COURSE INFORMATION					
Course Title	*Code*	*Semester*	*Lecture+Practice+Laboratory Hour*	*Credits*	*ECTS*
Cardiovascular Surgery (Adult and Congenital)(Clinical Clerkship)	MED 406	4/7-8	16+20	2	2*

* 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.

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	Tijen Alkan-Bozkaya, MD. Assoc. Prof.
The instructors	(Yeditepe University Hospital) Halit Yerebakan, MD. Assoc. Prof. Tijen Alkan-Bozkaya, MD. Assoc. Prof., PhD (Kartal Koşuyolu Higher Education and Research Hospital) Prof. Dr. Fuat Büyükbayrak (Eğitim Sorumlusu) Prof. Dr. M. Kaan Kırali Prof. Dr. Hasan Sunar Prof. Dr. Hakan Ceyran Prof.Dr. Murat Bülent Rabuş Prof.Dr.Mesut Şişmanoğlu Doç.Dr.Sabit Sarıkaya Doç.Dr.Taylan Adademir
Assistants	-
Goals	This internship is an opportunity for interns to approach patients who need adult and pediatric cardiac surgery surgery, to participate in surgeries as an observer, to learn about cardiac surgery and its principles, to approach cardiac surgery cases according to these, to learn diagnosis and treatment modalities, to approach and guideline information about emergency cardiac surgery. In this direction, it aims to have the appropriate clinical triage notion, to equip the cardiac patients with the necessary knowledge and skills to refer to advanced health units in line with the indication.

Content

CARDIOVASCULAR SURGERY - GROUP I - II - III - IV 2022-2023						
	Monday /2022- 2023	Tuesday / 2022 -2023	Wednesday 2022-2023	Thursday 2022-2023	Friday 2022-2023
09.00-09.30	Independent Learning	Independent Learning	Independent Lear ning	Independent Learning	Independent Learning
09.30-10-20	Lecture Introductory Course History of Cardivascular Surgery *Halit Yerebekan*	Lecture Extracorporeal Circulation and Organ Pritection *Halit Yerebekan*	Lecture Aortic Aneurysm and Aortic Dissection *Halit Yerebekan*	Lecture Cardiac Neoplasms and Pericardial Disease Tijen Bozkaya	Assessment Session
10.30 – 11.20	Lecture Anatomy of Heart and Great Vessels Tijen Bozkaya	Lecture Surgical Treatment of Coronary Artery Disease *Halit Yerebakan*	Lecture Aortic Aneurysm and Aortic Dissection *Halit Yerebekan*	Lecture Peripheric Arterial Disease and Carotid Oclusive Disease Tijen Bozkaya	Program Evaluation Session Review of the Exam Questions, Evaluation of the CP
11.30 – 12.20	Lecture Surgical Treatment of Valvular Heart Disease *Tijen Bozkaya*	Lecture Congenital Heart Disease Acyanotic *Tijen Bozkaya*	Lecture Venous and Lymphatic System Disease *Tijen Bozkaya*	Lecture Surgical Treatment of Heart Failure *Halit Yerebakan*	Independent Learning
12.20 - 13.30	Lunch	Lunch	Lunch	Lunch	
13.30 – 14.20	Lecture Surgical Treatment of Valvular Heart Disease Tijen Bozkaya	Lecture Congenital Heart Disease Cyanotic *Tijen Bozkaya*	Lecture Prophylaxis Diagnosis and Treatment of VTE *Tijen Bozkaya*	Lecture Heart and Great Vessels Injuries *Halit Yerebekan*	
16.00-17.00	Independent Learning	Independent Learning	Independent Learning	Independent Learning	

Learning outcomes 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 cardiovascular surgery 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 cardiovascular 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 cardiovascular surgery patients	1.1.7	1,2,3	A,B,C
Describe the examination and follow-up methods, evaluation and comparison methods of diseases in the field of Cardiovascular Surgery.	1.1.8, 1.1.10	1,2,3	A,B,C
Describe the definitions, stages and principles of surgical planning of diseases in the field of Cardiovascular Surgery and related surgical procedures.	1.1.8, 1.1.9	1,2,3	B,C

Describe the initial steps of pericardiocentesis (surgical indications and approach)	1.1.8, 1.1.9	1,2,3	A,B,C
Explain the surgical treatment of cardiac rhythm disorders.	1.1.3, 1.1.5	1,2,3	A,B,C
Explains the procedures and criteria of outpatient follow-up of patients entering the field of Outpatient Cardiovascular Surgery.	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
A detailed patient history is taken from the patients belonging to the diseases that fall into the field of Cardiovascular Surgery.	1.1.2, 1.1.4	1,2,3	A,B,C
Performs a detailed physical examination of patients with diseases in the field of Cardiovascular Surgery.	1.1.5	1,2,3	B,C
Provide basic life support and follow up to cardiac patient at ICU	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
Provides a priority problem list of diseases that fall under the field of Cardiovascular Surgery. Manages common cardiac disorders and emergencies related to diseases in the field of Cardiovascular Surgery.	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
Evaluates blood gases, serum electrolytes, kidney and liver function tests, thyroid function tests, cardiac biomarkers, infection parameters.	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 sphingomanometry	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
Complies with infection control regulations while evaluating inpatients (in the intensive care and service) and working in 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 Cardiovascular Surgery 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 and cardiovascular physical exam	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** Myocardial Infarction (MI) and mechanical complications I	Materials for the course provided by the instructor
1	**Lecture** Post MI and mechanical complications and hemodynamic management II	Materials for the course provided by the instructor
1	**Lecture** Post MI mechanical complications and surgical approach III	Materials for the course provided by the instructor
1	**Lecture** Chronic Coronary Artery Disease and coronary bypass grafting	Materials for the course provided by the instructor
1	**Lecture** Percutaneous peripheral vascular 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 and surgical approach 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 and Surgery	Materials for the course provided by the instructor
1	**Lecture** Aortic Valve Diseases and Surgery	Materials for the course provided by the instructor
1	**Lecture** Tricuspid and Pulmonary Valve Diseases and Surgery	Materials for the course provided by the instructor
1	**Lecture** Pulmonary Hypertension	Materials for the course provided by the instructor
1	**Lecture** Infective Endocarditis and Surgery	Materials for the course provided by the instructor
1	**Lecture** Pericardial Diseases and Surgery	Materials for the course provided by the instructor
2	**Lecture** Aortic aneurysm and Dissections I-II	Materials for the course provided by the instructor
1	**Lecture** Congenital Heart Surgery I	Materials for the course provided by the instructor
1	**Lecture** Congenital Heart Surgery II	Materials for the course provided by the instructor
1	**Lecture** Congenital Heart Surgery III	Materials for the course provided by the instructor
2	**Lecture** Cardiac Tumors	Materials for the course provided by the instructor
2	**Lecture** Vascular Surgery	Materials for the course provided by the instructor
1	**Lecture** Pulmonary Vascular Disease	Materials for the course provided by the instructor
2	**Cardiology Practice** (Kartal Koşuyolu Higher Education and Research Hospital, Operating Room)	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**- Cardiac Surgery in Adults, Cohn L.H. Mc Graw Hill 2- Cardiac Surgery, Kouchoukos N.T., et al. Churchill Livingstone 3- Haimovici's Vascular Surgery, Ascher E., et al. Wiley-Blackwell
Additional Resources	Lecture notes

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

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**

COURSE CATEGORY	Compulsory

COURSE'S CONTRIBUTION TO PROGRAM							
No	Program Learning Outcomes	Contribution					
		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.				x		
1.1.6	***interprets*** 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				
1.1.12	***keeps*** medical records in health care provision and ***uses*** information systems to that aim.					x	
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			

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.		x	
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.			x
2.2.2	***pays importance to*** the rights of patient, patient's relatives and physicians, and ***provides*** services in this context.			x
2.5.2	***displays*** a patient-centered and holistic (biopsychosocial) approach to patients and their problems.		x	

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity/ day	Duration (Hour)	Total Workload (Hour)
Course Duration (2 weeks)	10	4	40
Hours for off-the-classroom study (Pre-study, practice, review/week)	10	2	20
Homework	-	-	-
Exam	2	2	4
Total Work Load			64
Total Work Load / 30 (h)			2.13
ECTS Credit of the Course			2