		COURSE IN	FORMATION		
Course Title	Code	Semester	Lecture+Practice+Labrotory Hour	Credits	ECTS
Cardiology (Clinical Clerkship)	MED 405	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 have at least the Phase 3 knowledge level in medical faculty.	
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Language of Instruction	English
Course Level	Second-cycle higher education (i.e. QF-EHEA-2, EQF-LLL-7, TYYÇ-7) with Master's Degree/ "Regulated Professions" legislation by EU 2005/36/EC Directive
Course Type	Compulsory
Course Coordinator	Olcay Özveren, MD. Assoc. Prof.
The instructors	(Yeditepe University Hospital) Muzaffer Murat Değertekin, MD. Prof. Olcay Özveren, MD. Assoc. Prof. Tolga Aksu, MD. Assoc. Prof. Mustafa Aytek Şimşek, MD. Assist. Prof. Erdal Durmuş M.D. Çiğdem Koca M.D Ferit Onur Mutluer M.D (Kartal Koşuyolu Higher Education and Research Hospital) Ramazan Kargın MD. Assoc. Prof. Ali Karagöz, MD. Assoc. Prof. Alev Kılıçgedik, MD. Assoc. Prof.
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.
Content	

CARDIOLOGY - GROUP A / Week I

		Mari	ale:		Tuesday				Wednesday			Thursday				Friday				
	Monday 07-Feb-2022		2	0		sday 5-2022	2			esda <u>y</u> 5-202				sday o-202		1		day 5-202	2	
	Car	Cardiology Practise KARTAL KOŞUYOLU HIGHER EDUCATION AND RESEARCH HOSPITAL		ctise J AND	Cardiology Practise KARTAL KOŞUYOLU HIGHER EDUCATION AND RESEARCH HOSPITAL			Cardiology Practise KARTAL KOŞUYOLU HIGHER EDUCATION AND RESEARCH HOSPITAL			Cardiology Practise KARTAL KOŞUYOLU HIGHER EDUCATION AND RESEARCH HOSPITAL			H N	Cardiology Practise KARTAL KOŞUYOLU HIGHER EDUCATION AND RESEARCH HOSPITAL		N N			
08.30 - 12.00	Gr ou p A1	Gr ou p A2	Gr ou p A3	Gr ou p A4	G r o u p A 1	G r o u p A 2	G r o u p A 3	G r o u p A 4	G r o u p A 1	G r o u p A 2	G r o u p A 3	G r o u p A	G r o u p A 1	G r o u p A 2	G r o u p A 3	G r o u p A 4	G r o u p A 1	G r o u p A 2	Group A3	GroupA4
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12.50 - 13.50	Car Muz	ntrodu diolog	y Trai gram Değer takin Durmu	ning tekin	F (Patier Chest <i>Muz</i>	ture th to that with t Pain affer rtekin	ı	Infa	Myoc rctior e An	Elevarardial ardial n/Unstragina gina a Ayte	tabl	Ç	iğden Muz	ture ailure n Koo affer rtekin	a		Dise	Valve	
14.00 - 14.50	E	Lec ardiov Exam Erdal L	inatioi Durmu	n <i>ış</i>	! 	Lecture ST Elevation Myocardial Infarction I Mustafa Aytek Simşek Lecture Chronic Corona Artery Diseas Mustafa Ayte Şimşek		se	Lecture Heart Failure II Çiğdem Koca Muzaffer Değertekin			a	Lecture Aortic Valve Diseases Olcay Özverel							
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16.00 - 17.00	Independent		nt		depe Lear	enden ning	it	lr	Independent Learning			Değertekin Independent Learning			nt	Independent Learning			nt	

GROUP A / Week II

					GROUP A / Week II									
	1	Mor 4-Fel	nday b-202	22	1		sday b-20				esda b-202		Thursday 17-Feb-2022	Friday 18-Feb-2022
	F	KAR KOŞU HIG DUC	ctise RTAL IYOL HER ATIO ND ARC	U N H	ED	Pra KAI KOŞI HIG UCAT RESE	diolog actise RTAL JYOL GHER FION EARC PITA	.U AND	F	Prad KAR (OŞU HIG DUC AI RESE	iology ctise RTAL JYOL HER ATIO ND EARC	U N H		
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	E c h o · l a b ·	O u t P a t i e n t	n t e n s i v e c a r e	E m e r g e n c y	E c h o - I a b	O u t P a t i e n t	n t e n s i v e c a r e	E m er g e n cy	O u t P a t i e n t	n t e n s i v e c a r e	E m e r g e n c y	E c h o - I a b		and Oral Examination YEDİTEPE UNIVERSITY
13.00 - 13.50	Ç	Lec lypert liğder lcay (ture tension	ca	Та	chyai	cture rhyth a Aks			Lec Syn	ture cope a Aksi	u	Independent Learning	HOSPITAL Muzaffer Değertekin Olcay Özveren
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	Monday 07-March-2022			22	Tuesday 08-March-2022				Vedn		•			sday		11-		Friday 11-March-2022		
	Cardiology Practise KARTAL KOŞUYOLU HIGHER EDUCATION AND RESEARCH HOSPITAL		H AND	Cardiology Practise KARTAL KOŞUYOLU HIGHER EDUCATION AND RESEARCH HOSPITAL			Cardiology Practise KARTAL KOŞUYOLU HIGHER EDUCATION AND RESEARCH HOSPITAL			Cardiology Practise KARTAL KOŞUYOLU HIGHER EDUCATION AND RESEARCH HOSPITAL			Cardiology Practise KARTAL KOŞUYOLU HIGHER EDUCATION AND RESEARCH HOSPITAL							
08.30 - 12.00	Gr ou p A1	Gr ou p A2	Gr ou p A3	Gr ou p A4	Group A1	GroupA2	G r o u p A 3	GroupA4	Group A1	GroupA2	G r o u p A 3	G r o u p A 4	GroupA1	G r o u p A 2	G r o u p A 3	G r o u p A 4	G r o u p A 1	G r o u p A 2	Group A3	G r o u p A 4
	Ec ho- lab	Ou tPa tie nt	Int en siv e car e	Em erg en cy	E c h o a b	OutPatient	I n t e n s i v e c a r e	E m e r g e n c y	OutPatient	l n t e n s > e c a r e	E m e r g e n c y	E c h o · l a b	OutPatient	I n t e n s i v e c a r e	E m e r g e n c y	E c h o · l a b	I n t e n s i v e c a r e	E m e r g e n c y	Есьо. — аь	O u t P a t i e n t
12.50 - 13.50	Card H	ntrodu diolog Prog <i>Muz</i> Değe History	y Trai gram caffer crtekin v takin Durmu caffer	ining ng uş	Lecture Approach to the Patient with Chest Pain Muzaffer Değertekin		Lecture Non-ST Elevation Myocardial Infarction/Unstabl e Angina Mustafa Aytek Şimşek		Lecture Heart Failure I Çiğdem Koca Muzaffer Değertekin			а	Lecture Mitral Valve Diseases Olcay Özveren							
14.00 - 14.50	E	ardiov Exami Erdal E Muz	inatio	n Iş	Lecture ST Elevation Myocardial Infarction I Mustafa Aytek Şimşek			Lecture Chronic Coronary Artery Disease Mustafa Aytek Şimşek			Lecture Heart Failure II Çiğdem Koca Muzaffer Değertekin			са	Lecture Aortic Valve Diseases Olcay Özveren					
15.00 - 15.50		Electrocardiograph		! 	Myoc nfarc ustaf	ture evatio ardial tion II a Ayto	l I	C	Lec ercuta orona Valv nterve Muz Değe	aneou ary an rular ention affer	id s	H Car Ç	yperi diom s iğder Muz		thie	Lecture Tricuspid and Pulmonary Valve Diseases Olcay Özveren		llve		
16.00 - 17.00	Independent Learning			nt		depe Lear	ender ning	nt	Ir	ndepe Lear	ning	nt D D I		Lear	ender ning		Independent Learning			

CARDIOLOGY - GROUP B / Week I

GROUP B / Week II

		onday arch-20	022	15	Tue 5-Mar	sday				esda rh-20		Thursday 17-March- 2022	Friday 18-March- 2022
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08.30 - 12.00	G	G r o u p A 3	G r o u p A 4	G r o u p A 1	G r o u p A 2	G r o u p A 3	G ro u p A 4	G r o u p A 1	G r o u p A 2	G r o u p A 3	G r o u p A 4	Lecture Pulmonary Vascular Disease Erdal Durmuş	Written Examination
	E c h o · l a b ·	n t e n s i v e c a	E m e r g e n c y	E c h o - I a b	O u t P a t i e n t	n t e n s i v e c a	E m er g e n cy	O u t P a t i e n t	n t e n s i v e c a	E m e r g e n c y	E c h o - I a b	Olcay Özveren	and Oral Examination YEDİTEPE
13.00 - 13.50	Hype Çiğd	ecture ertensidem Ko	ca	Та	chyai	cture rrhyth			Syn	ture cope a Aksi	u	Independent Learning	UNIVERSITY HOSPITAL Muzaffer Değertekin Olcay Özveren
14.00 - 14.50	Inf Ende <i>Çiğd</i>	ecture ective ocardit em Ko	ca	Tac Aks	chyar	cture rhyth Tolga	mias		dden De	ture Card ath		Independent Learning	Tolga Aksu Mustafa Aytek Şimşek Erdal Durmuş Çiğdem Koca
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16.00 - 17.00		pende arning		ı	ndep Lea	ende rning		lı		ende ning		Independent Learning	

Learning outcomes the end of this clerkship, student should be able to;	Program Learning Outcomes	Teaching Methods	Assessmen t Methods
List required procedures and investigations for delivering preventive healthcare measures to cardiology patients	1.1.3, 1.1.5	1,2,3	В,С
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		1,2,3	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	В,С
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	В,С
Provide basic life support to cardiac patient	1,1,11	1,2,3	В,С
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	В,С
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	В,С
Ask for consultation when indicated	1.2.1, 1.2.2	1,2,3	В,С
Refer patients to advanced healthcare units when indicated	1.2.1, 1.2.2	1,2,3	В,С
Use written and online sources correctly and efficiently to access evidence-based information	3.1.1, 3.1.2	1,2,3	В,С
Communicate and collaborate effectively with colleagues, teaching staff and other members of the healthcare team	1.2.1, 1.2.2	1,2,3	В,С
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	В,С
Diagnose acute cardiac disorders	1,1,3	1,2,3	A,B,C
Practice cardiac auscultation	1,1,5	1,2,3	В,С
Measure blood pressure with sphingomanometry	1,1,5	1,2,3	В,С
Assess cardiac monitorization and ECG	1,1,5	1,2,3	В,С
Use written and on-line sources correctly	3.1.1, 3.1.2	1,2,3	В,С
Respect and understand of the roles, responsibilities and relationship of primary care and specialty care providers	1.2.2	1,2,3	В,С
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	В,С

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	В,С
Obey infection control regulations when working at inpatient and outpatient clinics	2.1.1, 2.2.1	1,2,3	В,С
Communicate and collaborate effectively with colleagues, teaching staff and other members of the healthcare team	1.2.1, 1.2.2	1,2,3	В,С

Teaching Methods:	1: Lecture, 2: Bedside Teaching, 3: Small Group Discussion
Assessment Methods:	A: MCQ B: OE C: SOE D:EMQ

COURSE CONTENT						
Nee (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 1	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 Tachyarrhythmas	Materials for the course provided by the instructor
2	Lecture Tachyarrhythmias	Materials for the course provided by the instructor
2	Lecture Bradyarrhytmias 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

	RECOMMENDED SOURCES
Textbook	1- Braunwald's Heart Disease: A Textbook of Cardiovascular Medicine,Volume Set, 10th Edition2- Marriott's Practical Electrocardiography
Additional Resources	Lecture notes

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

ASSESSMENT						
Questions Types (Pencil-Paper Tests)	Proportio n (in Pass/Fail Decision)	Questions Types (Pencil-Paper Tests)				
Multiple Choice Questions	%100	Multiple Choice Questions				
Total	%100	Total				
Other Assessment Methods and Tools	Proportio n (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				
Tota	I %50	Total				
Pass/Fail Decision	Proportio n (in Pass/Fail Decision)	Pass/Fail Decision				

	Total %100	Total
Other Assessment Methods and Tools	%50	Other Assessment Methods and Tools
Pencil-Paper Tests	%50	Pencil-Paper Tests

COURSE CATEGORY Compulsory

	COURSE'S CONTRIBUTION TO PROGRAM							
No	lo Program Learning Outcomes		Contribu					
INO	Program Learning Outcomes	1	2	3	4	5		
1.1.2	employs a patient-centered approach in patient management.					x		
1.1.3	recognizes most frequently occurring or significant clinical complaints, symptoms, signs, findings and their emergence mechanisms in clinical conditions.				X			
1.1.5	does general and focused physical and mental examination.				х			
1.1.6	<i>interprets</i> findings in medical history, physical and mental examination.				x			
1.1.7	employs diagnostic procedures that are used frequently at the primary health care level.		x					
1.1.9	makes clinical decisions using evidence-based systematic data in health care service.		x					
1.1.1 2	keeps medical records in health care provision and uses information systems to that aim.					x		
1.2.1	throughout his/her career, <i>communicates</i> effectively with health care beneficiaries, co-workers, accompanying persons, visitors, patient's relatives, care givers, colleagues, other individuals, organizations and institutions.			x				
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			
1.2.3	recognizes the protection and privacy policy for health care beneficiaries, co-workers, accompanying persons and visitors.				х			
1.2.4	communicates with all stakeholders taking into consideration the socio-cultural diversity.					x		
2.1.1	performs medical practices in accordance with the legal framework which regulates the primary health care service.					x		

2.2.1	recognizes basic ethical principles completely, and distinguishes ethical and legal problems.	×	
2.2.2	pays importance to the rights of patient, patient's relatives and physicians, and provides services in this context.	×	
2.5.2	displays a patient-centered and holistic (biopsychosocial) approach to patients and their problems.	x	

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ECTS ALLOCATED BASED ON STUDENT WORKLOAD	BY THE COL	JRSE DESC	RIPTION
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	í		144
Total Work Load / 30 (h))		4.8
ECTS Credit of the Course	.		5