

**EASTERN MEDITERRANEAN UNIVERSITY
COURSE OUTLINE**

COURSE CODE	BIOL 416	COURSE LEVEL	Fourth Year	SEMESTER OFFERED	2019-2020 Spring Semester						
COURSE TITLE	Bioethics of Genetics and Genomics										
COURSE TYPE	Area Core (Molecular Biology and Genetics)										
LECTURER(S)	MSc. Fezel Nizam Office: AS114 Office phone: 630 2060 Office Hours: TBA E-mail: fezel.nizam@emu.edu.tr										
CREDIT VALUE	(3, 1, 0) 3	ECTS VALUE	7								
PREREQUISITES	None										
COREQUISITES	None										
DURATION OF COURSE	One Semester										
RELATIONSHIP TO OTHER COURSES	This is a core course for Molecular Biology and Genetics Program.										
AIMS											
<p>The aim of this course is to critically think about and discuss the relevant Ethical, Legal and Social Issues (ELSI) surrounding the contemporary developments in the fields of molecular biology, genetics and genomics. Course is focused to introduce the field of bioethics as an interdisciplinary subject through critical thinking, writing and discussing contemporary issues. This course will cover mainly the genetics and genomics aspects of the ethical issues by the processes of both scientific and philosophical thinking.</p>											
GENERAL LEARNING OUTCOMES (COMPETENCES)											
<p>The students who successfully complete this course are able to:</p> <ul style="list-style-type: none"> • Understand the legal and ethical discussions in genetics and genomics • Understand the basic problems, methods, and approaches to the field of bioethics • Engage in the critical analysis of bioethical questions and articulate their theoretical and practical dimension • Discuss and form opinions about the ethical, legal and social issues in genetics and genomics • Identify and critically evaluate the bioethical issues that arise in genetic research and in clinical genetics 											
LEARNING / TEACHING METHOD											
<p>The modes of delivery include formal lectures, discussions and presentations. In addition, in-class exercises, literature search and assignments are used as learning tools.</p>											
METHOD OF ASSESSMENT											
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Written Assignment</td> <td style="text-align: right;">20%</td> </tr> <tr> <td>Review Questions</td> <td style="text-align: right;">40% (4 points for each question)</td> </tr> <tr> <td>Final Exam</td> <td style="text-align: right;">40%</td> </tr> </table>						Written Assignment	20%	Review Questions	40% (4 points for each question)	Final Exam	40%
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Review Questions	40% (4 points for each question)										
Final Exam	40%										
ATTENDANCE											
<p>Attendance is required. Students who attend less than 50% of classes and laboratories, and who do not take midterm and final exams receive an NG grade</p>											
EXTRA CREDIT											
<p>Unannounced extra credit options may arise throughout the semester. Attending all of the lectures is to your benefit.</p>											
TEXTBOOK											
<p>No required textbooks</p>											
RECOMMENDED READING											
<p>"The Immortal Life of Henrietta Lacks" by Rebecca Skloot</p>											

“The Gene: An Intimate Story” by Siddhartha Mukharjee – 2016

Other reading materials are assigned throughout the semester

TENTATIVE CONTENT & SCHEDULE OF LECTURES

Lectures will be held on the following specified times and lecture halls:

Monday 14:30 -17:20 via Microsoft Teams

The lecture topics and exam schedules within the semester are as follows:

DATE	TOPICS	Assignment Submission Dates
30 March	Review a) Ethical Frameworks and Methods of Reasoning b) Genetics and Genomics Ethics c) Genetics and the Law d) Privacy and Confidentiality e) Genetic discrimination, Non-medical Use of Genetic Information f) Eugenics	
6 April	Ethics in Genetic Counseling – definition – genomic counseling Personalized Genome Sequencing – Genomic Sequencing in the general population – global genomic data sharing for research	
13 April		Review Question 1
20 April	DTC – WGS – Whole Exome Sequencing GWAS Autism –Screening for neurodevelopmental diseases	
27 April	Sex Selection – PGD – IVF-surrogates – human nuclear genome transfer – 3 parent embryos – designer babies Prenatal genetic testing –screening – abortion	Review Question 2
4 May	Cancer risk assessment – BRCA testing and further familial cancers Sample donation for genetic research – DNA – Tissue – Consent	
11 May	Human Experimentation Animal Research in Genetics and Biotechnology – GMO	Review Question 3
18 May	Stem Cells – Regenerative Medicine Review	Term Assignment (22 May)
25 May	Ramadan Bairam	Review Questions 4 (29 May)

*** **Exam Dates will be Announced via Microsoft Teams and Student Portal**