COURSE INFORMATION					
Course Title	*Code*	*Semester*	*Lecture*	*Credits*	*ECTS*
Medical Genetics (Clinical Clerkship)	MED 519	5/9-10	18	2*	2

* ECTS credits are the university credits of the courses in Yeditepe University, Faculty of Medicine, Undergraduate Medical Education Program

Prerequisites	The student that joins this course, should have at least the Phase 2 knowledge level in medical faculty.

Language of Instruction	English
Course Level	Second-cycle higher education (i.e. QF-EHEA-2, EQF-LLL-7, TYYÇ-7) with Master's Degree/ "Regulated Professions" legislation by EU 2005/36/EC Directive
Course Type	Compulsory
Course Coordinator	Ömer Faruk Bayrak, PhD, Prof.
The instructors	Ömer Faruk Bayrak, PhD, Prof. Ayşegül Kuşkucu, MD Assoc Prof.
Assistants	-
Goals	The course aims to equip the clerkship attendees with the necessary knowledge and skills required to approach to genetic diseases, cancer.
Content	

MEDICAL GENETICS- Week II

	Day 1	Day 2	Day 3	Day 4	Day 5
20:00-20:50		Introduction to Medical Genetics *Ömer Faruk Bayrak*	Patterns of Single Gene Inheritence *Ömer Faruk Bayrak*	The Human Genome and Chromosomal Basis of Heredity *Ömer Faruk Bayrak*	
21:00-21:50		Introduction to Medical Genetics *Ömer Faruk Bayrak*	Patterns of Single Gene Inheritence *Ömer Faruk Bayrak*	Cytogenetics and Chromosomal Disorders *Ömer Faruk Bayrak*	

Medical Genetics - Week III

	Day 1	Day 2	Day 3	Day 4	Day 5
09:00-09:50		Cancer Genetics and Genomics *Ömer Faruk Bayrak*		Molecular Basis of Genetic Diseases *Ömer Faruk Bayrak*	
10:00-10:50		Cancer Genetics and Genomics *Ömer Faruk Bayrak*		Tools of Human Molecular Genetics *Ömer Faruk Bayrak*	
13:00-13:50	*LUNCH*	*LUNCH*	*LUNCH*	*LUNCH*	*LUNCH*
16:00-16:50	Developmental Genetics and Birth Defects *Ömer Faruk Bayrak*		The Human Genome and Chromosomal Basis of Heredity *Ömer Faruk Bayrak*		
17:00-17:50	Developmental Genetics and Birth Defects *Ömer Faruk Bayrak*		Cytogenetics and Chromosomal Disorders *Ömer Faruk Bayrak*		

Medical Genetics - Week IV

	Day 1	Day 2	Day 3	Day 4	Day 5
14:00-14:50		Treatment of Genetic Disease-Introduction to Gene Therapy Ömer Faruk Bayrak			
15:00-15:50		Treatment of Genetic Disease-Introduction to Gene Therapy Ömer Faruk Bayrak			

Medical Genetics - Week V

	Day 1	Day 2	Day 3	Day 4	Day 5
11:00-11:50	**Genetics of Complex Diseases Ömer Faruk Bayrak**				
12:00-12:50	**Genetics of Complex Diseases Ömer Faruk Bayrak**				

Learning Outcomes	Programme Learning Outcomes	Teaching Methods	Assessment Methods
1.Explain the chromosome structure and structural mutations.	1,1,6 - 1,1,7	1,2	A, B
2. Has knowledge of human genome structure.	1,1,6 - 1,1,7	1,2	A, B
3. Has knowledge about the factors that play a role in hereditary and non-hereditary genetic diseases and the complex mechanism of genetic mutations.	1,1,3 - 1,1,6	1,2	A, B
4. Discuss the mechanisms underlying Mendelian and non-Mendelian genetics, and have knowledge of the methods and devices used in genetic diagnosis.	1,1,6	1,2	A, B
5. Has knowledge about cellular mechanisms and genetic factors that play a role in cell physiology and genetic diseases	1,1,6	1,2	A, B
6. Provide the necessary knowledge about genetic diseases, mitotic and meiosis cell divisions, regulation of cell cycle and cell death, and cancer genetics.	1,1,6	1,2	A, B
7. Associate the genetic factors that play a role in the development of diseases with the clinic, and is well-equipped with the relevant literature.	1,1,6	1,2	A, B

Teaching Methods:	1: Lecture 2: Small Group Discussion

Assessment Methods:	A: MCQ B:SbMCQ

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	**Lecture** Introduction to Medical Genetics	Materials for the course provided by the the instructor
1	**Lecture** Patterns of Single Gene inheritence	Materials for the course provided by the instructor
1	**Lecture** The Human Genome and Chromosomal Basis of Heredity	Materials for the course provided by the instructor
1	**Lecture** Cytogenetics and Chromosomal Disorders	Materials for the course provided by the instructor
1	**Lecture** Developmental Genetics and Birth Defects	Materials for the course provided by the instructor
1	**Lecture** Cancer Genetics and Genomics	Materials for the course provided by the instructor
1	**Lecture** Molecular Basis of Genetic Diseases	Materials for the course provided by the instructor
1	**Lecture** Tools of Molecular Genetics	Materials for the course provided by the instructor
1	**Lecture** Treatment of Genetic Diseases- Introduction to Gene Therapy	Materials for the course provided by the instructor
1	**Lecture** Genetics of Complex Diseases	Materials for the course provided by the instructor

RECOMMENDED SOURCES	
Textbook	1- Thompson & Thompson Genetics in Medicine, 8edition
Additional Resources	Lecture notes

MATERIAL SHARING	
Documents	Photocopy shareable.

Assignments	Not Shareable
Exams	Not shareable

ASSESSMENT		
Questions Types (Pencil-Paper Tests)	**Proportion (in Pass/Fail Decision)**	**Questions Types (Pencil-Paper Tests)**
Multiple Choice Questions	%100	Multiple Choice Questions
Total	%100	**Total**

COURSE CATEGORY	Compulsory

COURSE'S CONTRIBUTION TO PROGRAM							
No	Program Learning Outcomes	Contribution					
		1	2	3	4	5	
1.1.2	***employs*** a patient-centered approach in patient management.					x	
1.1.3	***recognizes*** most frequently occurring or significant clinical complaints, symptoms, signs, findings and their emergence mechanisms in clinical conditions.				x		
1.1.5	***does*** general and focused physical and mental examination.	x					
1.1.6	***interprets*** findings in medical history, physical and mental examination.	x					
1.1.7	***employs*** diagnostic procedures that are used frequently at the primary health care level.			x			
1.1.9	***makes*** clinical decisions using evidence-based systematic data in health care service.				x		
1.1.12	***keeps*** medical records in health care provision and ***uses*** information systems to that aim.					x	
1.2.1	throughout his/her career, ***communicates*** effectively with health care beneficiaries, co-workers, accompanying persons, visitors, patient's relatives, care givers, colleagues, other individuals, organizations and institutions.			x			

1.2.2	***collaborates*** as a team member with related organizations and institutions, with other professionals and health care workers, on issues related to health.		x	
1.2.3	***recognizes*** the protection and privacy policy for health care beneficiaries, co-workers, accompanying persons and visitors.		x	
1.2.4	***communicates*** with all stakeholders taking into consideration the socio-cultural diversity.			x
2.1.1	***performs*** medical practices in accordance with the legal framework which regulates the primary health care service.	x		
2.2.1	***recognizes*** basic ethical principles completely, and ***distinguishes*** ethical and legal problems.			x
2.2.2	***pays importance to*** the rights of patient, patient's relatives and physicians, and ***provides*** services in this context.			x
2.5.2	***displays*** a patient-centered and holistic (biopsychosocial) approach to patients and their problems.		x	

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity/ day	Duration (Hour)	Total Workload (Hour)
Course Duration (1 week)	5	4	20
Hours for off-the-classroom study (Pre-study, practice, review/week)	5	5	25
Homework	-	-	-
Exam	1	2	2
Total Work Load			47
Total Work Load / 30 (h)			1.6
ECTS Credit of the Course			2