



**MUĞLA SITKI KOÇMAN UNIVERSITY FACULTY of MEDICINE
PHASE V
ENGLISH MEDICINE PROGRAM**

**COURSE of Cardiovascular Surgery
2022/2023 Academic Year
COURSE GUIDEBOOK**

Course Code: MED 5023

Course Topic Code: MED5-KDC

***This guide has been prepared by the Department of Cardiovascular Surgery Course Purpose, Target, Outcomes, Training and Education Contents, Methods, Educational Activities, Measurement and Evaluation Techniques, Course Logbook, Program Qualifications Matrix, Matching the Courses with NCEP 2020, Matching the Courses with the Course Objectives and Outcomes, Matching the Course Achievements with Measurement Techniques, Course Notification Form, Vertical/Horizontal Integration Status of Courses and Course Schedules were declared on 04.07.2022.**

PREFACE

Dear Students,

Welcome to the **Cardiovascular Surgery** course which is an important part of your education.

In this course program, which is going to continue for 2 weeks, we aim to give the basic education of the course program in all aspects of theoretical courses and practical applications. This guide describes what you will learn and perform during your course, the rules you must follow in our clinic, and the working conditions. We wish you all success with the belief that this guide will guide you sufficiently through your course studies.

Department of Cardiovascular Surgery

GENERAL INFORMATION on COURSE

| | |
|--|---------------------------------|
| Course Title | : Cardiovascular Surgery |
| Main Department of Course | : Surgical Sciences |
| Department Responsible for Course | : Cardiovascular Surgery |
| Course Code | : Med 5023 |
| Course Type | : Required |
| Duration of the Course | : 2 weeks |
| Teaching Method of the Course | : Formal |
| ECTS | : 3 |
| Language | : English |
| Head of the department | : Prof. Dr. Buğra Harmandar |
| Teaching Staff | : |

| Teaching Staff | Subject area | Theoretical Course duration (Hours) |
|--------------------------------------|--|-------------------------------------|
| Prof. Dr. Buğra Harmandar | Adult and Pediatric Cardiovascular Surgery | 10 |
| Assist. Prof. Dr. Burak Can Depboylu | Adult Cardiovascular Surgery | 13 |
| Assist. Prof. Dr. Serkan Yazman | Adult Cardiovascular Surgery | - |
| Assist. Prof. Dr. Hande İřtar | Pediatric Cardiovascular Surgery Subspecialty Specialist | 13 |
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|--|-----------------------------|
| Coordinator of the Department Education Program | : Prof. Dr. Buğra Harmandar |
| Coordinator of the Course Education Program | : Prof. Dr. Buğra Harmandar |
| Coordinator of the Course Examinations | : Prof. Dr. Buğra Harmandar |
| Coordinator of Course Assessment and Evaluation | : Prof. Dr. Buğra Harmandar |
| e-Mail | : bugraharmandar@mu.edu.tr |

TEACHING METHODS-TECHNIQUES

1. Theoretical lessons
2. Learning Centered Teaching
 - a. Case-based discussion sessions
 - b. Student case reports,
 - c. Practical application at the bedside
 - d. Practical application at the bedside in the outpatient clinic
3. Interactive teaching

PHYSICAL SPACES

| Teaching Activity | Physical Space | Explanation |
|----------------------------|--------------------------------|---|
| Theoretical lessons | Morphology Building | |
| Inpatient bedside practice | Training and Research Hospital | 3rd floor Cardiovascular Surgery Ward 19- 26th rooms |
| Policlinic | Training and Research Hospital | 2 nd floor Cardiovascular Surgery Polyclinic |
| Case analysis | Morphology Building | |
| Problem-based teaching | | |
| Special audit applications | Training and Research Hospital | Jblock, Cardiovascular Surgery operating rooms and intensive care unit |
| Private field applications | Training and Research Hospital | Jblock, Cardiovascular Surgery operating rooms and intensive care unit |

RELATED LEGISLATION

<http://www.tip.mu.edu.tr/tr/ilgili-mevzuat-6641>

AIM(S) of the COURSE

| | |
|----------|--|
| 1 | In this course, it is aimed that students have sufficient knowledge, skills and abilities and gain attitudes to evaluate the signs and symptoms of common diseases in cardiovascular surgery within the scope of the National CEP, to diagnose in primary care conditions, to create / implement / monitor a treatment plan, to perform emergency intervention when necessary and to provide referral to a cardiovascular surgeon. |
|----------|--|

OBJECTIVE(S) of the COURSE

| | |
|---|---|
| 1 | To be able to take medical history from Cardiovascular Surgery patients, perform physical examination and evaluate findings. |
| 2 | To be able to present Cardiovascular Surgery patients at visits. |
| 3 | To be able to explain the diagnosis and medical treatments of peripheral arterial diseases and venous system diseases. |
| 4 | To be able to explain diagnosis of heart valve, coronary and congenital heart diseases, medical and surgical treatments. |
| 5 | To be able to evaluate the patient in the intensive care unit after open heart surgery. |
| 6 | To be able to explain the characteristics of drains, catheters, and probes and to be able to follow and evaluate the process. |
| 7 | To be able to perform nonsterile, sterile, and uncomplicated dressings. |
| 8 | To be able to perform the first-line treatments of cardiovascular surgery diseases. |

INTENDED LEARNING OUTCOME(S)

| | |
|---|---|
| 1 | Can take medical history from Cardiovascular Surgery patients, perform physical examination, and evaluate findings. |
| 2 | Can present Cardiovascular Surgery patients at visits. |
| 3 | Can explain the diagnosis and medical treatments of peripheral arterial diseases and venous system diseases. |
| 4 | Can explain diagnosis of heart valve, coronary and congenital heart diseases, medical and surgical treatments. |
| 5 | Can evaluate the patient in the intensive care unit after open heart surgery. |
| 6 | Can explain the characteristics of drains, catheters and probes and can follow and evaluate the process. |
| 7 | Can perform nonsterile, sterile, and uncomplicated dressings. |
| 8 | Can perform the first-line treatments of cardiovascular surgery diseases. |

DUTIES AND RESPONSIBILITIES OF STUDENTS

Duration of course is 2 weeks.

In addition to the theoretical courses, “patient practice” courses are carried out during the course.

Course students are expected to make observations and experiences about the studies and practical applications of the theoretical courses given to them. (Percutaneous invasive interventions, surgical interventions and follow-up of these practices etc. in the operating room and CVS intensive care unit at the bedside under the supervision of the relevant clinical specialist)

There is no practice of staying on duty at the hospital during this course.

Information about the polyclinic practice and what is expected from the students:

1. Taking anamnesis about cardiovascular diseases.
2. Performing systemic physical examination and special physical examinations for cardiovascular diseases, requesting the laboratory and imaging tests to aid diagnosis.
3. Routine follow-up of post-operative cardiovascular surgery patients (laboratory tests, imaging tests and physical examination findings etc.)
4. Prescribing medical treatments used in cardiovascular surgery, giving information to the patients about drug use and follow-up.

Information and expectations about ward work and patient preparation:

1. Performing general systemic physical examination and special physical examinations related to the diagnosis of the patients who admitted to the cardiovascular surgery ward. (peripheral pulse examination via manually and/or using hand doppler device, listening cardiac murmurs, etc.)
2. Requesting the laboratory examinations and imaging methods in the preoperative preparation of patients in the CVS ward.
3. Postoperative follow-up of the patients in the CVS ward and intensive care unit.

Students are responsible for completing the course logbook for each application during the course.

Although there is no directive of the medical faculty regarding dress, all students are expected to perform personal care and dress with a style and care worthy of a physician candidate during all practical and theoretical training hours.

During the course program (if no change is notified by the relevant faculty member during the course period), students are expected to fully present for theoretical or practical application. According to the regulation, there is an attendance requirement of 70% in theoretical courses and 80% in applied courses in Phase V.

RECOMMENDED RESOURCE(S)

KEY RESOURCE(S)

| KEY RESOURCE(S) | Matched Course Outcome(s) |
|---|---------------------------|
| Cardiovascular Surgery Book (Editors; PAÇ, AKÇEVİN, AKA, BÜKET, SARIOĞLU) | 1,2,4,5,6,8 |
| Cardiovascular Surgery Book, Editor: Prof. Dr. Enver DURAN | 1,2,3,4,5,6,8 |
| Cardiac Surgery 4th Edition Kirklin / Barratt-Boyes | 1,2,4,5,6,8 |
| Rutherford's Vascular Surgery 9th Edition | 1,2,3,8 |

ADDITIONAL RESOURCE(S)

| ADDITIONAL RESOURCE(S) | Matched Course Outcome(s) |
|---|---------------------------|
| Aortic Surgery Book (Editor: Suat BÜKET, Tahir YAĞDI) | 1,2,4,5 |
| Turkish Society of Cardiovascular Surgery Peripheral Artery and Vein Diseases Treatment Guide | 3 |
| National Treatment Guidelines for peripheral artery and vein diseases | 3 |
| Perioperative Approach in Adult Cardiac Surgery Robert M. Bojar | 1,2,4,6, |

ASSESSMENT and EVALUATION

Assessment and Evaluation in the End of Course Evaluation Exam

| Assessment and Evaluation Method | Explanation | Role in the End of Course Evaluation | % Value for the End of Course Evaluation |
|--|---|--------------------------------------|--|
| Attendance to Classes | | Compulsory | |
| Course Logbook | | Compulsory | |
| Multiple Choice Theoretical Test Exam* | Multiple choice questions | | 50 |
| Bedside Clinical Practice Exam** | | | |
| Unstructured Oral Examination*** | Under the supervision of at least two faculty members | | 50 |
| Total | | | 100 |

Availability of Course Logbook, Place of Course Report in Course Assessment and Evaluation Principles

For the right to take the written exam, the student must be evaluated as “adequate” from the criteria specified in the course report.

Existence of Attendance Requirement and Its Place in Course Assessment-Evaluation Principles

It is stated at the beginning of the course that the student who is absent from the courses will not be taken to the written exam.

The Effect of the Assessment and Evaluation Methods to be Applied on the Success Status at the End of the Course

In order to be successful in the course, it is required to get at least 60 points at each stage of the course exams. A student whose score is 59 and below in an assessment-evaluation technique is not allowed to participate in the other exam phase.

1 st stage: Multiple Choice Theoretical Test Exam

2 nd stage: Unstructured (Jury-Based) Classical Oral Examination

Assessment and Evaluation in Resit Examination

| Assessment and Evaluation Method | Explanation | Role in the End of Course Evaluation | % Value at the End of Course Evaluation |
|--|---|--------------------------------------|---|
| Multiple Choice Theoretical Test Exam* | Multiple choice questions | | 50 |
| Unstructured Oral Examination** | Under the supervision of at least two faculty members | | 50 |
| Total | | | %100 |

Assessment and Evaluation in Single Course Resit Exam

| Assessment and Evaluation Method | Explanation | Role in the End of Course Evaluation | % Value at the End of Course Evaluation |
|--|---|--------------------------------------|---|
| Multiple Choice Theoretical Test Exam* | Multiple choice questions | | 50 |
| Unstructured Oral Examination** | Under the supervision of at least two faculty members | | 50 |
| Total | | | %100 |

COURSE LOGBOOK

STUDENT'S NAME AND SURNAME :

STUDENT'S SCHOOL NO :

COURSE PERIOD :

| APPLICATION | NCEP Clause | TEACHING STAFF (SIGNATURE) |
|---|-------------|----------------------------|
| DATE | | |
| 1.General and Problem-Related History Taking | A-1 | |
| 2.Cardiovascular System Examination (Particularly heart and lung auscultation) | B-13 | |
| 3.Cardiovascular System Examination, Abdominal Examination (Palpation of peripheral pulses Manually and with Hand Doppler) | B-13 | |
| 4.The follow up and evaluation of the drains, catheters and probes. | | |
| 5.Making non-sterile, sterile and uncomplicated dressings, Ability to care for wounds and burns | E-68 | |
| 6.Patient follow-up, presentation in visits in cardiovascular surgery ward | | |
| 7.Postoperative patient follow-up in the cardiovascular surgery intensive care unit, Informing and obtaining consent, Preparing patient file, Preparing epicris | C-3,C-7,C-5 | |
| 8.Assisting cardiovascular surgery assistants in their applications | | |
| 9.Learning the basic concepts of blood transfusion, hemostasis and coagulation and their application in surgical practice, Ability to transfuse blood | E-41 | |
| 10.Evaluation of arterial blood gas result, Arterial blood gas collection | E-6 | |
| 11.Learning simple suturing techniques, application and taking sutures, Superficial Suturing and Removal | E-70 | |
| 12.Basic evaluation of specific examinations such as Doppler USG, CT angio, MR angio, Coronary Angio, DSA. | | |
| DECISION: PASS FAIL | | |
| Head of Department or Coordinator: | | |
| Date: | | |
| Signature: | | |

Faculty of Medicine
English Medicine Program
Phase V
CARDIOVASCULAR SURGERY COURSE
Competence Matrix

| The Name of the Course | Po1 | Po2 | Po3 | Po4 | Po5 | Po6 | Po7 | Po8 | Po9 | Po10 | Po11 | Po12 | Po13 |
|------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| Cardiovascular Surgery | 5 | 5 | 5 | 5 | 3 | 3 | 5 | 5 | 3 | 3 | 4 | 4 | 5 |

* Completed according to the following program outcomes. (Score from 0 to 5.)

PO: Program Outcomes of Faculty of Medicine

PO Link: <https://muweb.mu.edu.tr/tr/program-yeterlilikleri-6598?site=tip.mu.edu.tr>

TRAINING ACTIVITY AND ASSESMENT AND EVALUATION METHODS MATCHING OF COURSE GAINS

| Intended Learning Outcome | TRAINING ACTIVITY MATCHING | ASSESMENT AND EVALUATION METHODS MATCHING |
|--|-------------------------------|--|
| 1.Can take medical history from Cardiovascular Surgery patients, perform physical examination, and evaluate findings. | T,V,P,R, L | S,T,P |
| 2.Can present Cardiovascular Surgery patients at visits. | V,OS,S | P |
| 3.Can explain the diagnosis and medical treatments of peripheral arterial diseases and venous system diseases. | T,V,P,R, L | S,T |
| 4.Can explain diagnosis of heart valve, coronary and congenital heart diseases, medical and surgical treatments. | T,V,P,R, L | S,T |
| 5.Can evaluate the patient in the intensive care unit after open heart surgery. | T,V,OS,R ,L, | S,T |
| 6.Can explain the characteristics of drains, catheters and probes and can follow and evaluate the process. | T | S,T,P |
| 7.Can perform nonsterile, sterile, and uncomplicated dressings. | V,OS,MB L | P |
| 8.Can perform the first-line treatments of cardiovascular surgery diseases. | T,V,OS,P ,R,L, | S,T,P |
| <p>Abbreviations</p> <p>Teaching Activity: Theoretical lessons (T), Visit (V), Case report (CR), Clinical picture discussion-Outpatient clinic (C), Vocational skills lab (VSL), Radiological evaluation (R), Laboratory evaluation (L), Presentation (Pr)</p> <p>Assessment Method: Practical - Logbook (P-L), Oral exam (OE), Theoretical exam (TE)</p> | | |

INFORMATION AND MATCHING TABLE ON THE THEORETICAL AND PRACTICAL COURSES IN THE COURSE TO BE INCLUDED IN THE 2022- 2023 ACADEMIC YEAR COURSE PROGRAM

| Lecture Code* | Hour | Lecture Type | Lecture Subject | Course Aim Matching | Course Learning Outcome Matching | Activity Matching** | Assessment and Evaluation Method matching** | Vertical Integration | Horizontal Integration |
|---------------|------|--------------|---|---------------------|----------------------------------|---------------------|---|-------------------------------|------------------------|
| MED5 KDC001 | 1 | P | Course Promotion Meeting Cardiovascular system anatomy and physiology Overview of Peripheral Artery Diseases and Physical Examination | 1 | 1,2,3,8 | T,V | TE,OE | Phase 2 Vocational skills lab | |
| MED 5 KDC002 | 1 | T | Anamnesis, Physical Examination and Radiological Imaging Methods in Aortoperipheral Occlusive Artery Diseases | 1 | 1,3,8 | T,R,CR, V | TE,OE | | |
| MED 5 KDC003 | 1 | T | Surgical and Interventional Revascularization Methods in Aortoperipheral Occlusive Artery Diseases | 1 | 1,3,8 | T,CR | TE,OE | | |
| MED 5 KDC004 | 1 | T | Medical Treatment Indications and Drug Options in Aortoperipheral Occlusive Artery | 1 | 1,3,8 | T,CRL, C | TE,OE | | |

| | | | Diseases | | | | | | |
|-----------------|---|---|---|---|-------------|------------------|-------|---------------------------------|--------------------------------|
| MED 5 KDC005 | 1 | T | Diagnosis, Surgical and Interventional Treatment Methods in Abdominal Aorta, Iliac and Peripheral Artery Aneurysms | 1 | 1,8 | T,CR,R | TE,OE | | |
| MED 5 KDC006 | 1 | T | Diagnosis and Treatment in Carotid Artery Stenosis | 1 | 1,2,8 | T,CR,R, C,V | TE,OE | | Phase 5 Neurology Course |
| MED 5 KDC007 | 1 | T | Diagnosis and Treatment of Deep Vein Thrombosis and Venous Thromboembolis m | 1 | 1,3,8 | T,CR,R, C,L,V | TE,OE | | |
| MED 5 KDC008 | 1 | T | Diagnosis and Treatment of Chronic Venous Insufficiency | 1 | 1,2,3, 8 | T,CR,R, C,L,V | TE,OE | | |
| MED 5 KDC009 | 1 | T | Lymphatic and Vasospastic Vascular Diseases | 1 | 1,2,3, 8 | T,CR,R, C,L,V | TE,OE | | |
| MED 5 KDC010 | 1 | T | History of Open Heart Surgery | 1 | 5 | T | TE,OE | | |
| MED 5 KDC011 | 1 | T | Cardiopulmonary Bypass and Heart- Lung Machine | 1 | 4 | T,CR | TE,OE | | |
| MED 5 KDC012 | 1 | T | Cardioplegic Cardiac Arrest, Myocardial Protection Methods, Systemic Inflammatory Response and Treatment in Open Heart Surgery | 1 | 4 | T,CR | TE,OE | | |
| MED 5 KDC013 | 1 | T | Overview of Coronary Artery Diseases and Physical Examination | 1 | 1,2,4, 8 | T,CR,C, V | TE,OE | Phase 4 Cardiology course | |

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|-----------------|---|---|---|---|-------------|----------------|-------|---------------------------|--|
| MED 5 KDC014 | 1 | T | Surgical Treatment of Coronary Artery Diseases and Use of Intra-aortic Balloon Pump | 1 | 4 | T,CR | TE,OE | Phase 4 Cardiology course | |
| MED 5 KDC015 | 1 | T | Mechanical Complications and Surgical Treatment of Myocardial Infarction | 1 | 4 | T,CR,R, L | TE,OE | Phase 4 Cardiology course | |
| MED 5 KDC016 | 1 | T | Left Ventricular Aneurysms and Surgical Treatment | 1 | 1 | T,CR,R | TE,OE | Phase 4 Cardiology course | |
| MED 5 KDC017 | 1 | T | Infective Endocarditis and Surgical Treatment | 1 | 1,8 | T,CR | TE,OE | Phase 4 Cardiology course | |
| MED 5 KDC018 | 1 | T | Surgical Treatment in Cardiac Arrhythmias | 1 | 1,8 | T,CR | TE,OE | Phase 4 Cardiology course | |
| MED 5 KDC019 | 1 | P | Overview of Venous and Lymphatic Diseases and Physical Examination | 1 | 1,2,3, 8 | T,CR,V, C | TE,OE | | |
| MED 5 KDC020 | 1 | T | Pericardial Diseases and Surgery | 1 | 1 | T,CR,R, L,C | TE,OE | Phase 4 Cardiology course | |
| MED 5 KDC021 | 1 | T | Minimally Invasive Cardiac Surgery (Off-pump, MIDCAB, Robotic Heart Surgery etc.) | 1 | 1,4 | T,CR | TE,OE | | |
| MED 5 KDC022 | 1 | T | Intensive Care Management After Open Heart Surgery | 1 | 2,5 | T,CR,V, L | TE,OE | | |
| MED 5 KDC023 | 1 | T | Thoracic and Thoracoabdominal Aortic Aneurysms, Surgical and Interventional Treatment methods | 1 | 1 | T,CR | TE,OE | | |
| MED 5 KDC024 | 1 | T | Diagnosis, Typing, Imaging, Surgical and Interventional | 1 | 1 | T,CR,R, C | TE,OE | | |

| | | | | | | | | | |
|--------------|---|---|---|---|-------|------------|-------|--|--|
| | | | Treatment Methods in Aortic Dissections | | | | | | |
| MED 5 KDC025 | 1 | T | Heart Tumors and Surgical Treatment | 1 | 1 | T,CR,R | TE,OE | Phase 4 Cardiology course | |
| MED 5 KDC026 | 1 | P | Fetal Circulation, Overview of Congenital Heart Diseases and Physical Examination | 1 | 1,2,4 | T,CR,V,C | TE,OE | Phase 4-Child Health and Diseases Course | |
| MED 5 KDC027 | 1 | T | Cyanotic and Acyanotic Congenital Heart Diseases | 1 | 1,4 | T,CR,R,L,V | TE,OE | Phase 4-Child Health and Diseases Course | |
| MED 5 KDC028 | 1 | T | Left-Right Shunt Congenital Heart Diseases, Surgical and Interventional Treatment Methods | 1 | 1,4 | T,CR,R | TE,OE | Phase 4-Child Health and Diseases Course | |
| MED 5 KDC029 | 1 | T | Tetralogy of Fallot, Diagnosis and Treatment | 1 | 1,4 | T,CR,R | TE,OE | Phase 4-Child Health and Diseases Course | |
| MED 5 KDC030 | 1 | T | Pulmonary Atresia, Diagnosis, Typing, Surgical and Interventional Treatment Methods | 1 | 1,4 | T,CR | TE,OE | Phase 4-Child Health and Diseases Course | |
| MED 5 KDC031 | 1 | T | Surgical Treatment in Congenital Heart Diseases with Single Ventricle Physiology | 1 | 1,4 | T,CR | TE,OE | Phase 4-Child Health and Diseases Course | |
| MED 5 KDC032 | 1 | T | In Chronic Heart Failure, Non-Transplant Surgical Treatment Methods, Ventricular Support Devices and Total Artificial Heart | 1 | 1 | T,CR | TE,OE | | |
| MED 5 KDC033 | 1 | P | Overview of Valvular Heart Diseases and Physical Examination | 1 | 1,2,4 | T,CR,V,C | TE,OE | Phase 4 Cardiology course | |
| MED 5 KDC034 | 1 | T | Mitral valve disease and Surgical | 1 | 1,4 | T,CR | TE,OE | | |

| | | | | | | | | | |
|--------------|---|---|---|---|-----------|-----------|-------|--|--|
| | | | Treatment Methods | | | | | | |
| MED 5 KDC035 | 1 | T | Aortic Valve Diseases and Surgical Treatment | 1 | 1,4 | T,CR | TE,OE | | |
| MED 5 KDC036 | 1 | T | Congenital Tricuspid Valve Diseases and Ebstein's Anomaly | 1 | 1,4 | T,CR | TE,OE | Phase 4-Child Health and Diseases Course | |
| MED 5 KDC037 | 1 | T | Great Artery Transposition and Congenital Coronary Artery Anomalies | 1 | 1,4 | T,CR | TE,OE | Phase 4-Child Health and Diseases Course | |
| MED 5 KDC038 | 1 | T | Aortic Coarctation and Interrupted Arcus Aorta | 1 | 1,4 | T,CR | TE,OE | Phase 4-Child Health and Diseases Course | |
| MED 5 KDC039 | 1 | T | Pulmonary Venous Return Anomalies and Cor Triatriatum | 1 | 1,4 | T,CR | TE,OE | Phase 4-Child Health and Diseases Course | |
| MED 5 KDC040 | 1 | T | Isolated Heart, Heart-Lung Transplantation and Transplantation Immunology | 1 | 1 | T,CR | TE,OE | Phase 4 Cardiology course | |
| MED 5 KDC041 | 1 | P | Basic ECG Information Ability To Take And Evaluate EKG | 1 | 8 | C,VSL | | | |
| MED 5 KDC042 | 3 | P | Surgical Applications of Coronary Artery Diseases | 1 | 1,2,5,6,7 | V,C,L,VSL | | | |
| MED 5 KDC043 | 5 | P | Surgical Applications of Peripheral Artery Diseases | 1 | 2,6,7 | V,C,L,VSL | | | |
| MED 5 KDC044 | 4 | P | Surgical Applications of Venous System Diseases | 1 | 2,6,7 | V,C,L,VSL | | | |
| MED 5 KDC045 | 3 | P | Surgical Applications of Heart Valve | 1 | 1,2,5,6,7 | V,P,L,VSL | | | |

| | | | | | | | | | |
|-----------------|---|---|---|---|---------------------------|---------------|--|--|--|
| | | | Diseases | | | | | | |
| MED 5 KDC046 | 3 | P | Surgical Applications of Congenital Heart Diseases | 1 | 1,2,5, 6,7 | V,C,L ,MBL | | | |
| MED 5 KDC047 | 1 | T | Evaluation of Course Exam Questions | 1 | 1,2,3,4 ,5,6,7 ve 8 | Pr | | | |
| MED 5 KDC048 | 1 | T | Course Evaluation Meeting | 1 | 1,2,3,4 ,5,6,7 ve 8 | Pr | | | |

EXPLANATIONS:

* Lecture code will be formed by writing 001, 002,... at the end of the code taken from the "Codes for Phase 5 matrix" section.

****Abbreviations**

Teaching Activity: Theoretical lessons (T), Visit (V), Case report (CR), Clinical picture discussion-Outpatient clinic (C), Vocational skills lab (VSL), Radiological evaluation (R), Laboratory evaluation (L), Presentation (Pr)

Assessment Method: Practical - Logbook (P-L), Oral exam (OE), Theoretical exam (TE)