

COURSE INFORMATION					
Course Title	<i>Code</i>	<i>Semester</i>	<i>Lecture</i>	<i>Credits</i>	<i>ECTS</i>
Medical Genetics (Clinical Clerkship)	MED 519	Phase 5 / 9-10	16	2*	2

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

Prerequisites	The student that joins this course, should completed Phase 1, 2, 3 and 4 courses of medical faculty.
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Language of Instruction	English
Course Level	Second Cycle including First Cycle Degree (One Tier Programme)
Course Type	Compulsory
Course Coordinator	Ömer Faruk Bayrak, PhD, Prof.
The instructors	Ömer Faruk Bayrak, PhD, Prof. Ayşegül Kuşkuçcu, 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	

Learning Outcomes <i>At the end of this clerkship, the student should be able to:</i>	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 inheritance	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

NCC 2014 – Essential Medical Procedures (Medical Genetics)	Performance Level
Making a family tree and referring the patient for genetic counseling when necessary	4

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

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

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

COURSE CATEGORY	Expertise/Field Courses
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COURSE'S CONTRIBUTION TO PROGRAM						
		Contribution				
PODG.1. Basic Professional Competencies		1	2	3	4	5
POD.1.1. Clinical Competencies						
PO.1.1.1.	values preventive health services, offers primary prevention (i.e. prevention of diseases for the protection of health), secondary prevention (i.e. early diagnosis and treatment) tertiary prevention (i.e. rehabilitation) and quaternary prevention (i.e. prevention of excessive and unnecessary diagnosis and treatment) services, provides consultancy on these issues.					
PO.1.1.2.	employs a patient-centered approach in patient management.					X
PO.1.1.3.	recognizes most frequently occurring or significant clinical complaints, symptoms, signs, findings and their emergence mechanisms in clinical conditions.				X	
PO.1.1.4.	takes medical history from the applicant himself/herself or from the individual's companions.					
PO.1.1.5.	does general and focused physical and mental examination.	X				
PO.1.1.6.	interprets findings in medical history, physical and mental examination.	X				
PO.1.1.7.	employs diagnostic procedures that are used frequently at the primary health care level.			X		
PO.1.1.8.	selects tests that have evidence-based high efficacy at the primary health care level and interprets results.					
PO.1.1.9.	makes clinical decisions using evidence-based systematic data in health care service.				X	
PO.1.1.10.	performs medical interventional procedures that are used frequently at the primary health care level.					
PO.1.1.11.	manages healthy individuals and patients in the context of health care services.					
PO.1.1.12.	keeps medical records in health care provision and uses information systems to that aim.					X
POD.1.2. Competencies related to Communication						
PO.1.2.1.	throughout his/her career, communicates effectively with health care beneficiaries, co-workers, accompanying persons, visitors, patient's relatives, care givers, colleagues, other individuals, organizations and institutions.			X		
PO.1.2.2.	collaborates as a team member with related organizations and institutions, with other professionals and health care workers, on issues related to health.				X	
PO.1.2.3.	recognizes the protection and privacy policy for health care beneficiaries, co-workers, accompanying persons and visitors.				X	

PO.1.2.4.	communicates with all stakeholders taking into consideration the socio-cultural diversity.						X
	POD.1.3. Competencies Related to Leadership and Management						
PO.1.3.1.	manages and leads within the health care team in primary health care organization.						
PO.1.3.2.	recognizes the principles of health management and health sector economy, models of organization and financing of health care services.						
PO.1.3.3.	recognizes the resources in the health care service, the principles for cost-effective use.						
	POD.1.4. Competencies related to Health Advocacy						
PO.1.4.1.	recognizes the health status of the individual and the community and the factors affecting the health, implements the necessary measures to prevent effects of these factors on the health.						
PO.1.4.2.	recognizes and manages the health determinants including conditions that prevent access to health care.						
	POD.1.5. Competencies related to Research						
PO.1.5.1.	develops, prepares and presents research projects						
	POD.1.6. Competencies related to Health Education and Counseling						
PO.1.6.1.	provides consultancy services and organizes health education for the community to sustain and promote the health of individual and community.						
	POD.2. Professional Values and Perspectives						
	POD.2.1. Competencies related to Law and Legal Regulations						
PO.2.1.1.	performs medical practices in accordance with the legal framework which regulates the primary health care service.	X					
	POD.2.2. Competencies Related to Ethical Aspects of Medicine						
PO.2.2.1.	recognizes basic ethical principles completely, and distinguishes ethical and legal problems.						X
PO.2.2.2.	pays importance to the rights of patient, patient's relatives and physicians, and provides services in this context.						X
	POD.2.3. Competencies Related to Social and Behavioral Sciences						
PO.2.3.1.	relates historical, anthropological and philosophical evolution of medicine, with the current medical practice.						
PO.2.3.2.	recognizes the individual's behavior and attitudes and factors that determine the social dynamics of the community.						
	POD.2.4. Competencies Related to Social Awareness and Participation						
PO.2.4.1.	leads community with sense of responsibility, behavior and attitudes in consideration of individual behaviors and social dynamics of the community, and if there is a necessity, develops projects directed towards health care services.						
	POD.2.5. Competencies Related to Professional Attitudes and Behaviors						
PO.2.5.1.	displays a patient-centered and holistic (biopsychosocial) approach to patients and their problems.						
PO.2.5.2.	respects patients, colleagues and all stakeholders in health care delivery.			X			

PO.2.5.3.	displays the proper behavior in case of disadvantaged groups and situations in the community.					
PO.2.5.4.	takes responsibility for the development of patient safety and healthcare quality.					
PO.2.5.5.	evaluates own performance as open to criticism, realizes the qualifications and limitations.					
PODG.3. Professional Development and Self-Worth						
PODG.3.1. Personal Development and Values						
PO.3.1.1.	embraces the importance of lifelong self-learning and implements .					
PO.3.1.2.	embraces the importance of updating knowledge and skills; searches current advancements and improves own knowledge and skills.					
PO.3.1.3.	uses English language at least at a level adequate to follow the international literature and to establish communication related to the profession.					
POD.3.2. Competencies Related to Career Management						
PO.3.2.1.	recognizes and investigates postgraduate work domains and job opportunities.					
PO.3.2.2.	recognizes the application requirements to postgraduate work/job domains, and distinguishes and plans any requirement for further training and work experience.					
PO.3.2.3.	prepares a resume, and recognizes job interview methods.					
POD.3.3. Competencies Related to Protection and Development of Own Physical and Mental Health						
PO.3.3.1.	implements the rules of healthy living.					
PO.3.3.2.	displays appropriate behavior specific to work under stressful conditions.					
PO.3.3.3.	uses self-motivation factors.					

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity/ day	Duration (Hour)	Total Workload (Hour)
Course Duration (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