BAU TIP

BAHÇEŞEHİR UNIVERSITY SCHOOL OF MEDICINE

"scientia et amore vitae"

BAHÇEŞEHİR UNIVERSITY

SCHOOL OF MEDICINE

CLASS 3

ACADEMIC PROGRAMME

2021-2022

Dean	Türker Kılıç, Prof.
Vice Dean	Demet Koç, Assist. Prof.
Class 3 Coordinator	Fatih Özdener, Assoc. Prof.
Class 3 Co- Coordinator	Zülfiye Gül, Assit. Prof.

THIRD YEAR					
5.Semester					
CODE	**COURSE**	**T**	**P**	**C**	**E**
	General Elective	3	0	3	4
	Non-Departmental Elective	2	0	2	4
	Departmental Elective	2	0	2	2
TMED3000					
MED3003	Integration of Basic Sciences to Clinical Medicine I	2	2	3	4
MED3005	Integration of Basic Sciences to Clinical Medicine II	2	2	3	4
MED3007	Integration of Basic Sciences to Clinical Medicine III	2	2	3	4
MED3002	Research methodology and biostatistics	1	2	2	**3**
MED3004	Introduction to internal medicine	3	2	**4**	**5**
		17	**10**	**22**	**30**
6.Semester					
CODE	**COURSE**	**T**	**P**	**C**	**E**
	General Elective	3	0	3	4
	Non-Departmental Elective	2	0	2	4
	Departmental Elective	2	0	2	2
MED3004	Introduction to internal medicine				
MED3006	Introduction to general surgery	2	2	**3**	**4**
MED3008	Introduction to pediatrics	3	2	**4**	**5**
MED3010	Introduction to gynecology and obstetrics	2	2	**3**	**4**
MED3012	Introduction to neurological sciences	2	2	3	4
MED3020	Introduction to public health	2	0	2	**3**
		18	**8**	**22**	**30**

	BAHCESEHIR UNIVERSITY SCHOOL OF MEDICINE **2021 – 2022 ACADEMIC CALENDAR FOR THE THIRD YEAR**					
	2021 – 2022 ACADEMIC YEAR FALL SEMESTER					
	September 25, 2021		**Fall Semester Courses begin**			
	Orientation Seminar		**September 25, 2021**			
Group A		Integration of Basic Sciences to Clinical Medicine I (27.09.2021-27.10.2021)	Integration of Basic Sciences to Clinical Medicine II (01.11.2021-02.12.2021)	Integration of Basic Sciences to Clinical Medicine III (06.12.2021-06.01.2022)	Introduction to internal medicine (10.01.2022-03.02.2022)	Introduction to public health (07.02.2022-17.02.2022)
Group B					Introduction to pediatrics (10.01.2022-03.02.2022)	
Group A + B		Research Methodology and Biostatistics (27.09.2021-06.01.2022)				
	October 28-29, 2021, Thursday, Friday		**Republic Day of Turkey (National holiday)**			
	February 21- March 04, 2022		**Semester Break**			
	2021 – 2022 ACADEMIC YEAR SPRING SEMESTER					
Group A	Introduction to pediatrics (07.03.2022-31.03.2022)	Introduction to gynecology and obstetrics (04.04.2022-28.04.2022)	Introduction to neurological sciences (05.05.2022-26.05.2022)	Introduction to general surgery (30.05.2022-22.06.2022)		
Group B	Introduction to internal medicine (07.03.2022-31.03.2022	Introduction to general surgery (04.04.2022-28.04.2022)	Introduction to gynecology and obstetrics (05.05.2022-26.05.2022)	Introduction to neurological sciences (30.05.2022-22.06.2022)		
May 02 – 04, 2022, Monday, Tuesday, Wednesday			**Ramadan Feast Holiday**			
May 19, 2022 Thursday			**Commemoration of Atatürk, Youth and Sports Day (National holiday)**			
July 01, 2022			**Make- up Exams for Courses**			
July 06, 2022			**Final Exam**			
July 21, 2022			**Make- up Exam for the Final exam**			

BAHÇEŞEHİR UNIVERSITY SCHOOL OF MEDICINE PHASE I (2021-2022)										
		EXAM 1 (Theoretical Exam)		EXAM 2 (Practical Exam)		AVERAGE OF COMMITTEE GRADES	EXAM 3 (FINAL EXAM)		YEAREND GRADE	PASSING GRADE
	Committee Names	**Method**	**%**	**Method**	**%**		**Method**	**%**		
YEAR 3	Committee 1: Integration of Basic Sciences to Clinical Medicine I	MCQ (100 questions)	100 %	• PHARMACOLOGY CASE BASED PRESENTATION (CBL) 100% • PROBLEM BASED LEARNING (PBL) 100% • CLINICAL SKILLS EVAULATİON 100%		**(C1+ C2+ C3+C5+C6+C7+ C8+ C9) +[(C4+ C10)/ 2] / 9**	MCQ (200 questions)	100%	AVERAGE OF COMMITTEE GRADES (60%) + FINAL EXAM SCORE(40%)	YEAREND GRADE (90%) + CLINICAL SKILLS GRADE (3%) + PBL (4%) +CBL (3%)
	Committee 2: Integration of Basic Sciences to Clinical Medicine II	MCQ (100 questions)	100 %							
	Committee 3: Integration of Basic Sciences to Clinical Medicine III	MCQ (100 questions)	100 %							
	Committee 4: Research Methodology and Biostatistics	MCQ (20 questions)	40 %	CRITICAL REVIEW	60 %					
	Committee 5: Introduction to internal medicine	MCQ (100 questions)	100%							
	Committee 6: Introduction to pediatrics	MCQ (100 questions)	100%							
	Committee 7: Introduction to gynecology and obstetrics	MCQ (100 questions)	100%							
	Committee 8: Introduction to general surgery	MCQ (100 questions)	100%							
	Committee 9: Introduction to neurological sciences	MCQ (100 questions)	100%							
	Committee 10: Introduction to public health	MCQ (50 questions)	100%							

RESEARCH METHODOLOGY AND SATISTICS EVALUATION: 2021-2022

Two different assessment tools are used:

1. Midterm exam (40%)
2. Research article review (60%)

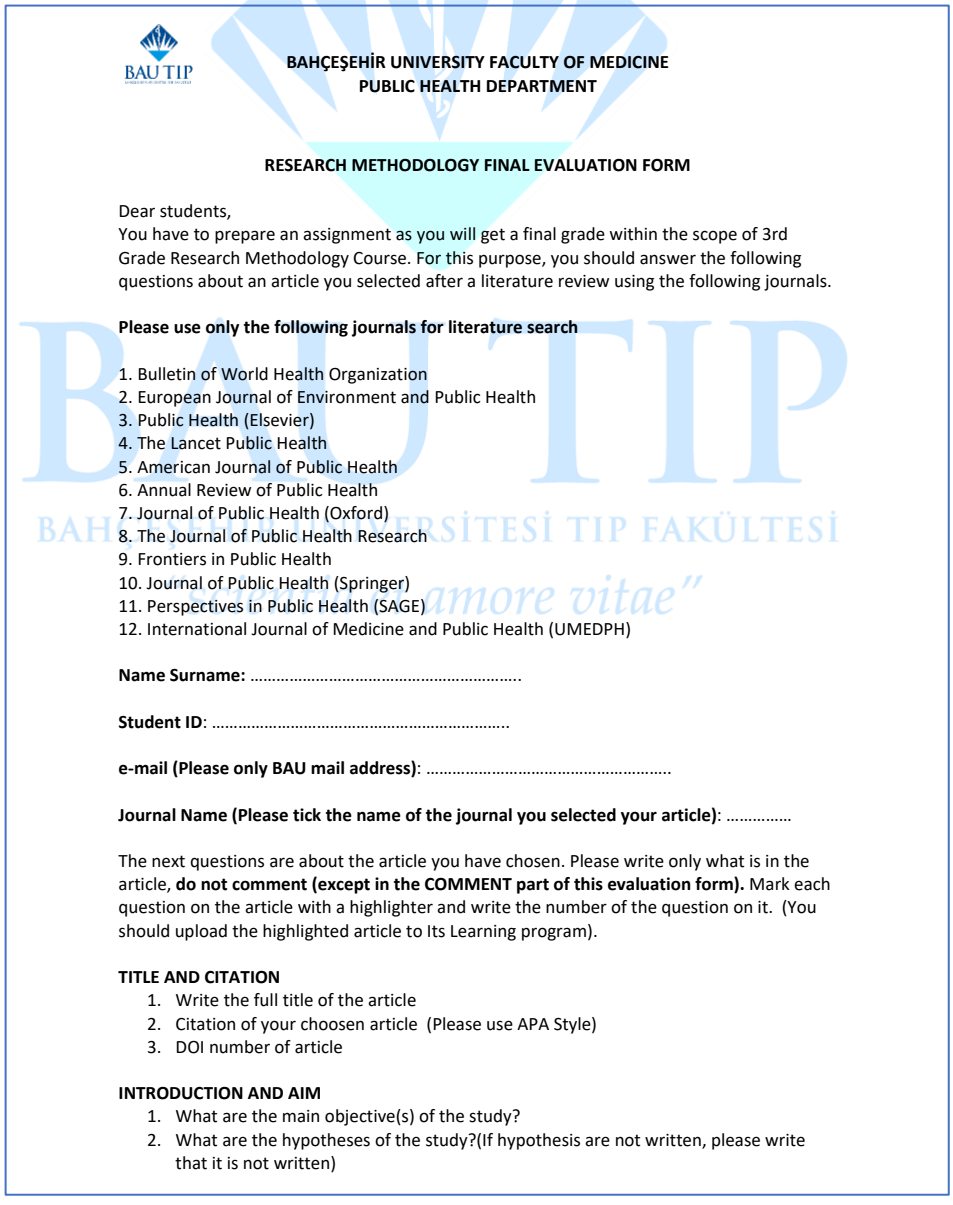
Midterm exam:

It will consist of 20 multiple choice questions in total.

Research article review:

This homework is planned in order to evaluate whether all the lessons given in this course can be done in practice. In this context, you will search the literature from the journals we have notified you and select an article. You will only choose one of the articles published in the last 5 years from the journals we recommend. You will answer questions about the article you selected via Google Forms in the link (https://forms.gle/abmXtC79wgf2D3dZ7). The questions are given separately in the attachment.

We ask you to mark the questions about the article with a highlighter on the article and write the number of the question on it. Then you need to save this highlighted document in pdf format with Student ID and Name and Surname and upload it to its learning (**Example: 2201971 SebahatDilekTorun**).



BAU TIP

BAHÇEŞEHİR UNIVERSITY FACULTY OF MEDICINE
PUBLIC HEALTH DEPARTMENT

RESEARCH METHODOLOGY FINAL EVALUATION FORM

Dear students,
You have to prepare an assignment as you will get a final grade within the scope of 3rd Grade Research Methodology Course. For this purpose, you should answer the following questions about an article you selected after a literature review using the following journals.

Please use only the following journals for literature search

1. Bulletin of World Health Organization
2. European Journal of Environment and Public Health
3. Public Health (Elsevier)
4. The Lancet Public Health
5. American Journal of Public Health
6. Annual Review of Public Health
7. Journal of Public Health (Oxford)
8. The Journal of Public Health Research
9. Frontiers in Public Health
10. Journal of Public Health (Springer)
11. Perspectives in Public Health (SAGE)
12. International Journal of Medicine and Public Health (UMEDPH)

Name Surname: .....

Student ID: .....

e-mail (Please only BAU mail address): .....

Journal Name (Please tick the name of the journal you selected your article): .....

The next questions are about the article you have chosen. Please write only what is in the article, **do not comment (except in the COMMENT part of this evaluation form).** Mark each question on the article with a highlighter and write the number of the question on it. (You should upload the highlighted article to Its Learning program).

TITLE AND CITATION

1. Write the full title of the article
2. Citation of your choosen article (Please use APA Style)
3. DOI number of article

INTRODUCTION AND AIM

1. What are the main objective(s) of the study?
2. What are the hypotheses of the study?(If hypothesis are not written, please write that it is not written)

THE NAMES OF PROBLEM-BASED LEARNING SCENARIOS 2021-2022 and EVALUATION

- Passenger, Stop!
- Hope in Desert
- Are you a friend or a foe?
- Birthday Surprise
- Silence of Volcano
- Do not Ignore

Evaluation of Parameters	GRADES
Identifying of hypotheses	1 | 2 | 3 | 4
Linking and explaining hypothesis to the problems using prior knowledge	1 | 2 | 3 | 4
In the inquiry process, asking questions by using evidence; questioning the accuracy of the information; research, etc.	1 | 2 | 3 | 4
Active participation in questioning the case, examining it, requesting the necessary tests	1 | 2 | 3 | 4
Contribution to the setting of learning goals	1 | 2 | 3 | 4
Able to discuss the case with its biological, social, behavioral, and ethical dimensions	1 | 2 | 3 | 4
Get ready by using classical resources and appropriate resources in the independent work hours	1 | 2 | 3 | 4
Sharing information with the group, creating drawings, diagrams, and concept maps	1 | 2 | 3 | 4
Communication Skills (active listening, making clear explanations, expressing herself/himself; supporting group dynamics; encouraging; upholding rights; making appropriate explanations where the group is blocked, etc.)	1 | 2 | 3 | 4
Evaluation Skills (evaluation of: herself/himself, group, training guide, the scenario in an objective, content-oriented, supportive of development manner)	1 | 2 | 3 | 4
TOTAL GRADE	

PHARMACOLOGY CASE BASED PRESENTATION EVALUATION-2021-2022

PHARMACOLOGY CASE BASED PRESENTATION EVALUATION

Presenter (Name-Surname): Date: Presentation Topic:	
	0-20 points
Presentation reflects up to date knowledge	
Case question is presented concisely and clearly	
Slides prepared satisfactorily	
Effective justification of the answer	
Interesting presentation and maintenance of audience interest	

Total Presentation Point: 100

CLINICAL SKILLS EVALUATION: 2021-2022

CLINICAL SKILLS EVALUATION FORM

	Satisfactory	Needs Improvement	Poor
A- Professionalism (Total 10)			
Always on time and has no unexcused tardiness/absence	**2**	**1**	**0**
Appearance is appropriate: respects dress code, wears name tag	**2**	**1**	**0**
Has team work ability	**2**	**1**	**0**
Shows effective time management	**2**	**1**	**0**
Obeys clinical skills laboratory rules	**2**	**1**	**0**
TOTAL			
B- Medical Knowledge and Clinical Reasoning (Total 40)			
Demonstrates theoretical knowledge	**2**	**1**	**0**
Demonstrates analytical thinking	**2**	**1**	**0**
TOTAL			
C-Interpersonal and Communication Skills (Total 10)			
Demonstrate the ability to communicate effectively with the lecturer and friends	**2**	**1**	**0**
TOTAL			
D- Clinical Skills (Total 40)			
Performs steps of the clinical skill in the guideline appropriately	**2**	**1**	**0**
Applies standard precautions for infection prevention and control	**2**	**1**	**0**
TOTAL			

Total GRADE: ……../100

STUDENT NAME-SURNAME:	
CLASS:	
CLINICAL SKILL TOPIC:	
DATE:	

STUDENTS

GÜNEL				**APUZZO**		**CHIOCCA**	
1	1728690	**46**	1904151	**1**	1406587	**1**	1800942
2	1728758	**47**	1904164	**2**	1607313	**2**	1801283
3	1802720	**48**	1904224	**3**	1736202	**3**	1802140
4	1802847	**49**	1904283	**4**	1736341	**4**	1900047
5	1803146	**50**	1904310	**5**	1800344	**5**	1900095
6	1803298	**51**	1904387	**6**	1800393	**6**	1900277
7	1803305	**52**	1905493	**7**	1800670	**7**	1900581
8	1803375	**53**	1905599	**8**	1802133	**8**	1900671
9	1803659	**54**	2017421	**9**	1802420	**9**	1900696
10	1803789			**10**	1802568	**10**	1900707
11	1804005			**11**	1802664	**11**	1900758
12	1804212			**12**	1802810	**12**	1900898
13	1804558			**13**	1802832	**13**	1901031
14	1804626			**14**	1802839	**14**	1901035
15	1805173			**15**	1803134	**15**	1901037
16	1901576			**16**	1803248	**16**	1901051
17	1901714			**17**	1803548	**17**	1901358
18	1901815			**18**	1803681	**18**	1901408
19	1902046			**19**	1803703	**19**	1901436
20	1902089			**20**	1804131	**20**	1901513
21	1902203			**21**	1804495	**21**	1901540
22	1902212			**22**	1804535	**22**	1904906
23	1902259			**23**	1804687	**23**	1904941
24	1902267			**24**	1804857	**24**	1904947
25	1902332			**25**	1804924	**25**	1905136
26	1902394			**26**	1804970	**26**	1905141
27	1902429			**27**	1902085	**27**	1905145
28	1902590			**28**	1902200	**28**	1905146
29	1902662			**29**	1902365	**29**	1905147
30	1902720			**30**	1902748	**30**	1905769
31	1902765			**31**	1902753	**31**	1905847
32	1902792			**32**	1902776	**32**	1905986
33	1902834			**33**	1902791	**33**	1906281
34	1902891			**34**	1903382	**34**	1906294
35	1903003			**35**	1903804	**35**	1906452
36	1903446			**36**	1903902	**36**	1906584
37	1903503			**37**	1903961	**37**	1906668
38	1903630			**38**	1904476	**38**	1906873
39	1903650			**39**	2000641	**39**	1906957
40	1903803			**40**	2000686	**40**	2018027
41	1903832			**41**	2017604	**41**	2018223
42	1903838			**42**	2017808	**42**	2018615
43	1903924			**43**		**43**	
44	1904065			**44**		**44**	
45	1904150			**45**		**45**	

CLASS 3

AIM: The purpose of the Class 3 Program is to integrate students' basic science knowledge with their use in clinical settings by different types of teaching methods, to introduce basic clinical fields and basic concepts used in research.

PROGRAM CONTENT:

In the first 3 courses, basic science knowledge of the most common diseases mentioned in the National Core Educational Program is given by associating them with the clinic. The distribution of courses according to the specialities is:

COURSE 1: Integration of Basic Sciences to Clinical Medicine I (Internal Diseases)

COURSE 2: Integration of Basic Sciences to Clinical Medicine II (Pediatrics)

COURSE 3: Integration of Basic Sciences to Clinical Medicine III (General Surgery, Obstetrics and Gynecology, Neuroscience)

There is also a research based course and it is taught as a vertical corridor course throughout the first three committees.

COURSE 4: Research Methodology and Statistics

The next 6 courses are the introductions of clinics. The distribution of courses according to the specialities is:

COURSE 5: Introduction to Internal Medicine

COURSE 6: Introduction to Pediatrics

COURSE 7: Introduction to General Surgery

COURSE 8: Introduction to gynecology and obstetrics

COURSE 9: Introduction to neurological sciences

COURSE 10: Introduction to public health

TEACHING METHODS:

- **Class Lessons:** Theoretical lectures in the Integration of Basic Sciences to Clinical Medicine courses are mainly based on cases in connection with the clinic.
- **Student Presentations:** Clinical Pharmacology lectures are done as Case- Based Presentations by the students. All students are assigned specific questions on published clinical cases. They are given time to prepare presentations and present in front of the class and get feedback from the facilitator. Each student has three different cases.
- **Problem-Based Learning**
- **Clinical Skills Teaching in Clinical Skills Laboratory**
- **Clinical Observations**
- **Self-Study (Research Methodology Assignment, National/International Exam Preparations)**
- **Research Project Participation with academic mentors and faculty members**

LEARNING OBJECTIVES:

At the end of this class, the students should be able to:

KNOWLEDGE:

1. Remember the basic sciences of the most common internal diseases mentioned in the National Core Educational Program.
2. Remember the basic sciences of the most common pediatric diseases mentioned in the National Core Educational Program.
3. Remember the basic sciences of the most common gynecologic, obstetric, general surgery, and neurological diseases mentioned in the National Core Educational Program.
4. Get knowledge about the most common infectious diseases.
5. Get basic knowledge about the fundamentals of research methodology.
6. Recognize the most common symptoms of internal medicine,pediatric, gynecologic and neurological diseases (according to the National Core Education Program)
7. Recognize the most common symptoms in diseases requiring general surgery

SKILLS:

8. Perform various clinical skills in Clinical Skills Laboratory.
9. Get skills in taking history from a patient and making physical examination
10. Get skills in taking inform consent
11. Get skills in presenting a case.
12. Observe patients in hospital settings.
13. Understand the importance of effective communication between a patient and a doctor.
14. Understand the importance of research ethics.

ATTITUDES:

15. Have the perception that medicine is a honorable and respected profession, reflect this on his/her behavior.
16. Observe the rules of professional ethics in his/her relations with the colleagues.
17. Realize the importance of following the working principles in clinical skills laboratories.
18. Realize the importance of hand hygiene in preventing diseases.
19. Realize the importance of introducing himself/herself to the patient, giving information about the interventions to be made, and getting approval.
20. Realize the importance of team work.
21. Gain the program evaluation culture.

MED 3003: INTEGRATION OF BASIC SCIENCES TO CLINICAL SCIENCES I				
Course Date	September 27-October27, 2021			
Exam Dates	Theoretical Exam: October 27, 2021			
Course Coordinators:	FATİH ÖZDENER, ZÜLFİYE GÜL			
Academic Unit	**Academic Staff**	**Theoretical hours**	**Practical Hours**	**Total**
Clinical Anatomy	Çağatay Barut, Prof.	2	-	2
Clinical Biochemistry	Yeşim Neğiş, Assoc. Prof. Özlem Unay, Assist. Prof. Erdem Yılmaz, Assist. Prof. .	6	-	6
Clinical Microbiology	Orhan Cem Aktepe, Prof. Gülden Çelik, Prof.	10	-	12
Clinical Pathology	Özlem Yapıcier, Prof.	12	-	12
Clinical Pharmacology (Case Presentations)	Fatih Özdener, Assist. Prof. Zülfiye Gül, Assist. Prof.	20	22	44
Clinical Physiology	Sema Tülay Köz, Assoc. Prof Faize Elif Bahadır, Assist. Prof.	8	-	8
Clinical Skills	Demet Koç, Assist. Prof. Senem Polat, Assist. Prof.		2	2
PBL sessions	Kevser Erol, Prof. Orhan Cem Aktepe, Prof. Sema Tülay Köz, Assoc. Prof Dila Şener, Assist. Prof.		10	10
Research Methodology	Sebahat Dilek Torun, Assoc. Prof Melike Yavuz, Assist. Prof. Petek Eylül Taneri, Assist. Prof.	15	-	15
TOTAL		75	34	109

Due to possible changes because of Covid-19 pandemic, course schedules and student practice-hybrid groups will be announced before each committee.

COURSE AIM:

The aim of this course is;

- to provide the integration of basic sciences with the most common internal diseases mentioned in the National Core Educational Program (Pulmoary Embolism, Hypertension, Coronary Artery disease, Heart Failure, Myocardial Infarction, Arrythmias, Diabetes Mellitus, Anemia, Goiter, Graves, Tuberculosis, Pneumonia, COPD, Peptic Ulcer, Hepatitis)
- to get skills in preparing to initiate an intravenous infusion.

LEARNING OUTCOMES:

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP.	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL ANATOMY	Pulmonary Embolism (T-2)	1. Discuss the clinical anatomy of lungs and pulmonary circulation 2. Identify the main structures of the lungs and related vessels 3. Define pulmonary embolism in relation to vascular anatomy of the lungs 4. Describe the characteristic and clinical presentations of pulmonary embolism in relation to clinical anatomy 5. Recognize how pulmonary emboli affect the morphology and functions of the lungs and the related vessels

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP.	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL BIOCHEMISTRY	Hypertension/ CAD/Heart Failure/Arrhythmias (T-2)	1. Describe the laboratory findings in hypertension 2. Define cardiac enzymes and their change of levels by time in coronary artery disease 3. Describe Brain Natriuretic Peptide (BNP) and its correlation with heart failure 4. Describe the laboratory changes in arrhythmias
	Diabetes (T-2)	1. Classify types of diabetes 2. Identify the acute and chronic complications of diabetes 3. Explain the pathogenesis of diabetes 4. Explain the effect mechanism of insulin and oral anti diabetic agents 5. Explain the biochemical laboratory tests for diagnosis of diabetes
	Anemia (T-2)	1. Classify types of anemia 2. List the laboratory parameters used for diagnosis of anemia 3. Define the use of laboratory parameters in the differential diagnosis of anemia

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP.	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL MICROBIOLOGY	Fever etiology in Infectious origin (T-1)	1. Define fever and fever types 2. Explain the mechanism of fever 3. List the definitions of fever of unknown origin 4. List the infectious etiological agents responsible from fever 5. List the steps in investigating fever of unknown origin 6. Describe the laboratory diagnostic algorithm for fever etiology in a step forward manner
	Travel associated Infections/ Malaria (T-1)	1. Describe the Travel associated infections 2. Define the types of such infections 3. List of these infections according to geographical distributions 4. Explain main approach to these infections and list of the basic laboratory tests 5. Define malaria as a travel associated infection 6. Explain the pathogenesis of Malaria 7. Describe the laboratory diagnostic algorithm for Malaria 8. List the preventive measurement and antibiotherapy
	Cardiovascular System Infections (T-1)	1. List the main group of microorganisms responsible from cardiovascular system infections 2. Explain the pathogenesis 3. List the main methods in the laboratory diagnosis 4. List the main advantages and disadvantages of the methods and interpretation of the results 5. List the preventive measures and the routine recommended antimicrobial treatment
	Upper Respiratory Tract Infections (T-1)	1. Recall the anatomical structure 2. List the main group of microorganisms responsible from upper respiratory tract infections 3. Explain the pathogenesis 4. List the main methods in the laboratory diagnosis 5. List the main advantages and disadvantages of the methods and interpretation of the results 6. List the preventive measures and the routine recommended antimicrobial treatment
	Lower Respiratory Tract Infections (T-1)	1. List the main group of microorganisms responsible from lower respiratory tract infections 2. Explain the pathogenesis 3. List the main methods in the laboratory diagnosis 4. List the main advantages and disadvantages of the methods and interpretation of the results 5. List the preventive measures and the routine recommended antimicrobial treatment
	Tuberculosis (T-1)	1. Define tuberculosis infections type 2. Explain the pathogenesis 3. Describe the screening procedures of tuberculosis 4. List the main methods in the laboratory diagnosis 5. List the preventive measures and the routine recommended antimicrobial treatment

	Emerging and reemerging infections (T-1)	1. Define emerging and reemerging infections 2. Classify emerging and reemerging infections 3. List their important properties 4. List their clinical manifestations 5. Describe the lab diagnosis 6. Describe treatment and prevention measures from emerging and reemerging infections
	COVID-19 (T-1)	1. Define COVID-19 2. List COVID-19 clinical manifestations 3. Describe the lab diagnosis 4. Describe treatment and prevention measures from COVID-19
	Urinary Tract Infections (T-1)	1. Recall the anatomical structure 2. List the main group of microorganisms responsible from urinary tract infections 3. Explain the pathogenesis 4. List the main methods in the laboratory diagnosis 5. Recall interpretation of the results 6. List the preventive measures and the routine recommended antimicrobial treatment
	Gastrointestinal System Infections (T-1)	1. List the main group of microorganisms responsible from gastrointestinal system infections 2. Explain the pathogenesis 3. List the main methods in the laboratory diagnosis 4. List the main advantages and disadvantages of the methods and interpretation of the results 5. List the preventive measures and the routine recommended antimicrobial treatment

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL PATHOLOGY	Hypertension / Coronary Artery Disease (T-1)	1. Describe the effects of hypertension on the heart and the arteries 2. Explain pathologic basis of coronary artery disease 3. Compare subendocardial and transmural myocardial infarction 4. Get through to the causes of secondary hypertension 5. Describe pathogenesis and causes of syncope 6. Explain the causes of cardiac and noncardiac dyspnea
	Heart Failure / Arrhythmias (T-2)	1. Describe pathogenesis of heart faire and major complications of myocardial infarction 2. Explain pathogenesis of arrhythmia and conduction abnormalities 3. Describe pathogenesis of right heart failure 4. Describe pathogenesis of left heart failure
	Pulmonary Emboli / Pneumonia / Tuberculosis (T-1)	1. Get through the risk factors for lung diseases with associated specific diseases 2. Describe sources and causes of hemoptysis with related diseases 3. Explain pathogenesis and morphological findings of tuberculosis 4. Get through the differential diagnosis of granulomatous inflammation

		5. Get through to the microscopic location of the inflammation in classifying pneumonias 6. Describe the complications of pneumonia 7. Get through to risk factors predisposing to pulmonary embolism 8. Explain the complex changes in the pulmonary vasculature and other parts of the lungs due to pulmonary emboli
	Bronchiolitis / Asthma / COPD (T-2)	1. Describe the pathogenesis of allergic and idiosyncratic forms of asthma 2. Explain pathologic changes in chronic obstructive pulmonary disease
	Diabetes (T-2)	1. Get through to causes of polyuria by describing the mechanism and findings of the clinical conditions 2. Describe the metabolic changes in diabetes 3. Explain the clinically important complications of diabetes mellitus and pathologic changes 4. Describe the pathogenesis of leg gangrene
	Goiter / Obesity (T-1)	1. Get through to the clinical manifestations of Graves' disease 1. Get through to clinical features of hypothyroidism 2. Describe the pathologic conditions causing thyroid enlargement 3. Describe the associated conditions with obesity seen in polycystic ovary syndrome 4. Explain the mechanisms of obesity in diabetes mellitus 5. Describe the obesity related endocrine disorder
	Peptic Ulcer / Diarrhea/Hepatitis (T-1)	1. Describe the causes of inflammatory and noninflammatory acute diarrhea 2. Explain the pathogenesis of chronic diarrhea 3. Describe the differential diagnosis of ulcerative colitis and Crohn's disease 4. Get through to factors play an important pathogenic role in peptic ulcer disease 5. Describe the most important complications of peptic ulcer disease 6. Get through to indications of liver biopsy 7. Describe the key histologic features of acute hepatitis 8. Classify the causes of chronic hepatitis and describe the histologic changes in cirrhosis
	Anemia (T-2)	1. Explain the etiology and pathogenesis of iron deficiency anemia

At the end of this lesson, the student will be able to:		
KNOWLEDGE, SKILLS		
DEP.	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL PHARMACOLOGY	Essential Hypertension (T-2, P-3)	1. Explain the main action the most likely mediates the long-term antihypertensive effect of thiazides 2. Describe the main cardiovascular action that mediates the antihypertensive effect of amlodipine 3. Describe a primary contraindication to the use of ACE inhibitors 4. Describe the action mediating the antihypertensive effect of clonidine

		5. Identify the drug used to manage the patient's hypertensive crisis 6. Describe the molecular mechanism of action of the most common drugs used to manage the hypertensive crisis 7. Identify the specific reason for the choice of drug used to treat the patient's hypertensive crisis
	Myocardial Infarction (T-1, P-1)	1. Explain the main action that mediates the therapeutic effect of nitroglycerin in myocardial infraction 2. Identify the endogenous compound that mediates the pharmacological action of nitrates 3. Explain the main action that mediates the analgesic effect of morphine 4. Explain the molecular mechanism of action of alteplase 5. Describe a serious adverse effect that can occur after the administration of alteplase 6. Identify the endogenous compound that function as a molecular target of enoxaparin 7. Describe an advantage of enoxaparin over the standard unfractionated heparin
	Atrial Fibrillation (T-2, P-1)	1. Recognize the disease that can be prevented by warfarin therapy in patient with Atrial Fibrillation (AF) 2. Describe a step of the coagulation cascade that is specifically inhibited by warfarin 3. Explain the reason for the use of diltiazem in AF 4. Explain mechanism of action of diltiazem 5. Identify the site of action of diltiazem in AF 6. Identify the drug to be used for maintenance of normal sinus rhythm after cardioversion
	Heart Failure (T-3, P-2)	1. Identify the primary site of action of furosemide 2. Describe the main action underlying the therapeutic effect of furosemide in heart failure 3. Explain the primary reason for diuretic-induced hypokalemia 4. Explain why loop diuretics are far more effective than thiazide diuretics 5. Identify the drug that can cause tinnitus, hearing loss and vertigo 6. Explain the molecular mechanism of action of carvedilol 7. Explain the mechanism of digoxin-induced nausea and vomiting
	Pulmonary Embolism (T-1, P-1)	1. Explain the mechanism of action of protamine in cases of heparin overdose 2. Identify the coagulation factor that is most sensitive to heparin-induced inhibition 3. Identify the coagulation factor that represents the molecular target of dabigatran 4. Identify the drug to be used in cases of serious dabigatran overdose
	Pneumonia (T-1, P-2)	1. Identify the enzyme specifically inhibited by levofloxacin 2. Identify the correct activity of fluoroquinolones 3. Identify the correct activity spectrum of third-generation cephalosporins 4. Identify the primary site of action of ceftriaxone 5. Explain the mechanism of action of azithromycin

		6. Identify the common mechanism for bacterial resistance to cephalosporins, macrolides, and fluoroquinolones 7. Explain the mechanism of action of aminoglycosides
	Asthma (T-1, P-1)	1. Identify the molecular action mediating the therapeutic effect of albuterol in asthmatic patients 2. Identify the enzyme whose inhibition mediates the anti-inflammatory effect of fluticasone 3. Explain why adverse effect of inhaled glucocorticoids are extremely rare 4. Explain the mechanism of action of montelukast 5. Explain the mechanism of action of clotrimazole
	Chronic Obstructive Pulmonary Disease (T-1, P-2)	1. Explain the likely mechanism of albuterol-induced tremor 2. Explain the mechanism of action of losartan 3. Identify the two receptors that are blocked by ipratropium 4. Identify the most common adverse effect of ipratropium 5. Explain the mechanism of action of diltiazem 6. Explain the mechanism of action of montelukast 7. Describe a proposed mechanism of the bronchodilating action of theophylline
	Type 1-Diabetes Mellitus (T-1, P-1)	1. Explain the mechanism of action of insulin 2. Describe the physiological effects of insulin on glucose, fat and protein metabolism 3. Describe the different type of insulin preparations and their therapeutic application in the management of DM1 4. Describe the appropriate precautions to be taken while on insulin therapy to prevent its adverse effects 5. Describe the adverse effect of insulin therapy
	Type 2-Diabetes Mellitus (T-2, P-1)	1. Explain the mechanism of action of metformin 2. Describe the adverse effect of metformin 3. Explain the mechanism of action of fluconazole 4. Describe the mechanism of action of sulfonylureas 5. Describe the mechanism of action of pioglitazone 6. Describe the adverse effect of pioglitazone 7. Describe the pharmacology of incretin-mimetic agents
	Graves' Disease (T-1, P-1)	1. Identify a drug to be used for rapid management of cardiac symptoms in a patient with Graves' disease 2. Describe the adverse effect of thioamide agents 3. Describe the therapeutic uses of recombinant granulocyte-colony stimulating factor 4. Describe the mechanism of action of radioactive iodine in the treatment of Graves' disease 5. Identify a drug to be given to hyperthyroid patients with exophthalmos 6. Describe the mechanism of action of levothyroxine
	Addison's Disease (T-1, P-2)	1. Identify a drug to be used for management of Addison's disease 2. Describe the mechanism of action of mineralocorticoids 3. Describe the adverse effects of fludrocortisone
	Peptic Ulcer Disease (T-1, P-1)	1. Identify the enzyme that is inhibited by omeprazole 2. Explain the reason for the long duration of action of omeprazole

		3. Explain the pharmacokinetic action that can account for the high concentration of omeprazole in the stomach lumen 4. Identify the site of action of erythromycin 5. Describe the property of H. pylori that makes it very sensitive to metronidazole 6. Explain the mechanism of action of bismuth salt in peptic ulcer disease
	Iron Deficiency Anemia (T-2, P-1)	1. Describe the optimal duration of an iron therapy for iron-deficiency anemia 2. Describe a common adverse effect of oral iron preparations 3. Describe a rare but life-threatening adverse effect of intravenous iron administration 4. Describe the optimal duration of an oral iron therapy for iron-deficiency anemia 7. Identify the most likely cause of the anemia-induced increase in serum transferrin

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL PHYSIOLOGY	Cardiac arrhythmias and their electrocardiographic reflections (T-2)	1. Describe the normal sinus rhythm ECG 2. Classify arrhythmias 3. Define the concepts of tachycardia and bradycardia 4. Name common arrhythmias and describe the anatomical region that is responsible from the arrhythmias 5. Describe the electrical mechanisms of arrhythmias and their electrocardiographic reflections 6. Explain treatment strategies of arrhythmias based on pathophysiological mechanisms 7. Name electrolyte disorders that can trigger arrhythmias
	Pathophysiology of Asthma (T-2)	1. Describe the major clinical features of asthma and acute asthmatic attack 2. Describe the changes in the airways in asthma 3. Describe changes in lung volumes, capacities and air flows in asthma 4. Describe the changes in blood oxygen and carbon dioxide content in asthma 5. Describe the immunological, neuromuscular and metabolic events that play role in the pathophysiology of asthma 6. Explain treatment strategies of asthma based on physiological alterations
	Pathophysiology of Goiter (T-2)	1. Describe the characteristic hormonal changes in hyperthyroidism 2. Identify the mechanisms that cause hyperthyroidism. 3. Explain the physiological basis of the signs and symptoms of hyperthyroidism 4. Describe the effects of hyperthyroidism at the cell and organ systems level 5. Name the reasons that cause goiter 6. Explain treatment strategies of hyperthyroidism based on pathophysiological mechanisms

	Case discussions on gastrointestinal system (T-2)	1. Describe the roles of the gastrointestinal tract structures in regards to motility, secretions, and digestion and absorption on normal physiological condition 2. Explain the pathophysiology on common gastrointestinal disorders and symptoms, such as irritable bowel diseases, steatorrhea, diarrhea , Zollinger-Ellison syndrome.

At the end of this lesson, the student will be able to:		
SKILLS		
DEP	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL SKILLS	CSL Rules, preparing to initiate an intravenous infusion (P-2)	1. List the CSL Rules 2. Set up appropriate equipment for iv infusion 3. Get skills in preparing an infusion bag 4. Define how to calculate the infusion rate

MED 3002: RESEARCH METHODOLOGY AND BIOSTATISTICS			
Course Date	September 27, 2021-January 06, 2022		
Course Coordinator:	MELİKE YAVUZ		
Academic Unit	**Academic Staff**	**Theoretical hours**	**Total**
Research Methodology	Sebahat Dilek Torun, Assoc. Prof Melike Yavuz, Assist. Prof. Petek Eylül Taneri, Assist. Prof. Cüneyd Parlayan, Assist. Prof. Serdar Durdağı, Prof.	50	50

COURSE AIM:

The aim of this course is to inform the students about the fundamentals of research methodology and to develop their research orientation. Specifically, the course aims at introducing the students to the basic concepts used in research and to scientific research methods and their approach.

LEARNING OUTCOMES:

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP	**TOPIC**	**LEARNING OUTCOMES**
RESEARCH METHODOLOGY	Introduction to the course / Concept of Research and Research Methodology (T-1)	1. Define the term research 2. Distinguish between common uses of the term *research* and scientific research 3. İdentify the key features of research 4. Differentiate between research and non-research 5. List the objectives of research 6. Explain the significance of research 7. Describe the different types of research 8. Distinguish between research methods and research methodology
	Research Process - An overview (T-2)	1. Explain the major phases of the research process 2. List the steps of research process in correct order 3. Explain the each step of research process briefly 4. Explain the criteria/ features of good research
	Formulating the Research Problem (T-2)	1. Define what a research problem is 2. List the sources of research problems 3. Differentiate a researchable and non-researchable question 4. Explain the factors to consider in selecting research problems 5. List the steps involved in formulating a research problem 6. İdentify the characteristics of a good research problem 7. Explain how to formulate research objectives 8. Define operational definitions

	Literature review (T-1)	1. Explain the place of literature review in research process 2. Explain the functions of literature review as a part of research process. 3. Explain the steps in conducting a literature review.
	Abstract and Index Data Bases (T-1)	1. Define abstract and index 2. Explain the differences between abstract and index 3. List the major abstract and index online databases
	Constructing Hypothesis (T-3)	1. Define the term hypothesis 2. Differentiate among assumption and hypothesis 3. Explain the functions of a hypothesis in a research process 4. Explain the main characteristics of a good hypothesis 5. Differentiate between the types of hypothesis 6. Compare null hypotheses and research hypotheses 7. Enumerate the types of variables included in stating a hypothesis 1.
	Epidemiology and Research (T-1)	1. Define the term 'epidemiology' 2. Describe the principles and objectives of epidemiology 3. Identify the basic terms of epidemiology
	Descriptive Studies (Case report, case series, ecologic studies) (T-1)	1. Describe the case report, case series, ecologic studies 2. Identify the advantages and disadvantages of case report, case series, ecologic studies 3. Define ecological fallacy
	Cross-Sectional Studies (T-3)	1. Describe the cross-sectional study design 2. Define the sampling process in cross sectional studies 3. State the definition and the formula of the prevalence 4. Identify the advantages and disadvantages of cross-sectional studies
	Case-Control Studies (T-3)	1. Define the case-control study design 2. Identify the process of selecting cases and controls 3. Describe the matching process 4. Explain advantages and disadvantages of case-control studies 5. Define and calculate the odds ratio
	Cohort Studies (T-2)	1. Define the cohort study design 2. Identify the types of cohort study 3. Describe the advantages and disadvantages of cohort studies 4. Calculate the relative risk
	Experimental Studies, Randomized Controlled Studies (T-2)	1. Explain the basic characteristics of experimental studies 2. Define the randomised controlled trials (RCT) 3. Draw a randomised controlled design 4. Explain the steps of RCT 5. Define the meaning and the purpose of randomisation and masking (blinding) 6. Explain the advantages and disadvantages of RCT
	Drug studies Phase 1,2,3,4 (T-3)	1. Identify the different phases of drug development 2. List objectives of each drug development phase 3. Give the quantities of volunteer requirements
	Sources of Data (T-1)	1. Define the terms primary and secondary data 2. Define the broad types of data collection methods

		3. List the important methods of collecting primary data and explain them briefly 4. List the advantages and disadvantages of each data collection method 5. Explain the considerations in selecting the appropriate method for data collection
	Identifying variables (T-2)	1. Explain what variables and concepts are and how they are different 2. Explain how to turn concepts into operational variables 3. Explain the types of variables from the viewpoint of: • causation • the study design • the unit of measurement
	Types of Measurement Scales (T-2)	1. Explain the nominal or classificatory scale 2. Explain the ordinal or ranking scale 3. Explain the interval scale 4. Explain the ratio scale 5. Explain the differences between measurement scales
	Research Ethics (T-2)	1. Identify ethical matters in research proposals 2. Identify and clearly describe a) any information needed from researchers and b) the reasons for that information 3. Define plagiarism and identify it on different examples 4. Prepare a project file for submitting to the ethics committee
	Measures of central tendency and dispersion, asymmetry (T-1)	1. Explain the essential understanding of data and information 2. Understand how data is dispersed and by which factors and parameters are effecting the data distribution 3. Lean how data input is plotted or laid out on graphical settings and what are reason of symmetricity and asymmetricity
	Statistical Inference (p value - Confidence Interval) (T-2)	1. Identify the concept of probabilistic result interpretation 2. Explain why p value is important to understand the value of the data and its integrity 3. Learn how p value is computed/found in different settings 4. Understand the accuracy and the confidence of the output of the result by calculating confidence interval. 5. Identify which factors may influence the confidence interval calculation and why they are important for data interpretation.
	Errors and Power (T-2)	1. Learn how errors occur and why they are important to consider. 2. Understand the different levels and significance of Errors in research and science 3. Understand the importance of power calculation 4. Learn power calculations for different clinical and experimental settings and how power concept should be constructed.
	Hypothesis Testing – Introduction (T-1)	1. Write a testable hypothesis 2. Explain the difference between the null and alternative hypotheses. 3. Define statistical significance and explain the meaning of a p-value. 4. Discriminate between type ı and type ıı errors.

		5. Define the importance of statistical power in conducting analyses. 6. Interpret the rejection region for one- and two-tailed tests and assess the significance of a statistical test.
	Hypothesis Testing -Choosing the right statistical test (T-2)	1. Name the various commonly used statistical tests 2. Describe the preconditions to select a statistical test 3. Apply the correct test for the problem at hand 4. İnterpret the conclusions of the test appropriately
	Bias and confounding (T-2)	1. Define the concept and term of bias 2. List the types of bias 3. İdentify the potential sources of bias 4. Define the concept of confounding 5. İdentify the potential confounders 6. Describe three ways to control confounding in the design phase of a study 7. Compare crude and adjusted measures of association to identify whether confounding is present and characterize the direction and magnitude of confounding
	Sampling (T-2)	1. Define what sampling is 2. Define the terms *population, sample, element, sampling unit and subject* 3. Compare a population and a sample 4. Identify the purpose of sampling 5. Explain the role of sampling in the research process
	Sampling Methods (T-2)	1. Describe the common methods of sampling 2. Distinguish between probability and nonprobability sampling strategies 3. Compare the advantages and disadvantages of nonprobability and probability sampling strategies. 4. Explain the importance of inclusion and exclusion criteria. 5. Describe sampling process – steps 6. Explain the contribution of nonprobability and probability sampling strategies to strength of evidence provided by study findings.
	Chi-square test (T-2)	1. Define and understand the significance of Chi-square test 2. Learn underlying reasons why is used and where 3. Learn how to compute the test
	T-Test (T-2)	1. Understand the test and why it is used 2. Explain the test results and Hypothesis rejection or acceptance

MED 3005: INTEGRATION OF BASIC SCIENCES TO CLINICAL SCIENCES II				
Course Date	November 01-December 12, 2021			
Exam Dates	Theoretical Exam: December 12, 2021			
Course Coordinator:	FATİH ÖZDENER, ZÜLFİYE GÜL			
Academic Unit	**Academic Staff**	**Theoretical hours**	**Practical Hours**	**Total**
Clinical Biochemistry	Özlem Unay, Assist. Prof. Erdem Yılmaz, Assist. Prof.	8	-	8
Clinical Genetics	Timuçin Avşar, Assist. Prof.	2	-	2
Clinical Histology	Yasemin Canıllıoğlu, Assist Prof. Dila Şener, Assist Prof.	4	-	4
Clinical Microbiology	Orhan Cem Aktepe, Prof. Gülden Çelik, Prof. Sibel Ergüven, Prof.	11	-	11
Clinical Pathology	Özlem Yapıcier, Prof. Ahmet Midi, Prof.	12	-	12
Clinical Pharmacology (Case Presentations)	Fatih Özdener, Assist. Prof. Zülfiye Gül, Assist. Prof.	22	21	43
Clinical Physiology	Sema Tülay Köz, Assoc. Prof	2	-	2
Clinical Skills	Demet Koç, Assist. Prof. Senem Polat, Assist. Prof.	-	2	2
PBL sessions	Kevser Erol, Prof. Fatih Özdener, Assoc. Prof Dila Şener, Assist. Prof. Elif Bahadır, Assist. Prof.	-	10	10
Public Health	Melike Yavuz, Assist. Prof.	2	-	2
Research Methodology	Sebahat Dilek Torun, Assoc. Prof Melike Yavuz, Assist. Prof. Petek Eylül Taneri, Assist. Prof.	15	--	15
TOTAL		77	33	110

Due to possible changes because of Covid-19 pandemic, course schedules and student practice-hybrid groups will be announced before each committee.

COURSE AIM:

The aim of this course is:

- to provide the integration of basic sciences with the common pediatric diseases mentioned in the National Core Educational Program (Cyanotic and acyanotic congenital heart diseases, Cystic Fibrosis, Gastroenteritis, Puberty Precocious/ Puberty with Delay, Nutrition/Malnutrition, Disorders of upper/lower respiratory tract, Anemia, Growth retardation and hypogonadism, Urinary tract infection)

LEARNING OUTCOMES:

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP.	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL BIOCHEMISTRY	Screening programs in childhood (T-2)	1. Describe the newborn screening program which is held by Health Ministry of Turkey 2. List the diseases which are included in newborn screening program 3. Name the alternative tests for newborn screening program
	Cystic Fibrosis (T-2)	1. Explain the biochemical basis of cystic fibrosis 2. List the tests used for diagnosis of cystic fibrosis
	Hemoglobinopathies (T-2)	1. Explain how the basic anatomy of a gene has a direct bearing on the occurrence of genetic disease. 2. Define the normal and abnormal expression patterns of the hemoglobin genes. 3. Explain the mutations that cause quantitative abnormalities in globin. 4. Define Unequal crossing over, and every other possible type of mutation 5. Recognize mutations that cause qualitative abnormalities in globin. 6. Define the molecular basis of sickle cell anemia
	Gastroenteritis (T-2)	1. Explain the biochemical aspect of gastroenteritis 2. List the clinical laboratory tests used for gastroenteritis

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP.	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL GENETİCS	Genetic testing for childhood disorders (T-2)	1. List and explain the genomic tools for diagnosis of pediatric disorders 2. Compare the technologies in detection of chromosomal changes 3. List the important childhood disorders and their associated gene/chromosomal variants.

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL	Fetal Status Assessing (T-2)	1. Clinical use of gestational age term and its importance. 2. Explain the fetal age detection criteria.

		3. Identify maternal, fetal and environmental factors influencing fetal growth with the associated cases. 4. Importance and aim of fetal status assessment. 5. Explain the fetal status assessing procedures related to cases.
	Histological and embryological approach to respiratory distress syndrome (T-2)	1. Explain the developmental stage of the respiratory system, briefly. 2. Explain lung compliance and the role of surfactant, 3. Describe the primary developmental lung abnormalities that can cause respiratory distress in the neonate 4. Describe the histological changes in respiratory distress disease in the neonate

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP.	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL MICROBIOLOGY	Skin & Soft tissue Infections (T-1)	1. List the main group of microorganisms responsible from skin and soft tissue infections 2. Explain the pathogenesis 3. List the main methods in the laboratory diagnosis 4. List the main advantages and disadvantages of the methods and interpretation of the results 5. List the preventive measures and the routine recommended antimicrobial treatment
	Superficial Mycoses (T-1)	1. List the main group of microorganisms responsible from Superficial Mycoses 2. Explain the pathogenesis 3. List the main methods in the laboratory diagnosis 4. List the main advantages and disadvantages of the methods and interpretation of the results 5. List the preventive measures and the routine recommended antimicrobial treatment
	Dermatophytosis(T-1)	1. List the main group of microorganisms responsible from Dermatophytosis 2. Explain the pathogenesis 3. List the main methods in the laboratory diagnosis 4. List the main advantages and disadvantages of the methods and interpretation of the results 5. List the preventive measures and the routine recommended antimicrobial treatment
	Hepatitis (T-3)	1. List the main group of microorganisms responsible from Hepatitis especially Hepatitis viruses 2. Explain the pathogenesis 3. List the main methods in the laboratory diagnosis 4. List the main advantages and disadvantages of the methods and interpretation of the results 5. List the preventive measures and the routine recommended antimicrobial treatment
	CNS Infections (T-1)	1. Recall the anatomical structure 2. List the main group of microorganisms responsible from central nervous system infections 3. Explain the pathogenesis 4. List the main methods in the laboratory diagnosis 5. List the main advantages and disadvantages of the methods and interpretation of the results

		6. List the preventive measures and the routine recommended antimicrobial treatment
	Common Parasitosis (T-2)	1. List the main group of microorganisms responsible from common parasitosis 2. Explain the pathogenesis 3. List the main methods in the laboratory diagnosis 4. List the main advantages and disadvantages of the methods and interpretation of the results 5. List the preventive measures and the routine recommended antimicrobial treatment
	Zoonotic Infections (T-1)	1. List the Zoonotic Infections 2. Classify them into the groups 3. List their important properties 4. List the common clinical manifestations 5. Describe the lab diagnosis of each Infections 6. Define the antibacterial resistance problems 7. Describe prevention measures from Zoonotic Infections
	Nosocomial Infections (T-1)	1. List the Hospital Infections 2. Define the Hospital Infections 3. List the important pathogens 4. List the common clinical manifestations 5. Describe the lab diagnosis of these Infections 6. Define the antibacterial resistance problems 7. Describe prevention measures and precautions from Hospital Infections

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL PATHOLOGY	Growth and development Lecture 1: Immunization/Nutrition/Malnutrition Lecture 2: Puberty Precocious/ Puberty with Delay (T-3)	1. Describe basic mechanisms of immunization. 2. Explain the consequences of nutrition deficiency. 3. Describe definition and clinical manifestations of malnutrition. 4. Explain malnutrition caused diseases. 5. Explain underlying mechanisms and clinical presentation of rickets disease. 6. Explain underlying mechanisms and clinical presentation of puberty precocious and pubertal delay.
	Respiratory diseases Lecture 1: Disorders of upper/lower respiratory tract Lecture 2: ARDS/Cystic fibrosis/SIDS (T-3)	1. Describe the chest wall dynamics, metabolic characteristics, immunologic incompetence, and physiologic control of respiration. 2. Explain the disorders of the upper airways with clinical manifestations, etiology, pathophysiology and symptoms. 3. Describe managements and treatment of upper airway infections. 4. Get through the disorders of the lower airways with clinical manifestations, etiology, pathophysiology and symptoms. 5. Describe managements and treatment of the lower airway disorders including acute respiratory distress syndrome (ARDS), cystic fibrosis, sudden infant death syndrome (SIDS).
	Cardiovascular and Hematological Diseases Lecture 1: Congenital Heart Diseases Lecture 2: Anemia	1. Get through the congenital heart diseases. 2. Explain the clinical findings of congenital heart diseases and those who need urgent intervention.

	(T-3)	3. Describe the pathogenesis and clinical findings of hemoglobinopathies, anemia and bleeding diathesis in childhood.
	Infectious Diseases Lecture 1: Infections of urinary tract and meninges/Diarrhea Lecture 2: Febrile illness with skin rashes (T-3)	1. Get through the most common causes of urinary tract infections 2. Describe the mechanisms and etiologic factors of acute diarrhea 3. Get through the most common microorganisms in children responsible for meningitis 4. Describe the morphologic, clinical findings and consequences of meningitis 5. Explain the disorders seen with rash in children

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP.	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL PHARMACOLOGY	Growth retardation and hypogonadism (T-3, P-2)	1. Describe the pharmacotherapy of GH deficiency 2. Describe the mechanism of action of somatropin 3. Identify the appropriate formulations of testosterone for replacement therapy in a boy with hypogonadism 4. Describe the mechanism of action of testosterone 5. Describe how androgens affect bone mineral density 6. Describe the appropriate therapy for treating infertility in men with hypogonadotropic hypogonadism 7. Explain the role of FSH in stimulating spermatogenesis 8. Describe the treatment for erectile dysfunction 9. Describe the contraindications for PDE5 inhibitors
	Acromegaly (T-2, P-2)	1. Describe the pharmacology of somatostatin analogues 2. Describe the molecular mechanism of action of octreotide 3. Describe the pharmacology of dopamine agonists used in the treatment of acromegaly and prolactinoma 4. Describe the mechanism of development of nausea and vomiting as adverse effects of dopamine agonists 5. Describe the common adverse effects of octreotide 6. Describe the mechanism of action of pegvisomant 7. Identify the sign that cannot be reversed in acromegalic patients undergoing appropriate therapy
	Cardiogenic shock (T-2, P-2)	1. Describe the most appropriate emergency therapy for cardiogenic shock 2. Describe the action caused by low dose of dopamine 3. Explain the main pharmacokinetic reason for the administration of dopamine by IV infusion 4. Calculate the time needed to reach the steady-state plasma concentration of dopamine given by IV infusion 5. Calculate the patient's increase in stroke volume after dopamine administration 6. Calculate the change in cardiac oxygen consumption knowing the patient's systolic blood pressure and the heart rate 7. Describe the molecular mechanism of action dobutamine 8. Identify the hemodynamic parameter that mediates the increase in urine output after dopamine infusion in a patient with cardiogenic shock
	Infective Endocarditis (T-2, P-3)	1. Explain the mechanism of action of penicillin 2. Identify the activity spectrum of penicillin G

		3. Identify the site of action of vancomycin 4. Explain the mechanism of action of vancomycin 5. Identify the activity spectrum of vancomycin 6. Describe the adverse effects of vancomycin 7. Explain the mechanism of action of clindamycin
	Acute Lymphoblastic Leukemia (T-3, P-2)	1. Describe the phases of ALL treatment 2. Identify the most likely mechanism of anticancer action of vincristine 3. Identify a common adverse effect of vincristine 4. Explain the mechanism of action of asparaginase 5. Identify a frequent, and sometimes serious adverse effect of asparaginase 6. Identify the drug administered intrathecally to children with ALL for prevention of leukemic relapse 7. Identify the most likely cause of metabolic abnormalities that occurred soon after starting induction chemotherapy for acute lymphoblastic leukemia 8. Describe the mechanism of action of rasburicase 9. Describe the mechanism of action of sevelamer
	Human Immunodeficiency Virus Infection (T-2, P-3)	1. Explain the mechanism of action of azoles 2. Identify the appropriate duration of HAART therapy in a patient diagnosed with AIDS 3. Identify the antiviral drug class that includes both emtricitabine and tenofovir 4. Identify the step of the viral cycle specifically inhibited by emtricitabine and tenofovir 5. Identify a rare but potentially lethal adverse effect that can be caused by nucleoside/nucleotide reverse transcriptase inhibitors 6. Identify a step of the viral cycle specifically inhibited by lopinavir and ritonavir 7. Explain the reason for the association of ritonavir with other protease inhibitors 8. Identify the enzyme specifically inhibited by raltegravir
	Urinary tract infection (T-3, P-2)	1. Identify the two enzymes specifically inhibited by the trimethoprim-sulfamethoxazole combination 2. Explain the mechanism of resistance to sulfonamides 3. Explain the mechanism of action of fluoroquinolones 4. Explain the interaction between antacids and fluoroquinolones 5. Identify a serious adverse effect of fluoroquinolones 6. Identify the mechanism of action of meropenem 7. Identify the correct activity of carbapenems
	Hematopoietic Cell Transplantation (T-2, P-3)	1. Explain the mechanism of action of imatinib. 2. Identify the most frequent adverse effect of imatinib therapy. 3. Identify the most likely reason for failure of imatinib therapy. 4. Identify the symptom/ sign that best explains the diagnosis of accelerated phase of chronic myelogenous leukemia. 5. Explain the mechanism of action of busulfan. 6. Identify the anticancer subclass that includes fludarabine. 7. Identify the cyclosporine action that mediates its prophylactic effect after hematopoietic cell transplantation. 8. Identify a common adverse effect of cyclosporine.

	Megaloblastic Anemia (T-3, P-2)	1. Identify the symptoms that can differentiate between folic acid anemia and cobalamin-deficiency anemia. 2. Explain the most likely reason for anemia-induced loss of pain sensation. 3. Identify the endogenous compound whose synthesis is impaired by both folic acid and cobalamin deficiency. 4. Explain the mechanism of the antianemic action of cobalamin. 5. Identify the length of therapy for megaloblastic anemia due to lack of intrinsic factor. 6. Explain why oral cobalamin is effective even when gastric intrinsic factor is absent.

At the end of this lesson, the student will be able to:		
DEP.	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL PHYSIOLOGY	Excess of Growth Hormone (T-2)	1. Describe the components of Hypothalamo- pituitary axis 2. Explain the role of hypothalamus in controlling anterior pituitary. 3. Name the Hypothalamic releasing and inhibitory hormones that control the anterior pituitary secretion 4. Identify the relationship between growth hormone and insulin-like growth factors 5. Define the factors that influence the GH secretion 6. Describe probable clinical changes in body as a result of GH excess and deficiency.

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP	**TOPIC**	**LEARNING OUTCOMES**
PUBLIC HEALTH	Childhood Screening Programs in Turkey (T-2)	1. List screening programs carried out in childhood in Turkey 2. List the diseases diagnosed with screening programs 3. Explain the importance of timely screening

At the end of this lesson, the student will be able to:		
SKILLS		
DEP	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL SKILLS	Blood Transfusion (P-1)	1. List the equipment needed for a blood transfusion 2. List the critical checks clinical staff have to take before, during and after administering a blood transfusion 3. Describe the potential adverse side effects and the things all healthcare staff should be aware of when caring for someone who has had a blood transfusion.
	Review (Practices of Class 2) (P-1)	

MED 3007: INTEGRATION OF BASIC SCIENCES TO CLINICAL SCIENCES III				
Course Date	December 06, 2021-January 06, 2022			
Exam Dates	Theoretical Exam: January 06, 2022			
Course Coordinators	FATİH ÖZDENER, ZÜLFİYE GÜL			
Academic Unit	**Academic Staff**	**Theoretical hours**	**Practical Hours**	**Total**
Clinical Anatomy	Çağatay Barut, Prof.	6		6
Clinical Biochemistry	Özlem Unay, Assist. Prof.	4		4
Clinical Genetics	Timuçin Avşar, Assist. Prof.	2		2
Clinical Microbiology	Orhan Cem Aktepe, Prof. Gülden Çelik, Prof.	12		12
Clinical Pathology	Özlem Yapıcier, Prof.	15		15
Clinical Pharmacology (Case Presentations)	Fatih Özdener, Assist. Prof. Zülfiye Gül, Assist. Prof.	22	23	45
Clinical Histology	Dila Şener, Assist Prof.	2		2
Clinical Skills	Demet Koç, Assist. Prof. Senem Polat, Assist. Prof.	-	2	2
PBL sessions	Kevser Erol, Prof. Mehmet Ozansoy, Assist. Prof. Sebahat Dilek Torun, Assoc. Prof Melike Yavuz, Assist. Prof.	-	10	10
Research Methodology	Sebahat Dilek Torun, Assoc. Prof Melike Yavuz, Assist. Prof. Petek Eylül Taneri, Assist. Prof.	20	--	20
TOTAL		74	35	109

Due to possible changes because of Covid-19 pandemic, course schedules and student practice-hybrid groups will be announced before each committee

COURSE AIM:

The aim of this course is:

- to provide the integration of basic sciences with the most common diseases encountered in General Surgery, Obstetrics and Gynecology and Neuroscience mentioned in the National Core Educational Program (Inguinal hernias, hemorrhoids, appadisitis, colon cancer,breast cancer, cervical cancer, osteoporosis, Alzheimer disease, meningitis, epilepsy, migraine, stroke, HIV&AIDS, sepsis).
- to provide knowledge about prenatal diagnosis and screening.
- to get skills in surgical hand washing.

LEARNING OUTCOMES:

At the end of this lesson, the student will be able to:		
DEP.	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL ANATOMY	Inguinal hernias (T-2)	1. Discuss the clinical anatomy of anterior abdominal wall and inguinal canal 2. Identify the main structures of the spermatic cord and layers of scrotum 3. Describe classification of inguinal hernias in relation to anterior abdominal wall and inguinal canal 4. Describe the characteristic and clinical presentations of inguinal hernias in relation to clinical anatomy 5. Recognize how inguinal hernia affect the morphology and functions of anterior abdominal wall and inguinal canal
	Hemorrhoids (T-2)	1. Discuss the clinical anatomy of rectum and anal canal 2. Identify the vessels and nerves of the rectum and anal canal 3. Define hemorrhoids in relation to anorectal vasculature 4. Describe the characteristic and clinical presentations hemorrhoids in relation to clinical anatomy 5. Recognize how hemorrhoids affect the morphology and functions of the rectum and anal canal
	Cervical cancer (T-2)	1. Discuss the clinical anatomy of vulva, vagina, uterus, ovaries, uterine tubes 2. Discuss the relationship of pelvic structures with each other 3. Identify the main vessels of vagina, uterus, ovaries, uterine tubes 4. Describe the anatomy of the lateral uterine support structures and related organs 5. Discuss the lymphatic drainage of uterus, vagina, uterine tubes and ovaries 6. Describe the anatomy related to a pelvic examination

At the end of this lesson, the student will be able to:		
DEP.	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL BIOCHEMISTRY	Alzheimer Disease: (T-2)	1. Describe the biochemical basis of Alzheimer disease 2. List the laboratory parameters used in diagnosis of Alzheimer disease 3. Define the use of laboratory parameters used for differential diagnosis of neurodegenerative diseases
	Meningitis (T-2)	1. Classify types of meningitis 2. List the laboratory parameters used in diagnosis of meningitis 3. Define the laboratory parameters used to assess the outcome of meningitis

At the end of this lesson, the student will be able to:		
DEP.	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL GENETİCS	Prenatal Diagnosis and Screening (T-2)	1. List prenatal diagnosis and screening methods. 2. Describe indications for prenatal applications 3. Define genetic counseling in prenatal stage.

At the end of these lessons, the student will be able to:		
DEP.	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL MICROBIOLOGY	HIV & AIDS (T-2)	1. List the virus responsible from HIV infection/AIDS 2. Explain the pathogenesis 3. List the main methods in the laboratory diagnosis 4. List the main advantages and disadvantages of the methods and interpretation of the results 5. List the preventive measures
	Anti-Retroviral therapy (T-2)	1. List the main groups of antivirals used in HAART therapy 2. Describe the main mechanisms of antiretrovirals 3. Describe the HAART therapy 4. Describe resistance problem and detection methods 5. Describe the pre and post exposure therapy
	Infections in Immunocompromised patients (T-2)	1. List the main group of microorganisms responsible from infections in Immunocompromised patients 2. Explain the pathogenesis 3. List the main methods in the laboratory diagnosis 4. List the main advantages and disadvantages of the methods and interpretation of the results 5. List the preventive measures and the routine recommended antimicrobial treatment
	Pregnancy and Infections (T-2)	1. List the main group of microorganisms responsible from infections that are common in pregnancy 2. Explain the pathogenesis 3. List the main methods in the laboratory diagnosis 4. List the main advantages and disadvantages of the methods and interpretation of the results 5. List the preventive measures and the routine recommended antimicrobial treatment
	GUS Infect./ STD (T-2)	1. List the main group of microorganisms responsible from genitourinary and sexually transmitted infections 2. Explain the pathogenesis 3. List the main methods in the laboratory diagnosis 4. List the main advantages and disadvantages of the methods and interpretation of the results 5. List the preventive measures and the routine recommended antimicrobial treatment
	Intra-abdominal Infections & Sepsis (T-2)	1. List the main group of microorganisms responsible from intra abdominal infections and sepsis 2. Explain the pathogenesis 3. List the main methods in the laboratory diagnosis 4. List the main advantages and disadvantages of the methods and interpretation of the results 5. List the preventive measures and the routine recommended antimicrobial treatment

At the end of this lesson, the student will be able to:		
DEP	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL PATHOLOGY	Appendicitis/Cholecystitis Colon cancer and related precursor lesions (T-3)	1. Describe the morphologic features of appendicitis and cholecystitis 2. Explain the pathologic basis of colon cancer additional with early and late stages of genetic changes 3. Compare the histomorphologic features of low and high grade dysplasia in adenomas of colon 4. Get through the subtypes of colon cancer 5. Describe the TNM staging of colon cancer
	Breast cancer/Prostate cancer Gallbladder/Pancreatic cancers (T-3)	1. Describe the morphologic features of breast cancer by means of subtypes of the tumor 2. Explain the immunohistochemical antibodies which are used for therapeutic approach in breast carcinoma 3. Describe the morphologic features of prostate cancer by means of Gleason grading 4. Explain the differential diagnoses of Gallbladder/Hepatic and Pancreatic carcinomas 5. Describe the grading and staging features of gallbladder and pancreatic carcinomas
	Abnormal uterine bleeding and related disorders Cervical/Ovarian cancers (T-3)	1. Explain the lesions of cervix and endometrium causing abnormal uterine bleeding 2. Compare endometrial hyperplasia with endometrial carcinoma in view of histomorphology 3. Describe precursor lesions of cervical cancer 4. Get through the subtypes of ovarian cancer 5. Describe the differential diagnosis of primary and secondary ovarian cancer
	Neurodegenerative diseases Demyelinated diseases (T-3)	1. Get through the types of neurodegenerative diseases 2. Explain the pathogenesis of each one of the neurodegenerative diseases
	WHO classification of brain tumors Most common benign and malignant tumors of CNS (T-3)	1. Describe the basic novelties of WHO classification system (2016) of brain tumors 2. Get through the most common benign and malignant tumors of central nervous system tumors (CNS) 3. Explain the pathogenesis and molecular changes of most commonly seen CNS tumors

At the end of this lesson, the student will be able to:		
DEP.	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL PHARMACOLOGY	General Anesthesia (T-3, P-2)	1. Describe the molecular action that most likely mediates the antianxiety effect of midazolam 2. Identify the ion channel action that most likely mediates the effect of propofol 3. Explain the main reason for the extensive use of IV anesthetic in general anesthesia 4. Explain the molecular mechanism of action of succinylcholine 5. Explain the meaning of MAC of an inhalational anesthetic 6. Identify the inhibition of ion current that most likely mediated the muscle relaxant effect of vecuronium 7. Identify the pairs of skeletal muscles that are to be paralyzed by vecuronium 8. Explain the reason for the administration of neostigmine after general anesthesia supplemented by vecuronium

	Breast cancer (T-2, P-3)	1. Identify the tumor cell receptor whose increase is most likely responsible for tumor metastases 2. Identify the primary reason for the use of raloxifene in breast cancer 3. Identify the disorder whose risk was increased because of raloxifene treatment 4. Explain the mechanism of action of trastuzumab 5. Identify the enzyme specifically inhibited by anastrozole 6. Identify a frequent adverse effect of anastrazole
	Lung cancer (T-3, P-2)	1. Explain why larger solid tumors are more difficult to eradicate by chemotherapy 2. Identify the pair of enzymes specifically inhibited by gemcitabine 3. Explain the mechanism of action of cisplatin 4. Identify the major adverse effects of cisplatin 5. Describe the mechanism of action of paclitaxel 6. Describe the main adverse effects of paclitaxel 7. Describe the mechanism of action of erlotinib 8. Describe the main adverse effects of erlotinib
	Prostate cancer (T-2, P-3)	1. Explain the reason leuprolide therapy in prostate cancer 2. Identify the site of action of leuprolide 3. Explain the molecular mechanism of action of leuprolide 4. Explain the molecular mechanism of action of flutamide 5. Identify a rare but life-threatening adverse effect of flutamide 6. Explain the reason for use of pamidronate in metastasized prostate cancer 7. Identify a rare but serious adverse effect of pamidronate treatment
	Hormonal contraception (T-3, P-2)	1. Describe emergency contraception 2. Describe the mechanism of contraceptive action of combination hormonal contraceptives 3. Describe the mechanism by which combination hormonal contraceptives act to show therapeutic effects in acne 4. Describe the characteristics of different types of synthetic progestins 5. Describe the different formulations of combined hormonal contraceptives 6. Describe different methods of starting combination hormone contraceptives 7. Explain extended cycle contraceptive formulations 8. Identify the disease whose risk is decreased with the use of combination hormonal contraceptives
	Perimenopause and osteoporosis (T-2, P-3)	1. List the estrogen and progestin compounds, routes of administration and different regimens used to treat menopausal hot flashes 2. Identify the disorder that can be prevented by adding a progestin to the estrogen in the menopausal replacement therapy 3. Describe the mechanism of action of bisphosphonates 4. Explain the appropriate duration of menopausal hormone therapy 5. Describe the adverse effects of menopausal HRT 6. Describe an appropriate drug preparation for managing vaginal atrophy associated with menopause 7. Describe the alternatives to HRT to treat vasomotor symptoms of menopause
	Epilepsy (T-3, P-2)	1. Identify the brain ion channel that is the primary target of phenytoin 2. Select the inhibition of a neurophysiological action that can contribute to the therapeutic effect of carbamazepine 3. Describe the change in ionic currents that most likely mediates the anticonvulsant action of valproic acid 4. Identify the brain receptor that is most likely blocked by topiramate

		5. Identify the most likely molecular target of levetiracetam 6. Identify the pairs of channels most likely blocked by lamotrigine 7. Identify the anticonvulsant drug that can block voltage-gated N-type Ca2+ channels on presynaptic terminals 8. Identify the drug that is commonly given to stop an ongoing epileptic seizure
	Migraine (T-2, P-3)	1. Identify the molecular action that mediates the analgesic effect of both aspirin ketoprofen in migraine 2. Identify a pair of receptors that are activated by ergotamine 3. Identify the blockade of receptors that mediate the antiemetic action of metoclopramide 4. Explain the most likely cause of calf pain in a patient receiving antimigraine therapy 5. Identify the receptors that is most likely mediate antimigraine effect of sumatriptan 6. Identify the neurotransmitter system most likely involved in valproate-induced migraine prevention
	Stroke (T-3, P-2)	1. Describe the action that most likely mediates the acute antihypertensive effect of labetalol 2. Identify the endogenous compound that represents the substrate of alteplase system 3. Identify a disorder that contraindicates the use of fibrinolytic drugs 4. Explain why clopidogrel is usually preferred to aspirin in a specific patient

At the end of this lesson, the student will be able to:		
DEP	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL HISTOLOGY	Infertility and Assisted Reproductive Technologies (T-2)	1. Explain the etiology of male and female infertility 2. Describe the assisted reproductive techniques with relevant case

At the end of this lesson, the student will be able to:		
SKILLS		
DEP	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL SKILLS	Surgical Hand Washing (P-1)	1. Define the purpose of surgical hand washing 2. List the equipment 3. Describe and perform a surgical hand scrub
	Review (Practices of Class 2) (P-1)	

MED 3004: INTRODUCTION TO INTERNAL MEDICINE			
Course Date	GROUP A- 10.01.2022-03.02.2022 GROUP B- 07.03.2022-31.03.2022		
Exam Dates	Theoretical Exam: Group A- 03.02.2022 Group B-31.03.2022		
Course Coordinator:	FATİH ÖZDENER, ZÜLFİYE GÜL		
Academic Unit	**Academic Staff**	**Theoretical hours**	**Practical Hours**
Internal Medicine	Cengiz Bölükbaş, Prof. Fulya Coşan, Prof. Sena Ulu, Prof. Yavuz Furuncuoğlu, Assoc. Prof. Eda Altun, Assist. Prof.	73	3 (Clinical Observations)
Pulmonary Medicine	Merih Kalamanoğlu Balcı,Assoc. Prof.	6	
Cardiology	Sabahattin Gündüz, Assoc. Prof.	6	
Radiology	Canan Erzen, Prof.	2	
Clinical Skills	Demet Koç, Assist. Prof. Senem Polat, Assist. Prof.	Clinical Skills	2
TOTAL		87	5

Due to possible changes because of Covid-19 pandemic, course schedules and student practice-hybrid groups will be announced before each committee.

COURSE AIM:

The aim of this course is:

- to introduce internal medicine to the students
- to give information about how to take history from a patient and how to make physical examination
- to recognize the most common symptoms of internal medicine diseases (according to the National Core Education Program)
- to get skills in taking history from a patient and preparing a patient file
- to recognize most commonly used radiographic imaging techniques in internal medicine
- to introduce students to hospital conditions

LEARNING OUTCOMES:

At the end of this lesson, the student will be able to:		
DEP	**LEARNING OUTCOMES**	
INTERNAL MEDICINE	History taking and physical examination in Internal Medicine (T-2)	1. Elicit the patient's chief complaint, history of present illness, past medical history, social, family, occupational histories and complete a review of systems 2. Perform a physical examination in a logical, organized and thorough manner 3. Describe the steps for obtaining a patient's vital signs 4. State normal values for adult vital signs 5. Demonstrate the ability to use data for clinical decisions
	Examination of head and neck (T-2)	1. Describe the common methods of physical examination of the head and neck: Inspection, palpation, auscultation 2. Describe the location and examination methods of lymph nodes 3. List the causes of lymph node enlargement
	Approach to patient with weakness (T-2)	1. Determine what the patient means by weak. 2. Take the history of a patient with weakness 3. Make the physical examination of a patient with weakness 4. List the laboratory tests that may aid in diagnosis
	Hypertension (T-2)	1. Describe the pathophysiology and clinical findings of hypertension (HT) 2. Describe the staging and treatment algorithm of HT 3. List the complications of HT
	History taking and physical examination in Nephrology (T-2)	1. Gather the important information that is needed for the nephrology history 2. Make a pertinent physical examination for the evaluation of nephrology consult patient 3. Interpret renal function tests 4. Interpret glomerular filtration rate in acute kidney injury and chronic kidney disease 5. Know how to differentiate findings on the urinalysis
	Acute Kidney Injury (acute renal failure) (T-2)	1. Describe the definition of acute kidney injury 2. Describe the etiology and pathophysiology of acute kidney injury

		3. Define the clinical evaluation and prevention of acute kidney injury 4. Describe the non dialytic management of acute kidney injury
	Chronic Renal Failure (chronic kidney disease) (T-2)	1. Define chronic kidney disease 2. Explain the pathophysiology of chronic kidney disease 3. Describe the clinical findings of chronic kidney disease 4. Take preventive measures against the development of chronic kidney disease 5. List the complications of chronic kidney disease 6. Arrange the initial treatments and refer to a specialist
	Approach to a patient with proteinuria (T-2)	1. Define normal range of proteinuria 2. Define abnormal range of proteinuria 3. Describe nephrotic and nephritic syndrome 4. Explain types of proteinuria
	Approach to a patient with electrolyte disorders (T-2)	1. Explain general principles of disorders of water balance 2. Explain general principles of disorders of sodium balance 3. Explain general principles of disorders of potassium balance 4. Define hyponatremia and hypernatremia 5. Define hyperkalemia and hypokalemia
	Approach to a patient with anuria, oliguria, polyuria, pollakiuria or nocturia (T-1)	1. Describe urinary symptoms including anuria, oliguria, polyuria, pollakiuria and nocturia 2. Clinical application of these urinary symptoms in clinical decisions
	Approach to a patient with hematuria (T-1)	1. Describe the pathophysiology and clinical findings of hematuria 2. Explain types of glomerular diseases
	Approach to patient with edema (T-1)	1. Identify the symptoms and signs of edema 2. Organize and prioritize a differential diagnosis based on specific findings of edema 3. Order appropriate laboratory and diagnostic studies for the most likely etiologies of edema
	History taking in Gastroenterology (T-2)	1. Comprehend how to communicate with a patient 2. Elicit the patient's chief complaint as well as a complete list of the patient's concerns. 3. Obtain a patient's history in a logical, organized, and thorough manner, covering the history of present illness; past medical history (including usual source of and access to health care, childhood and adult illnesses, injuries, surgical procedures, obstetrical history, psychiatric problems, hospitalizations, transfusions, medications, tobacco and alcohol use, and drug allergies); preventive health measures; social, family, and occupational history; and review of systems. 4. Describe a symptom, including location and radiation, intensity, quality, onset, duration, frequency, alleviating factors, aggravating factors and associated symptoms. 5. Identify the key findings of history taking and combine it with physical examination.
	Physical examination in Gastroenterology (T-2)	1. Assessment to give position the patient and self properly for each part of the physical examination. 2. Perform a physical examination for a patient in a logical, organized, respectful, and thorough manner, giving attention to the patient's general appearance, vital signs, and pertinent body regions.

		3. Recognize the importance of methods of physical examination: inspection, palpation, percussion, and auscultation. 4. Adapt the scope and focus of the history and physical exam appropriately to the medical situation and the time available. 5. Identify life-threatening situations
	Approach to a patient with nausea and vomiting (T-2)	1. Describe the pathophysiologic mechanisms of nausea and vomiting. 2. Recognize the definition and differential diagnosis of nausea and vomiting 3. Identify common causes of nausea and vomiting. 4. Define the complications of severe vomiting
	Approach to a patient with hematemesis and melena , hematochezia (T-2)	1. Define hematemesis, melena and hematochezia. 2. Describe, and prioritize the common causes for and symptoms of upper and lower GI blood loss 3. Recommend laboratory and diagnostic tests to evaluate GI bleeding, 4. Develop an appropriate evaluation and treatment plan for patients with a GI bleeding
	Approach to a patient with diarrhea, constipation (T-2)	1. Define diarrhea and review the different terminologies in diarrhea 2. Explain the causes, clinical symptoms and the metabolic changes during diarrhea 3. Define the constipation 4. Recognize the differences between functional versus organic causes of constipation.
	Approach to a patient with abdominal pain (ACUTE) (T-2)	1. Recognize the definition and differential diagnosis of acute abdominal pain 2. List symptoms and signs indicative of an acute abdomen 3. List the most frequent causes of acute abdominal pain? 4. Describe the key diagnostic criteria for common causes of abdominal pain, based on a history, physical exam and laboratory testing
	Approach to a patient with hepatomegaly (T-1)	1. Identify the possible causes of hepatomegaly and splenomegaly 2. List the important diagnostic considerations in patients who have hepatomegaly 3. Describe what clinical findings of hepatomegaly
	Approach to a patient with jaundice, pruritis (T-2)	1. Describe hyperbilirubinemia and list the causes of hyperbilirubinemia 2. Define cholestatic and hepatocellular liver disease 3. Define the difference between intrahepatic and extrahepatic cholestasis 4. Outline an approach to the evaluation of the jaundiced patient. 5. List of the pruritus causes
	Clinical skills learning (Preparation of a patient file) (T-1)	1. Take history from a patient 2. Prepare a patient file with writing history and physical examination 3. Elicit the patient's past medical history, social, family, and occupational histories 4. Review the symptoms of all systems
	Clinical skills learning (Presenting of a case)	1. Describe how to prepare a case report 2. Describe how to present a case as a power point

	(T-1)	
	Approach to patient with fever (T-2)	1. Become familiar with the definition of fever of known origin (FUO) 2. Consider etiologies of fever in normal hosts and in special populations (e.g., patients with human immunodeficiency virus {HIV}, recent travel or immigration, intravenous drug use) 3. Obtain and present an age-appropriate patient history that helps differentiate among likely etiologies for fever 4. Understand when to obtain diagnostic and laboratory tests for fever.
	Approach to patient with weight loss (T-2)	1. Define pathologic unintended weight loss 2. List the most significant causes of pathologic weight loss 3. Be familiar with the diagnostic work up and evaluation of patients with weight loss
	History taking and physical examination of the Hematopoietic System (T-2)	1. Describe hematopoiesis and hematopoietic growth factors 2. Organize and prioritize a differential diagnosis based on specific physical historical and exam findings of a disorder of hematopoietic system
	Signs and symptoms of the hematopoietic system (T-1)	1. Identify the signs and symptoms of anemia 2. Describe the signs and symptoms of leukopenia 3. Explain the pathophysiology of thrombocytopenia
	Pathophysiology and Classification of Anemia (T-2)	1. Describe the approach to the anemia 2. Describe microcytic and hypochromic anemias 3. Describe the pathophysiology of hemolytic anemias
	Thyroid function tests (T-2)	1. Explain the function of thyroid hormones 2. Describe the conditions which lead to abnormal thyroid hormone production 3. Interpret thyroid function tests
	Hypothyroidism - Hyperthyroidism (T-2)	1. Describe presenting symptoms and signs of hyperthyroidism and hypothyroidism 2. Describe pathogenesis of hyperthyroidism and hypothyroidism 3. Describe laboratory tests needed to diagnose hyperthyroidism and hypothyroidism
	History taking in Endocrinology (T-2)	1. Describe basic principles of endocrinology 2. Define neuroendocrine system, anterior and posterior pituitary gland 3. Describe polyglandular disorders 4. Describe the structure and components of the medical history of a patient with an endocrine system disorder
	Physical examination in Endocrinology (T-2)	1. Perform a physical examination of a patient with an endocrine system disorder 2. Use physical examination findings in diagnosis of endocrinological disorders
	Disorders of adrenal gland (T-2)	1. Describe the pathophysiology of glucocorticoid excess syndromes 2. Describe the pathophysiology of mineralocorticoid excess syndromes 3. Define the pathophysiology of glucocorticoid deficiency syndromes 4. Define the pathophysiology of mineralocorticoid deficiency syndromes

		5. Explain adrenal medulla, catecholamines, and pheochromocytoma
	Signs and symptoms of diabetes mellitus (T-2)	1. Define the etiology and pathophysiology of type 1 diabetes mellitus 2. Define the etiology and pathophysiology of type 2 diabetes mellitus 3. Define the risk factors for diabetes mellitus 4. Identify the symptoms and clinical findings of diabetes mellitus 5. Interpretation of the laboratory and diagnostic studies for diabetes mellitus
	Acute metabolic complications of diabetes mellitus (T-2)	1. Define the pathophysiology and clinical findings of diabetic ketoacidosis 2. Define the pathophysiology and clinical findings of hyperosmotic hyperglycemic non-ketotic state 3. Define the pathophysiology and clinical findings of hypoglycemia
	Chronic metabolic complications of diabetes mellitus (T-2)	1. Define the microvascular complications of diabetes mellitus; diabetic nephropathy, diabetic neuropathy, diabetic retinopathy. 2. Define the macrovascular complications of diabetes mellitus; coronary artery disease, cerebrovascular disease, peripheral artery disease
	Approach to being overweight and obesity (T-2)	1. Define the pathophysiology and classification of obesity 2. List the most common causes of weight gain 3. Define the metabolic syndrome 4. Evaluate a patient with obesity 5. Define the general approaches in treatment of obesity
	Approach to calcium and vitamin D metabolism disorders (T-2)	1. Describe the calcium and vitamin D metabolism 2. Describe the approach to a patient with hypercalcemia 3. Describe the approach to a patient with hypocalcemia 4. Describe the approach to a patient with vitamin D deficiency 5. Describe the approach to a patient with vitamin D intoxication
	Hormonal regulation of bone metabolism (T-1)	1. Define bone modeling and remodeling 2. Identify the effects of parathyroid hormone in bone metabolism 3. Identify the effects of vitamin D in bone metabolism 4. Identify the effects of calcitonin in bone metabolism 5. Identify the effects of estrogen in bone metabolism
	History taking and physical examination in Rheumatology (T-2)	1. Define the main symptoms in rheumatology 2. Learn the main questions for assessing the pain 3. Discriminate the origin of musculoskeletal pain 4. Evaluate the inflammation of the joints 5. Evaluate the findings of physical examination of other systems for rheumatological diseases 6. Learn the examination of peripheral joints and axial system
	Approach to musculoskeletal pain, articular and periarticular pain (T-2)	1. Describe the main characteristics of articular pain 2. Describe the main characteristics of periarticular pain 3. Discriminate articular and periarticular pain 4. Describe the main rheumatological diseases associated with articular and periarticular pain 5. Discriminate inflammatory and noninflammatory articular pain

	Approach to arthritis (T-1)	1. Define the main characteristics of arthritis 2. Explain the classification of arthritis according to the number of affected joints 3. Describe and evaluate the main causes of acute and chronic monoarthritis, 4. Describe and evaluate the main causes of acute and chronic oligoarthritis 5. Describe and evaluate the main causes of acute and chronic polyarthritis

At the end of this lesson, the student will be able to:		
	KNOWLEDGE	
DEP.	**TOPIC**	**LEARNING OUTCOMES**
PULMONARY MEDICINE	History taking of the Respiratory System (T-2)	1. Describe the structure and components of the medical history of a patient with a respiratory system disorder
	Physical examination of the Respiratory System (T-2)	1. Describe the structure and components of the clinical examination of a patient with a respiratory system disorder (inspection, palpation, percussion, auscultation)
	Approach to a patient with dyspnea, cyanosis and cough (T-1)	1. Evaluate a patient with dyspnea, cyanosis and cough 2. Define the pathophysiology, diagnostic techniques, and the treatment approaches for these symptoms
	Approach to a patient with hemoptysis, wheezing (T-1)	1. Evaluate a patient with hemoptysis, wheezing 2. Define the pathophysiology, diagnostic techniques, and the treatment approaches for these symptoms

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP.	**TOPIC**	**LEARNING OUTCOMES**
CARDIOLOGY	History taking of Cardiovascular System (T-2)	1. Name all the routine questions that are involved in taking a history of the patient with cardiovascular disease 2. Explain why they are being asked. 3. Discuss targeted history taking for cardinal symptoms including chest pain, shortness of breath, palpitations, temporary loss of consciousness, edema, fatigue, exercise intolerance 4. Differentiate between history of chief complaint and past medical history
	Physical examination of Cardiovascular System (T-2)	1. Understand the basics of the cardiac, vascular and respiratory components of the physical exam 2. Explain each part of the physical examination of the cardiovascular system
	Approach to a patient with acute chest pain (T-1)	1. Identify the symptoms and signs of chest pain characteristics of angina pectoris 2. Categorize chest pain as angina pectoris, atypical angina, or non-cardiac chest pain 3. Organize and prioritize a differential diagnosis based on specific physical historical and exam findings

		4. Order appropriate laboratory and diagnostic studies for the most likely etiologies of acute chest pain 5. Interpretation of ECG and Troponins in acute coronary syndromes 6. Recognize other life threatening causes of acute chest pain
	Approach to a patient with palpitation, presyncope/syncope (T-1)	1. Evaluate a patient with palpitation, presyncope/syncope 2. Define the pathophysiology, diagnostic techniques, and the treatment approaches for these symptoms

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP.	**TOPIC**	**LEARNING OUTCOMES**
RADIOLOGY	Imaging Methods and Image Interpretation in Internal Medicine (T-2)	1. Recognize most commonly used radiographic imaging technics in internal medicine 2. Discern the different structures on a radiographic imaging in internal medicine 3. Explain the advantages of each imaging technics in internal medicine

At the end of this lesson, the student will be able to:		
SKILLS		
DEP	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL SKILLS	Taking anamnesis and preparing a patient file (P-1)	1. Get skills in preparing a patient file
	Review (Practices of Class 2) (P-1)	

MED 3008: INTRODUCTION TO PEDIATRICS			
Course Dates	GROUP B- 10.01.2022-03.02.2022 GROUP A- 07.03.2022-31.03.2022		
Exam Dates	Theoretical Exams: Group B- 03.02.2022 Group A-31.03.2022		
Course Coordinator:	FATİH ÖZDENER, ZÜLFİYE GÜL		
Academic Unit	**Academic Staff**	**Theoretical hours**	**Practical Hours (Clinical Observations)**
General Pediatrics	Figen Dağlı, Prof. Suna Çelen, Assist. Prof	21	3
Pediatric Cardiology	Gülendam Koçak, Prof.	8	
Pediatric Allergy & Immunology	Suna Çelen, Assist. Prof	9	
Neonatology	Ali Haydar Turhan, Prof.	7	
Pediatric Nephrology	Duygu Hacıhamdioğlu, Assoc. Prof.	12	
Pediatric Neurology	Hatice Gülhan Sözen, Assist. Prof.	6	
Pediatric Hematology	Koray Yalçın, Assist. Prof.	10	
Pediatric Endocrinology & Metabolism	Serap Ata, Assist. Prof.	8	
Clinical Skills	Hatice Gülhan Sözen, Assist. Prof. Demet Koç, Assist. Prof. Senem Polat, Assist. Prof.	Clinical Skills	3
TOTAL		81	6

Due to possible changes because of Covid-19 pandemic, course schedules and student practice-hybrid groups will be announced before each committee

COURSE AIM:

The aim of this course is:

- to describe health maintenance and preventive care for children, including age-related issues in nutrition, vaccination;
- to identify normal growth, development in childhood;
- to recognize the characteristics of newborn and postnatal care;
- to recognize common acute and chronic pediatric cardiologic, allergic, immunologic, pulmonologic, nephrologic and neurologic condition
- to provide comprehensive information on the diagnosis and management of these common pediatric diseases
- to recognize most commonly used radiographic imaging techniques in pediatrics
- to get skills in intraosseous access and heel prick
- to introduce students to the hospital conditions

LEARNING OUTCOMES:

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
	TOPIC	**LEARNING OUTCOMES**
GENERAL PEDIATRICS	Growth and development (in infancy and school age) (T-2)	1. Describe physical growth and development in infants and toddlers 2. Explain cognitive development in infants and toddlers 3. Explain emotional and social development during infancy
	Nutrition in childhood (T-1)	1. Describe nutrition and calorie needs of infants and children 2. Compare nutritional qualities of human milk and infant formula
	The basis of immunization in childhood (T-2)	1. Recognize the importance of immunization in healthcare 2. Recognize the importance of immunization to prevent disease 3. Describe types and objectives of immunization
	Taking History in Pediatrics (T-2)	1. Demonstrate the skills necessary to perform a complete and accurate pediatric history including prenatal, birth, developmental, dietary, immunization, and psychosocial histories.
	Physical examination of Head and Neck (T-2)	1. Identify anatomic landmarks of the head, neck, eye, ear, nose and throat 2. Describe the physical examination techniques for routine evaluation of the head, and neck 3. Describe normal findings of the head, neck, eye, ear and nose and throat exam.
	Upper Respiratory Tract Infections (T-2)	1. Explain and categorize common *upper respiratory infections* 2. Be familiar with usual pathogens for common respiratory infections
	Anthropometric measurements (T-2)	1. Recognize importance of anthropometric measurements 2. Describe the techniques for calculating anthropometric measurements

	Disorders with rash (T-2)	1. Define the skin lesions, learn the terminology 2. Recognize the most common types of rashes 3. Recognize the most common childhood diseases with rash 4. Define the etiology, signs, symptoms and the treatment of the diseases
	Breast milk (T-1)	1. Define the composition of Milk 2. Describe the correct Breastfeeding Method 3. List the benefits of breastfeeding for the infant 4. List the benefits of Breastfeeding for Mother 5. List the absolute Contraindications of Breastfeeding
	Abdominal examination (T-1)	1. Define the steps of abdominal examination (Observation, Auscultation, Palpation, Percussion) 2. Describe the Evaluation of abdominal examination
	Approach to abdominal pain in childhood (T-2)	1. Classify the abdominal pain 2. Describe the history, clinical assessment of patient with abdominal pain 3. Make differential diagnosis and management of patient with abdominal pain
	Approach to hepatosplenomegaly in childhood (T-2)	1. Identify the possible causes of hepatosplenomegaly 2. List the important diagnostic considerations in patients who have hepatosplenomegaly 3. Describe what clinical findings occurring in a patient who has hepatosplenomegaly 4. Describe the most helpful initial tests 5. Define the diagnostic evaluation of the neonate and child with hepatosplenomegaly
PEDIATRIC CARDIOLOGY	History taking and Physical examination of cardiovascular system in childhood (T-2)	1. Name all the routine questions that are involved in taking history of pediatric patients with cardiovascular disease 2. Explain why they are being asked 3. Discuss targeted history taking for cardinal symptoms including murmur, chest pain, shortness of breath, palpitations, syncope, edema, fatigue, exercise intolerance, and cyanosis 4. Differentiate between history of chief complaint and past medical history 5. Understand the basics of the cardiac vascular components of the physical exam 6. Explain each part of the physical examination of the CVS
	Acyanotic, left to right shunt congenital heart diseases (T-2)	1. Define the anatomy and pathophysiology of VSD, ASD and PDA. 2. Identify the physical examination findings, symptoms and signs of all these left to right shunt lesions 3. Identify the diagnostic techniques, such as ECG, telecardiogram, echocardiography and others. 4. Define the basic treatment approaches for left to right shunt congenital cardiac abnormalities.
	Approach to syncope and chest pain in childhood. (T-2)	1. Evaluate a child with chest pain and syncope 2. Define the pathophysiology, diagnostic techniques, and the treatment approaches for these symptoms 3. Identify the symptoms and signs of chest pain and syncope originated from heart disease 4. Categorize chest pain and syncope as cardiac and noncardiac in origin 5. Organize and prioritize a differential diagnosis based on specific physical historical and exam findings

		6. Order appropriate laboratory and diagnostic studies for the most likely etiologies of acute chest pain and syncope 7. Interpret ECG in chest pain and syncope 8. Recognize the life threatening causes of chest pain and syncope
	Cyanotic congenital heart diseases and approach to cyanosis (T-2)	1. Define cyanosis in children, etiologies and pathogenesis 2. Make differential diagnosis based on cyanosis in children. 3. Define the anatomy and pathophysiology of cyanotic congenital heart diseases 4. Identify the physical examination findings, symptoms and signs of Fallot Tetralogy and transposition of great arteries. 5. Identify the diagnostic techniques, such as ECG, telecardiogram, echocardiography and others in TOF. 6. Define the treatment approaches for Tetralogy of Fallot and transposition of great arteries.
PEDIATRIC ALLERGY and IMMUNOLOGY	Anaphylaxis (T-2)	1. Mention the Types of Hypersensitivity Reactions. 2. Define Anaphylaxis. 3. Mention the Etiologic Causes. 4. Explain the Pathophysiologic Mechanism. 5. Mention the Signs & Symptoms. 6. Demonstrate the Diagnostic Investigations. 7. Display the Treatment & First Aid.
	Pneumonia (T-2)	1. Define pneumonia 2. List the factors that predispose to pneumonia 3. Explain the pathophysiology of pneumonia 4. Make the clinical classification of pneumonia 5. List common pathogens in pneumonia 6. List clinical symptoms and signs of pneumonia 7. Describe the laboratory evaluation of pneumonia 8. Explain the treatment of pneumonia
	History taking and physical examination of respiratory system (T-2)	1. Revise knowledge of anatomy and physiology 2. Obtain health history about respiratory system 3. Demonstrate physical examination 4. Differentiate between normal and abnormal findings
	Approach to child with immunodeficiency (T-2)	1. Define primary and secondary immunodeficiencies 2. Define whom to evaluate for immunodeficiency 3. Describe diagnostic approach to immunodeficiencies 4. List characteristic features of some immunodeficiencies 5. List the laboratory tests for humoral and cellular immunodeficiency
	Asthma diagnosis in childhood (T-1)	1. Make the definition of childhood asthma 2. Define the pathophysiology of asthma 3. List the triggering factors in childhood asthma 4. Take history and make physical examination in childhood asthma 5. Describe the pulmonary function tests in asthma
NEONATOLOGY	Physical examination of newborn (T-2)	1. Quickly identify any danger signs and organize the appropriate referral after pre-referral treatment 2. Assess the normal adaptations of a newborn after birth 3. Identify conditions requiring special care or follow-up observation. 4. Identify any birth defect or birth trauma 5. Monitor growth 6. Counsel the mother

	Postnatal care of newborn (T-2)	1. Explain the importance of postnatal care 2. Briefly describe the main physiological changes in the newborn in the postnatal period 3. Describe the main danger signs in the postnatal newborn 4. Give routine care to a healthy infant. 5. Advise a mother about care of a normal infant.
	Resuscitation of newborn (T-3)	1. Describe the individual tasks of a resuscitation team. 2. Delineate the role of continuous heart rate monitoring during resuscitation. 3. List the steps to providing adequate thermoregulation for the extremely low-birth weight infant. 4. Describe the role of T-piece resuscitators.
PEDIATRIC NEPHROLOGY	Clinical manifestations of Hypovolemia (T-2)	1. Describe the body fluid composition 2. Explain the hypovolemia etiologies 3. Explain the assessment of the degree of hypovolemia 4. Explain the evaluation of the hypovolemia
	Approach to Hematuria (T-1)	1. Describe the definition of hematuria 2. Explain the limitation of laboratory results 3. Explain the classification of the hematuria 4. Define the differential diagnosis of hematuria
	Approach to Proteinuria (T-1)	1. Describe the definition of proteinuria 2. Explain the pathogenesis of proteinuria 3. Describe the assessment of laboratory for proteinuria 4. Understand the classification of proteinuria
	Approach to edema in childhood (T-2)	1. Describe the edema definition 2. Describe the pathophysiology of edema in children 3. Explain the and etiology of edema in children 4. Explain the evaluation
	Approach to the child with arthritis (T-3)	1. Describe the arthritis definition 2. Explain the features in the history for differential diagnosis 3. Explain the features in physical examination for differential diagnosis 4. Explain the evaluation
	Approach to vomiting in childhood (T-1)	1. Describe the definitions 2. Explain the physiology 3. Explain the serious and prevalent etiologies 4. Explain the approach to the vomiting child 5. Describe the treatment
	Urinary tract infections (T-2)	1. Define clinical forms of Urinary Tract Infections (UTI) 2. Explain clinical symptoms of UTI 3. Interpret culture according to urine collection method
PEDIATRIC ENDOCRINOLOGY & METABOLISM	Thyroid function tests and Hypothyroidism – Hyperthyroidism (T-2)	1. Explain the function of thyroid hormones 2. Describe the conditions which lead to abnormal thyroid hormone production 3. Interpret thyroid function tests 4. Describe presenting symptoms and signs of hyperthyroidism and hypothyroidism 5. Describe pathogenesis of hyperthyroidism and hypothyroidism 6. Describe laboratory tests needed to diagnose hyperthyroidism and hypothyroidism
	Approach to being overweight and obesity in childhood (T-2)	1. Define the pathophysiology and classification of obesity 2. List the most common causes of weight gain 3. Define the metabolic syndrome

		4. Evaluate a patient with obesity 5. Define the general approaches in treatment of obesity
	Hormonal regulation of bone metabolism and approach to calcium and vitamin D metabolism disorders (T-2)	1. Define bone modeling and remodeling 2. Identify the effects of parathyroid hormone in bone metabolism 3. Identify the effects of vitamin D in bone metabolism 4. Describe the calcium and vitamin D metabolism 5. Describe the approach to a patient with hypercalcemia 6. Describe the approach to a patient with hypocalcemia
	Approach to dysmorphic child (T-2)	1. Define dysmorphism and common syndromes
PEDIATRIC HEMATOLOGY	Coagulation Cascades Bleeding diathesis (T-5)	1. Describe the coagulation and the factors which take place in the coagulation cascade 2. Identify the signs and symptoms of bleeding diathesis 3. Be familiar with the diagnostic workup of bleeding diathesis
	Thrombocyte Disorders (T-2)	1. Describe the thrombocyte disorders and associated diseases 2. Identify the signs and symptoms of thrombocytopenia 3. Be familiar with the diagnostic workup of thrombocyte disorders
	Hemoglobinopathies (T-3)	1. Describe the anemia and hemoglobinopathy 2. Identify the signs and symptoms of hemoglobinopathies 3. Be familiar with the diagnostic workup of hemoglobinopathies
PEDIATRIC NEUROLOGY	Neurologic examination in childhood (T-2)	1. Describe how to handle the neurological examination steps (General concepts, Higher cortical functions, Cranial nerves, Motor system → Posture and involuntary movements/Tone and strength/Coordination, Sensory system, Tendon reflexes, Developmental reflexes, Superficial reflexes, Gait , Spine, Head → Head circumference / Fontanels / Sutures)
	Mental-Motor development (T-2)	1. Identify stages of child development 2. Describe physical, intellectual, emotional and social characteristics of developmental stages 3. Define early detection of delayed development and early intervention and treatment
	Central nervous system infections (T-2)	1. Promptly recognize the patient with an acute CNS infection syndrome 2. Rapidly initiate appropriate empiric therapy 3. Rapidly and specifically identify the etiologic agent, adjusting therapies as indicated 4. Optimize management of complicating features

At the end of this lesson, the student will be able to:		
SKILLS		
DEP	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL SKILLS	Heel prick screening (P-1)	1. Define the goal of newborn screening 2. Describe the procedure for obtaining a heel prick capillary blood sample 3. Discuss the factors that need to be considered to promote the safety and comfort of the baby

	Intraosseous (IO) access (P-1)	1. Discuss the indications, contraindications, technique, and complications of performing intraosseous (IO) infusion 2. List devices used to perform IO insertion 3. Explain how to perform IO insertion, including how to find the visual landmarks 4. Describe how to administer medication via an IO line
	Review (Practices of Class 2) (P-1)	

(MED3020) Introduction to Public Health		
Course Date	GROUP A+B-07.02.2022-17.02.2022	
Exam Dates	Theoretical Exam: 17.02.2022	
Course Coordinator:	FATİH ÖZDENER, ZÜLFİYE GÜL	
Academic Unit	**Academic Staff**	**Theoretical hours**
Public Health	Sebahat Dilek Torun, Assoc. Prof. Melike Yavuz, Assist. Prof. Petek Eylül Taneri, Assist Prof.	37
Infectious Diseases and Clinical Microbiology	Gülgün Dilek Arman, Prof	3
TOTAL		40

Due to possible changes because of Covid-19 pandemic, course schedules and student practice-hybrid groups will be announced before each committee.

COURSE AIM:

The aim of the course to teach students the principles and basic concepts of preventive medicine and public health that are required to identify and to assess health problems of the society and improve health status of the society.

LEARNING OUTCOMES:

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP	**TOPIC**	**LEARNING OUTCOMES**
PUBLIC HEALTH	Public health concepts of history (T-2)	1. Describe public health definition and key terms 2. Identify history of public health 3. Define public health approach, core functions and essential services of public health
	Determinants of Health (T-3)	1. Explain the determinants of health 2. Define and provide examples of social determinants of health 3. Define health equity and disparities 4. Provide examples of health disparities 5. Describe health disparities existing in Turkey 6. Describe the basis for the common risk factor approach 7. Illustrate the social ecological framework
	Control of communicable diseases (T-2)	1. Describe chain of infection 2. Define reproductive rate 3. Identify factors that influencing transmission 4. Describe transmission routes

		5. Define primary, secondary and tertiary prevention strategies
	Epidemiological Approach to Outbreak Investigation (T-2)	1. Define the terms cluster, outbreak, epidemic and pandemic 2. List three reasons why outbreak investigations are important to public health 3. Describe the steps in the investigation of an outbreak 4. Differentiate the terms confirmed case, probable case and suspected case 5. State the purpose of a line listing and epidemic curve 6. Given the initial information of a possible disease outbreak, describe how to determine whether an epidemic exists
	Prevention strategies for COVID-19 (T-2)	1. Explain what should be known about the disease in order to prevent COVID-19 2. List the infection control measures for COVID-19 3. Explain each infection control measure with its justification
	Health indicators (T-2)	1. Explain the concept of health indicators 2. Explain the uses of health indicators. 3. Classify types of indicators
	Elderly health (T-2)	1. Describe population aging and causes 2. Identify demographic end epidemiologic transitions and their consequences 3. Define healthy aging and its key considerations
	Occupational Health and Safety (T-3)	1. Define Occupational Health 2. Explain the interrelationships between work and health 3. Describe the historical development of Occupational Health 4. Explain the basic concepts in Occupational Health 5. Explain the scope of Occupational Health 6. Describe the occupational health hazards in a workplace 7. List the common types of occupational health problems 8. Describe the hierarchy of controls 9. Explain Occupational Health profile in Turkey
	Health systems and economics (T-2)	1. Define the health system 2. Explain the goals of health system 3. List the functions/building blocks of health system 4. Explain the different health financing systems (tax-based, social insurance, private insurance, out-off-pocket) 5. Classify the health systems and give examples each of them 6. Explain the basic differences of health systems
	Health services in Turkey (T-1)	1. Explain the main components of health system in Turkey (stewardship, financing, service delivery) 2. List the therapeutic health services in Turkey 3. Explain the tasks of primary health centers in Turkey
	Nutrition and health (T-1)	1. Describe dietary recommendations 2. Identify malnutrition and its subtitles 3. Define double burden of malnutrition
	Prevention of chronic diseases (T-2)	1. Describe risk factors and determinants of ncds 2. Identify four major ncds 3. Define individual-based and population-based interventions for ncds

	Environment and health (T-2)	1. Define the fundamental terms related with environmental health • environment • disease • health 2. Define the environmental health 3. Classify the contributors which are harmful for environment 4. Explain the scope of environmental health sciences 5. List the facets of environmental health sciences 6. Explain how environment affect health 7. Explain the basic requirements for a healthy environment 8. List the principles of public health in solving the environmental health problems
	Global warming and climate change (T-1)	1. Define climate change 2. Explain the causes of climate change 3. Define the global warming 4. Explain the greenhouse effect and its causes (ghgs)
	Travel health (T-2)	1. Explain why travelers are important epidemiologically 2. Explain how travel affects the health of traveler 3. Explain the components of pretravel consultation 4. Explain what precautions should be given to travelers about water and food 5. Explain the travelers' diarrhea and precautions for it. 6. List the environmental hazards and other noninfectious health risks to travelers 7. Explain the jet lag.
	Maternal and child health (T-1)	1. Define maternity and maternal health 2. Explain why maternal and child health is important 3. Explain the objectives of maternal and child health care programs 4. Explain the importance, objectives and content of maternal health care programs (prepregnancy, antenatal, intranatal, postnatal). 5. Explain the objectives and content of infant and child health care programs in turkey
	Reproductive Health and Family Planning (T-3)	1. Define reproductive health and family planning 2. Describe the components of reproductive health 3. List the advantages of family planning 4. Explain the various contraceptive methods, including ideal and typical failure rates, mechanism of action and benefits 5. Differentiate contraception and family planning 6. Explain the various options for emergency contraception, including efficacy, mechanism of action and indications for use. 7. Explain the current use and trends of contraceptive methods in Turkey
	Population and Health (T-3)	1. List the sources of demographic data 2. Use demographic measures to describe populations composition, profile, change 3. Explain the Demographic Transition Model 4. Describe basics of population transition 5. Explain the relation between basic demographic measures and health level of populations 6. Interpret a Population Pyramid

		7. Describe the demographic indicators in Turkey 8. Explain the trend of the population in the world and Turkey.

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP	**TOPIC**	**LEARNING OUTCOMES**
INFECTIOUS DISEASES AND CLINICAL MICROBIOLOGY	Adult Immunization (T-1)	1. List the reasons for adult immunization 2. List the risk factors for vaccine preventable diseases 3. List the pathogen/disease which an adult with no risk factor, should be immune 4. List the recommended vaccine requirements according to risk groups 5. Search for general requirements and reach trusted references 6. Understand the adult vaccination needs 7. Understand that the recommendations may vary temporally according to changing epidemiology
	Infectional risk of health workers (T-2)	1. List the HCW's infectious risks 2. Tell the transmission ways of pathogens to HCW 3. List the preventive measures for infectious risks of HCW 4. List the vaccination requirements of HCW 5. List the required PPE 6. Tell the consequence of wearing PPE 7. Understand the infectious risks of himself/herself 8. Accept the vaccine requirements

MED 3006: INTRODUCTION TO GENERAL SURGERY			
Course Dates	GROUP B- 04.04.2022-28.04.2022 GROUP A- 30.05.2022-22.06.2022		
Exam Dates	Theoretical Exams: GROUP B- 28.04.2022 GROUP A- 22.06.2022		
Course Coordinator:	FATİH ÖZDENER, ZÜLFİYE GÜL		
Academic Unit	**Academic Staff**	**Theoretical hours**	**Practical Hours (Clinical Observations)**
General Surgery	Levent Kaptanoğlu, Prof. Metin Kement, Prof. Yusuf Günay, Assoc. Prof. Emre Sivrikoz, Assoc. Prof. Sabri Tekin, Assoc. Prof. Babek Tabandeh, Assist. Prof. Ertan Emek, Assist. Prof. Mehmet İlker Özer, Assist. Prof. Fadime Didem Can Trabulus, Assist. Prof.	58	3
Radiology	Canan Erzen, Prof.	2	
Clinical Skills	Demet Koç, Assist. Prof. Senem Polat, Assist. Prof.	Clinical Skills	3
TOTAL		60	6

Due to possible changes because of Covid-19 pandemic, course schedules and student practice-hybrid groups will be announced before each committee.

COURSE AIM:

The aim of this course is:

- to introduce general surgery to the students
- to give information about how to take history from a patient and how to make physical examination
- to recognize the most common symptoms of diseases requiring general surgery (according to the National Core Education Program)
- to give knowledge about asepsis, antisepsis,and disinfection
- to give knowledge surgical infections
- to give knowledge about the common problems encountered in the emergency service.
- to get skills in breast examination
- to recognize most commonly used radiographic imaging techniques in general surgery
- to introduce students to hospital conditions

LEARNING OUTCOMES:

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP	**TOPIC**	**LEARNING OUTCOMES**
GENERAL SURGERY	Introduction to committee, medical terminology, surgical terms (T-2)	1. Define medical terminology 2. Describe the importance of medical terminology 3. Define the common general surgery terms
	Patient History taking in general surgery (T-2)	1. Elicit the patient's chief complaint, history of present illness, past medical history, social, family, occupational histories and complete a review of systems 2. Recognize pertinent positive and negative history findings 3. Establish a positive professional relationship
	Physical examination in surgery (T-2)	1. Perform general examination 2. Perform local examination (abdomen, breast, inguinoscrotal region, etc.) 3. Perform systemic examination
	Asepsis, antisepsis and Disinfection (T-2)	1. Explain the basic concepts, rules and principles of surgical asepsis, antisepsis, and disinfection 2. Explain the importance of personal protective measures to prevent the spread of infection
	Surgical infection and usage of antibiotics (T-2)	1. Define surgical site infection 2. Identify the risk factors associated with 3. Explain the principles of infection control/safe practices 4. Explain the role of microbiology laboratory in the diagnosis and management of infections 5. Explain the safe and appropriate usage of antibiotics
	Metabolic and endocrine response to injury (T-2)	1. Define classical concepts of homeostasis 2. Define mediators of the metabolic response to injury 3. Describe physiochemical and biochemical changes that occur during injury and recovery
	Bleeding, hemostasis, blood transfusion (T-2)	1. Define hemostasis 2. Describe the mechanisms involved in hemostasis 3. Explain the principles of transfusion and list the

		indications and contraindications 4. Discuss the complications of blood transfusion
	Symptoms of GIS disease-1 (Dyspepsia and Dysphagia) (T-3)	1. Define dyspepsia 2. List the causes of dyspepsia 3. Describe the symptoms of dyspepsia 4. Define dysphagia 5. List the causes of dysphagia
	Symptoms of GIS disease-2 (Nausea and vomiting and Hematemesis) (T-3)	1. Identify common causes of nausea and vomiting 2. Describe the pathophysiologic mechanisms of nausea and vomiting 3. Create goals for treating nausea and vomiting 4. Define hematemesis 5. List the causes and symptoms of hematemesis 6. Review how to assess patients presenting with hematemesis
	Upper gastrointestinal bleeding (UGIB) (T-2)	1. Explain the pathophysiology of acute UGIB 2. List risk factors for UGIB 3. Describe symptoms 4. Review how to assess patients presenting with UGIB
	Rectal bleeding/hematochezia, Anorectal pain (T-2)	1. Define hematochezia 2. List the causes and symptoms of hematochezia 3. Review how to assess patients presenting with hematochezia 4. List the anorectal pain causes
	Lower gastrointestinal bleeding (LGIB) (T-2)	1. List the causes and symptoms of LGIB 2. Review how to assess patients presenting with LGIB
	Approach to breast lump, Nipple discharge (T-2)	1. Revisit the structure of the breast, relating hormonal changes to its functions 2. Outline the key features of examination and investigation of palpable breast lumps 3. Describe the history and exam features of pathologic and non-pathologic nipple discharge
	Breast Examination (T-2)	1. Describe and demonstrate palpation of the breast, using a systematic approach that ensures complete examination, including the subareolar area, the nipple, four breast quadrants, and the tail extending toward the axilla. 2. Perform a complete examination of the breast and axilla, in an adult female or male, in a manner that maximizes patient comfort. 3. List usual biological changes of the aging process and how they affect physical findings for the breast exam.
	Breast evaluation, Breast radiology (T-1)	1. Discuss current breast imaging technologies 2. Define the principles and objectives of population screening
	Breast diseases (T-2)	1. Define the classification of breast diseases 2. List the most common symptoms
	Surgical instruments and Materials (T-1)	1. Describe the types of surgical instruments 2. Discuss the materials used
	Preoperative management (T-2)	1. Identify the components of a focused patient history and physical examination 2. Explain the correct assessment and optimization needed for patients with common co-morbidities 3. Discuss basic principles of risk assessment

		4. Have an understanding of appropriate use of pre-operative lab tests
	Postop complications and patient care (T-2)	1. Define the most common postoperative complications 2. Explain how to manage with these problems
	Patient safety in surgery (T-2)	1. Define patient safety 2. Explain the importance of patient safety 3. Explain the causes of critical incidents and patient harm 4. Define patient safety measures
	Surgical metabolism and Nutrition (T-2)	1. Explain the importance of nutrition in surgical patients 2. Explain nutritional assessment 3. Define nutritional requirements
	Enteral and parenteral nutrition (T-2)	1. Evaluate the nutritional status of the patient 2. Determine the most appropriate form of nutrition support required 3. Estimate protein and caloric requirements of a patient based on the diseases state 4. Define enteral and parenteral nutrition 5. Explain enteral and parenteral nutrition methods 6. Discuss advantages and disadvantages of enteral and parenteral nutrition
	Anatomy of the inguinal region (T-2)	1. Describe the anatomy of inguinal region and inguinal canal
	Inguinal hernias (T-2)	1. Define the etiology and pathophysiology of inguinal hernias 2. Discuss locations and associated signs and symptoms 3. Explain complications 4. Explain diagnosis and examination methods
	Abdominal pain , discomfort and distention, mass (T-2)	1. Describe pathophysiologic mechanisms of abdominal pain and distention 2. Describe common causes of abdominal pain and distention 3. Identify signs and symptoms of a surgical abdomen 4. Explain principal diagnostic studies necessary to make differential diagnosis 5. Define the different types of abdominal mass in terms of site, etiology, and clinical characteristic
	Unintentional injuries (freezing, hypothermia, hyperthermia, heatstroke, bites/sting and others) (T-2)	1. Define unintentional injury 2. List the examples of unintentional injuries 3. Define hypothermia 4. Recognize the signs and symptoms of freezing injury 5. Discuss the treatment practices for managing freezing injury in the emergency department 6. Define hyperthermia 7. Describe signs and symptoms of hyperthermia 8. Discuss the treatment practices for managing heatstroke in the emergency department 9. Discuss common offending organisms, pathophysiology, assessment findings and management of a patient with a bite or sting.

		10. Identify when a casualty is having an allergic reaction to a bite or sting 11. Explain first aid treatment for a casualty who has been bitten or stung
	Poisonings (food poisoning, corrosive poisoning and others) (T-2)	1. Get knowledge required to manage poisoned patients in the emergency department 2. Explain the importance of airway management and cardiovascular support in a toxic ingestion 3. Explain the principles, methods and controversies of decontamination techniques (gastric lavage, activated charcoal and whole bowel irrigation) 4. Define causes, symptoms, diagnosis, treatment, and prevention of food poisoning 5. Identify intentional versus unintentional caustic ingestions 6. Describe the clinical features, investigations, and complications of corrosive ingestion
	Allergic reactions (T-2)	1. Describe mechanism, signs and symptoms, proper assessment, and treatment for patient experiencing an allergic reaction 2. Describe emergency medical care for patient in anaphylactic shock
	Burns (T-2)	1. Explain the rule of nines to estimate total body surface area of the burn 2. Describe partial and full thickness burn wounds Describe ambulatory management of burn patients

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP.	**TOPIC**	**LEARNING OUTCOMES**
RADIOLOGY	Imaging Methods and Image Interpretation in General Surgery (T-2)	1. Recognize most commonly used radiographic imaging technics in general surgery 2. Discern the different structures on a radiographic imaging in general surgery 3. Explain the advantages of each imaging technics in general surgery

At the end of this lesson, the student will be able to:		
SKILLS		
DEP	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL SKILLS	Self-Breast examination (P-1)	1. Gain knowledge and understanding of the practice of self-breast examination 2. Identify the indications of breast self-examination 3. Describe the preparation and techniques in regards to breast self-examination
	Review (Practices of Class 2) (P-1)	

MED 3010: INTRODUCTION TO OBSTETRICS AND GYNECOLOGY			
Course Dates	GROUP A- 04.04.2022-28.04.2022 GROUP B- 05.05.2022-26.05.2022		
Exam Dates	Theoretical Exams: GROUP A- 28.04.2022 GROUP B- 26.05.2022		
Course Coordinator:	FATİH ÖZDENER, ZÜLFİYE GÜL		
Academic Unit	**Academic Staff**	**Theoretical hours**	**Practical Hours (Clinical Observations)**
Obstetrics and Gynecology	Aynur Erşahin, Assoc. Prof. Cihan Çetin, Assoc. Prof. Tolga Taşcı, Assoc. Prof. Ahter Tayyar, Assist. Prof. Cansu Kanlıoğlu, Assist. Prof. Halenur Bozdağ, Assist. Prof. Nur Dokuzeylül Güngör, Assist. Prof. Emine Eda Akalın, Assist. Prof.	68	3
Clinical Skills	Nur Dokuzeylül Güngör, Assist. Prof. Demet Koç, Assist. Prof. Senem Polat, Assist. Prof.		3
Radiology	Canan Erzen, Prof.	2	
TOTAL		70	6

Due to possible changes because of Covid-19 pandemic, course schedules and student practice-hybrid groups will be announced before each committee.

COURSE AIM:

The aim of this course is:

- to introduce obstetrics and gynecology to the students
- to give information about how to take gynecologic and obstetric history from a patient and how to make gynecologic and obstetric examinations
- to recognize the most common symptoms of diseases in gynecologic diseases (according to the National Core Education Program)
- to give knowledge about maternal physiological changes during pregnancy
- to give knowledge about prenatal invasive and noninvasive procedures
- to give knowledge about the common problems encountered in pregnancy
- to get skills in speculum examination and taking vaginal smear
- to get skills in performing Leopold's maneuvers
- to recognize most commonly used radiographic imaging techniques in gynecology
- to introduce students to hospital conditions

LEARNING OUTCOMES:

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP	**TOPIC**	**LEARNING OUTCOMES**
OBSTETRIC AND GYNECOLOGY	Introduction to committee, anatomy of the female genital tract (T-2)	1. Identify and describe the basic anatomical features of the external female genitalia and the internal reproductive organs 2. Describe the functions of the main anatomical structures in the female reproductive system and their importance for obstetric care
	Gynecologic history taking-Obstetric history taking (T-1)	1. Define the components of a gynecological history 2. Define the logical sequence of history taking in pregnancy
	Gynecologic examination (PAP smear, Bimanual examination) (T-2)	1. Respect patient privacy 2. Define general examination 3. Define abdominal examination 4. Identify the indications for a pelvic examination 5. Describe the technique involved in performing a pelvic examination 6. Define inspection of external genitalia 7. Describe speculum examination, PAP smear, and bimanual examination
	Obstetric examination (Leopold maneuvers, Ultrasonography) (T-2)	1. Define general examination 2. Define abdominal examination 3. Describe the normal fetal presentation and position 4. Explain the Leopold maneuvers 5. Explain the clinical significance of abdominal palpation in the obstetric examination 6. Explain the principles of pregnancy ultrasound
	Menstrual cycle and its neuroendocrine control (T-3)	1. Explain the process of menstrual cycle 2. Explain the effects of hormones on the menstrual cycle

	Reproductive stages of a woman's life (T-2)	1. Explain the reproductive stages of a woman's life
	Abnormal Uterine & Vaginal Bleeding (T-2)	1. Define abnormal uterine and vaginal bleeding 2. Describe the pathophysiology, causes, clinical presentation, and diagnosis
	Amenorrhea (T-1)	1. Define amenorrhea 2. Make the classification of amenorrhea 3. Explain the causes, symptoms, and diagnosis
	Dysmenorrhea (T-1)	1. Define dysmenorrhea 2. Describe the types of dysmenorrhea 3. Explain the causes, symptoms, diagnosis, and treatment
	Pelvic Pain (T-2)	1. Evaluate pelvic pain 2. Make differential diagnosis 3. Identify treatment options
	Benign diseases of vulva-vagina (T-2)	1. Describe benign diseases of vulva and vagina 2. Explain the causes, symptoms, and diagnosis
	Benign diseases of uterus-cervix (T-2)	1. Describe benign diseases of uterus and cervix 2. Explain the causes, symptoms, and diagnosis
	Benign diseases of ovaries & Uterine Tubes (T-2)	1. Describe benign diseases of ovaries and uterine 2. Explain the causes, symptoms, and diagnosis
	Premalignant & Malignant diseases of vulva-vagina (T-2)	1. Describe premalignant and malignant diseases of vulva-vagina 2. Explain the causes, symptoms, and diagnosis
	Premalignant & Malignant diseases of cervix & uterus (Abnormal Smear Findings) (T-2)	1. Describe premalignant and malignant diseases of cervix and uterus 2. Explain the causes, symptoms, and diagnosis
	Premalignant & Malignant diseases of ovaries (T-2)	1. Describe premalignant and malignant diseases of ovaries 2. Explain the causes, symptoms, and diagnosis
	Diagnosis of pregnancy (T-1)	1. Explain the signs and symptoms of pregnancy 2. Describe diagnostic tests
	Maternal physiological changes during pregnancy (T-2)	1. Describe physiological changes in the female reproductive system during pregnancy and the consequences of these changes for the pregnant woman. 2. Describe the average changes in the pregnant woman's body weight. 3. Discuss changes in the cardiovascular system during pregnancy, and the effects on blood pressure, cardiac output, blood volume and red blood cell concentration. 4. Recognize normal and abnormal changes in the pregnant woman's respiration, digestion, urinary system, skin and breasts, including the production of colostrum.
	Embryological and fetal differentiation periods of fetus (T-2)	1. Differentiate between the embryonic period and the fetal period 2. Briefly describe the process of sexual differentiation 3. Describe the fetal circulatory system and explain the role of the shunts

		4. Trace the development of a fetus from the end of the embryonic period to birth
	Antenatal screening (T-1)	1. Compare the performance of various prenatal serum screening tests for Down syndrome 2. Define the multiple of the median 3. Discuss the use of circulating cell free DNA for prenatal screening 4. Explain prenatal screening for cystic fibrosis
	Prenatal invasive procedures (Amniocentesis, Cordosentesis, CVS) (T-2)	1. Describe prenatal invasive procedures 2. Explain the common indications and contraindications 3. Describe the technique used 4. Explain the possible complications
	Non-invasive prenatal tests (T-2)	1. Describe non-invasive prenatal tests 2. Explain the benefits and limitations
	Placental Abnormalities (Placenta accreta, increta and percreta) (T-2)	1. Discuss abnormalities of placenta 2. Outline the clinical significance of an abnormal placenta
	Amniotic Fluid & Abnormalities (oligohydramnios, polyhydramnios) (T-2)	1. Explain the character and functions of amniotic fluid 2. Explain the definition, etiology, and diagnosis of amniotic fluid disorders
	High Risk Pregnancy (T-1)	1. Define high risk pregnancy 2. List examples of high risk pregnancy 3. Identify factors contributing to high risk pregnancies 4. Identify problems associated with high risk pregnancy 5. Describe strategies to decrease incidence of high risk pregnancies
	Hypertensive Diseases of Pregnancy (T-2)	1. Describe hypertension in pregnancy 2. Explain the causes of hypertension in pregnancy 3. Define pregnancy induced hypertensive disorders 4. Explain maternal and fetal risks of uncontrolled chronic hypertension in pregnancy 5. Explain the management strategies
	Gestational Diabetes & Overt Diabetes in Pregnancy (T-2)	1. Describe the metabolic changes in pregnancy which produce a diabetogenic stress 2. Describe the short-term and long term morbidities for the woman with gestational diabetes mellitus and her infant 3. Explain the methods presently in use for screening and diagnosis
	Presentation Abnormalities & Mechanisms (T-2)	1. Define the most common abnormal presentations 2. Explain their diagnostic criteria and the required actions to take to prevent complications during labor
	C/S Indications (T-2)	1. Describe the classification of Caesarean sections 2. Explain the indications
	Postpartum Maternal care (T-1)	1. Describe normal maternal physiologic changes of the postpartum period 2. Describe normal postpartum care
	Normal Labor Stages (T-2)	1. Describe the characteristics of normal labor 2. Define the stages of normal labor 3. Identify and describe each stage of labor

	Labor Abnormalities, Operative delivery and Episiotomy (T-2)	1. List abnormal labor patterns 2. Describe the causes and methods of evaluating abnormal labor patterns 3. Explain fetal and maternal complications of abnormal labor 4. Describe operative delivery and episiotomy
	Abortions (T-1)	1. Define abortion 2. List the types of abortions 3. Explain etiology 4. Explain surgical and non-surgical pregnancy termination methods 5. Describe potential complications of abortion
	Ectopic Pregnancy (T-2)	1. Define ectopic pregnancy 2. Describe risk factors, signs, causes, and diagnosis
	Trophoblastic Diseases (T-2)	1. Describe the definition, etiology, risk factors, and pathophysiology of trophoblastic diseases
	Reproductive tract infections (RTI) (T-2)	1. Identify the major viral and bacterial RTIs 2. Describe the interaction between RTIs and family planning, child survival, safe motherhood, and HIV prevention. 3. Understand the general model for the spread of infection and its implications in the control and prevention of RTIs.
	Sexual Transmitted Diseases (T-2)	1. Describe methods of transmission, symptoms, physical findings, evaluation, and management
	PID (T-1)	1. Describe the epidemiology, risk factors, pathogenesis, clinical manifestations, treatment regimens, and prevention ways of pelvic inflammatory disease

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP.	**TOPIC**	**LEARNING OUTCOMES**
RADIOLOGY	Imaging Methods and Image Interpretation in Obstetrics and Gynecology (T-2)	1. Recognize most commonly used radiographic imaging technics in obstetrics and gynecology 2. Discern the different structures on a radiographic imaging in obstetrics and gynecology 3. Explain the advantages of each imaging technics in obstetrics and gynecology

At the end of this lesson, the student will be able to:		
SKILLS		
DEP	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL SKILLS	Speculum Examination (P-1)	1. Know how to prepare the patient for the procedure 2. Demonstrate competence in inserting a vaginal speculum
	Taking vaginal smear (P-1)	1. Discuss the concept of screening 2. Demonstrate competence in taking cervical smears
	Performing Leopold's Maneuvers (P-1)	1. Describe the normal fetal presentation and position 2. Explain the Leopold maneuvers
	Review (Practices of Class 2) (P-1)	

MED 3012: INTRODUCTION TO NEUROLOGICAL SCIENCES			
Course Dates	GROUP A- 05.05.2022-26.05.2022 GROUP B- 30.05.2022-22.06.2022		
Exam Dates	Theoretical Exams: GROUP A- 26.05.2022 GROUP B- 22.06.2022		
Course Coordinator:	FATİH ÖZDENER, ZÜLFİYE GÜL		
Academic Unit	**Academic Staff**	**Theoretical hours**	**Practical Hours (Clinical Observations)**
Neurology	Gülay Kenangil, Prof. Aslı Demirtaş Tatlıdede, Prof. Taşkın Güneş, Assist.Prof. Buse Çağla Arı, Assist. Prof.	39	3
Neurosurgery	Türker Kiliç, Prof. Deniz Konya, Prof. Ahmet Çolak, Prof. Akin Akakin, Assoc. Prof. Baran Yilmaz, Assoc. Prof. Zafer Orkun Toktaş, Assoc. Prof. Emre Ünal, Assist. Prof. Ümit Kepoğlu, Assist. Prof.	29	
Radiology	Mustafa Kemal Demir, Prof.	4	
Clinical Skills	Demet Koç, Assist. Prof. Senem Polat, Assist. Prof.	2	1
TOTAL		74	4

Due to possible changes because of Covid-19 pandemic, course schedules and student practice-hybrid groups will be announced before each committee.

COURSE AIM:

The aim of this course is:

- to introduce neurological sciences to the students
- to give information about how to take neurological history from a patient
- to recognize the most common symptoms of neurological diseases (according to the National Core Education Program)
- to give knowledge about EMG, EEG
- to provide comprehensive information on the diagnosis and management of some of the most commonly encountered diseases in Neurological Sciences clinical practice.
- to get skills in taking inform consent
- to recognize most commonly used radiographic imaging techniques in neurological diseases
- to introduce students to hospital conditions

LEARNING OUTCOMES:

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP	**TOPIC**	**LEARNING OUTCOMES**
NEUROLOGY	Introduction to Neurological Sciences Committee; History taking in Neurology (T-1)	1. Identify physical signs to look for while examining a patient with a neurological disease 2. Identify the parts of the nervous system that gets affected 3. Describe the importance of taking the patient's history and make a multi-systemic connection between the diseases.
	Semiology: Cortex, higher cortical functions (T-2)	1. Describe the main cortical and the association areas in the brain 2. Name the cortices of the brain 3. Describe the main functions of lobes in the brain 4. Learn the symptomatology on dysfunction of each brain lobe 5. Learn the main cortical signs and symptoms
	Cranial nerves (T-2)	1. Describe the anatomy and origin of cranial nerves 2. Describe functions and diseases of cranial nerves
	Semiology: Motor system (T-2)	1. Understand the difference between central and peripheral nervous systems 2. Understand the difference between upper and lower motor neuron findings 3. Learn the motor pathways 4. Learn the roots of the reflexes
	Semiology: Cerebellar system (T-1)	1. Describe the divisions of cerebellum 2. Identify the functions of cerebellum 3. Describe cerebellar circuits 4. List clinical signs of cerebellar dysfunction
	Extrapyramidal system (T-2)	1. Describe components of the extrapyramidal system 2. Identify the function of the extrapyramidal system 3. Describe functional circuitry of the basal ganglia 4. List circuitry involved in movement disorders

	Signs and symptoms in neurology (Nuchal Rigidity, meningeal irritation) (T-2)	1. Localize symptoms and signs in the nervous system. 2. Gain organized knowledge in the subject area of Nuchal Rigidity 3. Be able to correctly interpret clinical findings in patient with suspected meningitis 4. Know and apply the relevant evidence and/ or guidelines 5. Be aware of common errors in the diagnosis and management of suspected meningitis
	Semiology : sensory system (T-2)	1. Describe the anatomy of the sensory system 2. List functions of the sensory system 3. Explain the examination of the sensory system 4. Describe the sensory system's disturbance 5. Definition of CNS infections 6. Identify the neurological symptoms of CNS infections 7. Identify the signs of meningeal irritation
	Approach to a patient with muscle weakness (paresis, paralysis) (T-1)	1. List the terms of plegia and paresis 2. Localize the site of lesion according to neurological symptoms 3. Explain crossing of the pyramidal tract at the medulla, a lesion of one hemisphere causes hemiparesis of contralateral side of the body. 4. Explain the lesion is in spinal cord after the crossing of pyramidal tract, the hemiparesis is at ipsilateral side of the lesion 5. Describe Brown-Sequard Syndrome
	Sign and symptoms in Neurology (vertigo, balance, nausea vomiting, Syncope; Altered mental Status) (T-2)	1. List the common presentations of vertigo 2. Describe the head-thrust test 3. Describe the treatment maneuver for BPPV 4. List the disorders causing vertigo 5. Explain the pathological basis of syncope 6. List the reasons of altered mental status
	Approach to a patient with numbness, paresthesia (T-2)	1. Describe the conceptual framework for patient history and physical examination for numbness, paresthesia 2. Analyze the strengths and limitations of examination in the evaluation of these disorders. 3. Describe the anatomy and physiology of peripheral nerve and muscle and the pathophysiologic changes that occur with these disorder 4. Describe the standard approaches for the common conditions (radiculopathies, carpal tunnel syndrome, and ulnar neuropathies) as well as the less frequent disorders (polyneuropathy and generalized NM diseases). 5. Diagnose patients presenting with numbness, tingling, pain, or weakness.
	Electromyogram (EMG), Electroencephalogram (EEG) (T-2)	1. Describe the fundamentals of EEG and EMG 2. Identify the abnormal responses on EEG and EMG 3. List clinical application of EEG and EMG 4. Identify artifacts on the EEG
	Sign and symptoms in Neurology (Pupil disorders, Diplopia, visual loss) (T-2)	1. Describe the anatomy of the visual pathway 2. List the lesions of the visual pathway 3. Explain Pupillary reflexes and their abnormalities 4. Explain anisocoria
	Speech disorders, Speech and Language Assessment (T-2)	1. Classify speech disorders 2. List the main differences between dysarthria, dysphonia, aphasia

		3. Explain main components of speech and language assessment
	Ataxia (T-1)	1. List causes the ataxias? 2. List types of ataxias (especially the acute ones) 3. Describe neurological symptoms of Wilson's Disease 4. List laboratory parameters to look for in an ataxic patient?
	Headache (T-1)	1. Describe the definition of headache and describe origins of pain in the head 2. Take history from a patient with headache 3. Describe classification of headaches 4. Recognize «Red Flags» for dangerous headaches 5. Describe primary and most common headaches
	Neuropathic pain (T-2)	1. Describe the definition of neuropathic pain 2. Learn about the mechanisms and pathophysiology of neuropathic pain 3. Describe most common etiologies of neuropathic pain
	Movement Disorders (T-2)	1. Learn how movement occurs 2. Define the role of basal ganglia in movement 3. Describe the names and features of the main movement disorders
	Tremor (T-2)	1. Describe the features of tremor 2. Define the names different types of tremor 3. Learn the characteristic features of different types of tremors
	Memory Loss and Forgetfulness (T-2)	1. Learn the components of the limbic system and its relation to memory 2. Describe the main concepts in mini mental state examination 3. Learn the causes of an amnestic syndrome 4. Define the differences between dementia and delirium 5. Describe symptoms of Alzheimer disease
	Seizures and Epilepsy (T-3)	1. Describe seizure and epilepsy, define the difference between them 2. Recognize the semiology and symptoms of epileptic seizure 3. Learn about main types of epileptic seizures and their imitators 4. Describe the etiology, differential diagnosis and classification of epileptic seizure
	Sleep and Sleep Disorders (T-1)	1. Describe the general architecture and stages of sleep 2. Define sleep habits and requirements 3. List classification of sleep disorders 4. Define insomnia, obstructive sleep apnea, narcolepsy, REM sleep disorder and restless leg syndrome

At the end of this lesson, the student will be able to:		
KNOWLEDGE		
DEP	**TOPIC**	**LEARNING OUTCOMES**
NEUROSURGERY	Cranial nerves-function and anatomy (T-2)	1. Learn how to clinically perform the cranial nerve examination. 2. Learn the underlying neuroanatomy of each cranial nerve. 3. Learn the underlying neuroanatomical pathways responsible for each cranial nerve.

		4. Understand how the reflexes and responses use the central nervous system for integration of the pathways.
	The cerebellum-functional anatomy (T-2)	1. Describe functional anatomy of the cerebellum -its lobes, their input and output connections and their functions 2. Draw and label the circuitry of the cerebellum cortex, assign the functional role of each neuron type and give its synaptic action (excitatory/inhibitory) 3. Describe what is known about the role of the cerebellum in the regulation of skilled movement and in motor learning 4. Explain servo-control mechanisms as a model for cerebellar regulation of movements 5. Predict the neurological disturbances that can result from disease or damage in different regions of the cerebellum
	Anatomy of the skull base (T-1)	1. Describe the boundaries, walls and floors of the cranial fossae. 2. Describe the relationships between the structures of the brain and the anterior, middle and posterior cranial fossae. 3. Identify the major foramina of the skull, both internally and externally, and list the structure(s) that each transmits. 4. Describe the reflections of the dura mater and the formation of the venous sinuses. 5. Describe the anatomy of the dural venous sinuses. Explain the entrance of cerebral veins into the superior sagittal sinus in relation to subdural hemorrhage.
	Neural homeostasis and the limbic system (T-2)	1. Understand the consequences of a failure in neural homeostasis, and define pathophysiology 2. List Cannon's four postulates related to neural homeostasis, with examples 3. Explain the difference, using examples between local and long-distance control pathways 4. List the primary structures involved in the limbic system and describe the general functions of each of these structures. 5. Identify the reward centers in the brain, and the primary neurotransmitter associated with these centers
	Anatomy of the spine and spinal cord (T-2)	1. Describe the features of the spinal cord 2. Describe the vertebral column, the protective structure of the spinal cord 3. Describe the grey matter and spinal roots of the spinal cord 4. Describe the function and composition of spinal cord white matter
	Neuroscience today (T-2)	1. Provide students with broad knowledge of the field of neuroscience. 2. Learn neuroscience research techniques to conduct research. 3. Integrate content, skills and critical thinking to design feasible independent research projects employing the scientific method.
	Introduction to neurological research, Literature, reviews, problem solving (T-2)	1. Develop ability to be critical and independent thinkers. 2. Communicate scientific findings clearly. 3. Critique and contextualize the published neuroscience literature, including the ability to critically analyze experimental design and data interpretation. 4. understand of the ethical issues surrounding the use of human participants and animal subjects in neuroscience research.

	Sign and symptoms of increased intracranial pressure and differential diagnosis (T-2)	1. Understand the pathophysiology of elevated intracranial pressure, cerebral perfusion and the influence of blood pressure, blood gases, fluid and electrolyte balance. 2. Recognize the clinical manifestations of acute brain herniation including the Cushing reflex, midbrain effects and vital signs. 3. Understand the impact of focal mass lesions, structural shifts and their consequences.
	Intracranial pressure, cerebral edema (T-2)	1. Understand pathogenesis of cerebral edema and underlying cause and any life-threatening complications 2. Name three types of traumatic hemorrhage that do not involve brain parenchyma and know which of the three is most common. 3. Name three conditions besides cerebral edema in which increased intracranial pressure may cause death. 4. Understand the importance of fundoscopic examination in detecting increased intracranial pressure. 5. Name six causes of increased intracranial pressure.
	Cerebral circulation and metabolism, Cerebrospinal fluid (T-2)	1. Describe the role and circulation of cerebrospinal fluid in the nervous system 2. Describe the vessels that supply the CNS with blood 3. Name the components of the ventricular system and the regions of the brain in which each is located 4. Explain the production of cerebrospinal fluid and its flow through the ventricles 5. Explain how a disruption in circulation would result in neurological disorders
	Head Injury (T-2)	1. Differentiate the symptomatology of migraine, cluster, and tension headache and sinusitis headache. 2. Know the major causes of intracranial hemorrhage: vasculopathy in the aged (hypertension and amyloidosis), aneurysm, vascular malformation, tumor and coagulopathy. 3. Recognize the symptoms and signs of subarachnoid, cerebral and cerebellar hemorrhage. 4. Apply diagnostic tools in evaluation of acute headache (CT and MRI, role of lumbar puncture). 5. Understand the natural history and broad treatment strategies (surgery, radiosurgery, interventional radiology as well as treatment of vasospasm) of intracranial aneurysms and vascular malformations.
	Focused History and physical examination in neurotrauma, Glasgow Coma Scale-Coma (T-2)	1. Understand and assign the Glasgow Coma Score. 2. Recognize the presentation of brain herniation syndromes in the setting of trauma. 3. Initiate management of elevated intracranial pressure in head trauma. 4. Recognize and initiate management of concussion, brain contusion and diffuse axonal injury. 5. Recognize and initiate management of acute subdural and epidural hematoma, including surgical indications. 6. Recognize and initiate management of penetrating trauma including gunshot wounds. 7. Recognize and understand the principles of management of open, closed and basilar skull fractures, including cerebrospinal fluid leaks, and chronic subdural hematoma (in children and adults).

	Autonomous Nervous system (T-2)	1. Differentiate between the central, autonomic, and peripheral nervous systems and the common disorders associated with each 2. Explain and categorize seizure activity, and report common therapeutic interventions 3. Distinguish different types of infections and tumors of the central nervous system 4. Compare traumatic conditions of the brain and spinal cord 5. Describe and contrast the pathogenesis and clinical features of thrombotic and hemorrhagic stroke
	Introduction to spinal disease (T-2)	1. Initiate acute management of spinal cord injury including immobilization, steroids and systemic measures. 2. Understand the definition and subsequent management principles of the unstable spine. 3. Understand management principles in spinal cord injury including indications for decompressive surgery and treatment of the medical complications associated with cord injury (skin, bladder, bowel movement, respiratory).
	Spinal cord injury, Peripheral nerves (T-2)	1. Learn major structures of the nervous system and some of their functions 2. Understand how the nervous system develops and how it changes with experience 3. Learn the strategies for repairing damaged brains and spinal cords, and the obstacles

At the end of this lesson, the student will be able to:		
DEP	**TOPIC**	**LEARNING OUTCOMES**
RADIOLOGY	Basic principles of neuroimaging-Magnetic Resonance Imaging (T-2)	1. Know contemporary neuroimaging methods to study brain activity non-invasively with a particular emphasis on fMRI 2. Recognize spine fractures and dislocations. 3. Know basic principles and physics of the neuroimaging techniques. 4. Differentiate on computerized images between blood, air, fat, CSF, and bone. 5. Recognize specific disease entities listed below such as epidural, subdural, intracranial hematoma, subarachnoid hemorrhage, brain tumors, and hydrocephalus.
	Invasive neuroimaging techniques (T-2)	1. Know neuroimaging methods to study brain invasively 2. Know biomedical applications of neuroimaging.

At the end of this lesson, the student will be able to:		
SKILLS		
DEP	**TOPIC**	**LEARNING OUTCOMES**
CLINICAL SKILLS	Informed consent process (T-2)	1. Describe appropriate settings for informed consent 2. Discuss the guidance and regulations surrounding informed consent and human subject protection 3. Discuss how to enhance the informed consent process 4. Describe best practices for creating and maintaining high-quality documentation
	Review (Practices of Class 2) (P-1)	