

COURSE INFORMATION					
Course Title	Code	Semester	Lecture+Practice+Laboratory Hour	Credits	ECTS
Cardiovascular Surgery (Adult and Congenital)(Clinical Clerkship)	MED 406	Phase 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 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	Tijen Alkan-Bozkaya, MD. Assoc. Prof.
The instructors	<p><u>Yeditepe University Hospital</u> Tijen Alkan Bozkaya, MD, PhD, Noyan Temuçin Oğuş, MD, PhD,</p> <p><u>Kartal Koşuyolu Higher Education And Research Hospital</u> Hasan Sunar, MD, Prof. Fuat Büyükbayrak, MD, Prof.</p>
Assistants	-
Goals	This internship is an opportunity for interns to approach patients who need adult and pediatric cardiac 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.

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 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 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
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

NCC 2014 – Essential Medical Procedures (National Core Curriculum)	Performance Level
Cardiovascular system examination	1
Neurological examination	3
Reading and assessing direct radiographs	3
Performing pericardiosynthesis	1

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

ASSESSMENT

Questions Types (Pencil-Paper Tests)	Proportion (in Pass/Fail Decision)	Questions Types (Pencil-Paper Tests)
Multiple Choice Questions	%35	Multiple Choice Questions
Total	%35	Total
Other Assessment Methods and Tools	Proportion (in Pass/Fail Decision)	Other Assessment Methods and Tools
Oral Exam (OE)	%35	Oral Exam (OE)
Evaluation of Preparation Skills of Patient's File	%30	Evaluation of Preparation Skills of Patient's File
Total	%65	Total
Pass/Fail Decision	Proportion (in Pass/Fail Decision)	Pass/Fail Decision
Pencil-Paper Tests	%35	Pencil-Paper Tests
Other Assessment Methods and Tools	%65	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.						
	POD.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	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