1.1.11.	manages healthy individuals and patients in the context of health care services.					
PO.1.1.12.	keeps medical records in health care provision and uses information systems to that aim.					X
	POD.1.2. Competencies related to Communication					
PO.1.2.1.	throughout his/her career, communicates effectively with health care beneficiaries, co-workers, accompanying persons, visitors, patient's relatives, care givers, colleagues, other individuals, organizations and institutions.			X		
PO.1.2.2.	collaborates as a team member with related organizations and institutions, with other professionals and health care workers, on issues related to health.				X	
PO.1.2.3.	recognizes the protection and privacy policy for health care beneficiaries, co-workers, accompanying persons and visitors.				X	
PO.1.2.4.	communicates with all stakeholders taking into consideration the socio-cultural diversity.					X
	POD.1.3. Competencies Related to Leadership and Management					
PO.1.3.1.	manages and leads within the health care team in primary health care organization.					
PO.1.3.2.	recognizes the principles of health management and health sector economy, models of organization and financing of health care services.					
PO.1.3.3.	recognizes the resources in the health care service, the principles for cost-effective use.					
	POD.1.4. Competencies related to Health Advocacy					

PO.1.4.1.	recognizes the health status of the individual and the community and the factors affecting the health, implements the necessary measures to prevent effects of these factors on the health.					
PO.1.4.2.	recognizes and manages the health determinants including conditions that prevent access to health care.					
	POD.1.5. Competencies related to Research					
PO.1.5.1.	develops, prepares and presents research projects					
	POD.1.6. Competencies related to Health Education and Counseling					
PO.1.6.1.	provides consultancy services and organizes health education for the community to sustain and promote the health of individual and community.					
	PODG.2. Professional Values and Perspectives					
	POD.2.1. Competencies related to Law and Legal Regulations					
PO.2.1.1.	performs medical practices in accordance with the legal framework which regulates the primary health care service.					X
	POD.2.2. Competencies Related to Ethical Aspects of Medicine					
PO.2.2.1.	recognizes basic ethical principles completely, and distinguishes ethical and legal problems.					X
PO.2.2.2.	pays importance to the rights of patient, patient's relatives and physicians, and provides services in this context.					X
	POD.2.3. Competencies Related to Social and Behavioral Sciences					
PO.2.3.1.	relates historical, anthropological and philosophical evolution of medicine, with the current medical practice.					
PO.2.3.2.	recognizes the individual's behavior and attitudes and factors that determine the social dynamics of the community.					
	POD.2.4. Competencies Related to Social Awareness and Participation					
PO.2.4.1.	leads community with sense of responsibility, behavior and attitudes in consideration of individual behaviors and social dynamics of the community, and if there is a necessity, develops projects directed towards health care services.					
	POD.2.5. Competencies Related to Professional Attitudes and Behaviors					
PO.2.5.1.	displays a patient-centered and holistic (biopsychosocial) approach to patients and their problems.					
PO.2.5.2.	respects patients, colleagues and all stakeholders in health care delivery.			X		
PO.2.5.3.	displays the proper behavior in case of disadvantaged groups and situations in the community.					
PO.2.5.4.	takes responsibility for the development of patient safety and healthcare quality.					
PO.2.5.5.	evaluates own performance as open to criticism, realizes the qualifications and limitations.					
	PODG.3. Professional Development and Self-Worth					
	PODG.3.1. Personal Development and Values					
PO.3.1.1.	embraces the importance of lifelong self-learning and implements .					

PO.3.1.2.	embraces the importance of updating knowledge and skills; searches current advancements and improves own knowledge and skills.					
PO.3.1.3.	uses English language at least at a level adequate to follow the international literature and to establish communication related to the profession.					
POD.3.2. Competencies Related to Career Management						
PO.3.2.1.	recognizes and investigates postgraduate work domains and job opportunities.					
PO.3.2.2.	recognizes the application requirements to postgraduate work/job domains, and distinguishes and plans any requirement for further training and work experience.					
PO.3.2.3.	prepares a resume, and recognizes job interview methods.					
POD.3.3. Competencies Related to Protection and Development of Own Physical and Mental Health						
PO.3.3.1.	implements the rules of healthy living.					
PO.3.3.2.	displays appropriate behavior specific to work under stressful conditions.					
PO.3.3.3.	uses self-motivation factors.					

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity/ day	Duration (Hour)	Total Workload (Hour)
Course Duration (2 weeks)	10	6	60
Hours for off-the-classroom study (Pre-study, practice, review/week)	10	8	80
Homework	-	-	-
Exam	2	2	4
Total Work Load			144
Total Work Load / 30 (h)			4.8
ECTS Credit of the Course			5