Alanya Alaaddin Keykubat University | Rafet Kayış Faculty of Engineering
Genetic and Bioengineering Department
2024-2025 Spring Semester

Syllabus
Code/Name

Code/Name	GBM 104 / INT. TO GENETICS AND BIOENGINEERING
Type	Required
Credit/ECTS	3/3
Hour per Week	2 (2+0+0)
Level/Year	Undergraduate/1
Semester	Spring
Classroom	D107
Content	This course, designed as a seminar course for first-year students, faculty members from various departments describe research and educational opportunities specific to their departments and offered by them. Introduce the basics of bioengineering fundamentals. Specially released videos provide additional background information with readings from articles.
Prerequisites	
Textbooks	***Primary*** Class Notes ***Supplementary*** *Articles and presentations*
Objectives	● Identify the research areas of the department faculty. ● List the emerging promising areas of bioengineering fields ● Summarize design and production processes in bioengineering applications. ● Identify how biological principles intersect with engineering to drive innovation ● Combine, Interpret, and analyze different subfields of bioengineering
Course Outcomes	In this course you will be able to: CO1 Explain the fundamental concepts of biology and how they relate to engineering CO2 Analize research methods which are required to develop novel application methods CO3 Distinguish engineering and biological know-how CO4 Design bioengineering applications as project CO5 Explain the current state-of-the-art in various bioengineering domains.

Weekly Schedule of Topics

W	Topic
1	General introduction to bioengineering and its subfields
2	Introduction to course project/Presentation Techniques
3	Seminar on Biomaterial Engineering
4	Seminar on Enzyme Engineering
5	Seminar on Biomechanic Engineering
6	Seminar on Genetic Engineering
7	Seminar on Biomedical Engineering
8	Seminar on Bioinformatics and Systems Biology
9	Career Management, Introduction to national and international exchange programs

10	Panel I: Industrial Career Analysis of industrial career opportuniteis by industry-affiliated bioengineering experts
11	Panel II: Academic Career Analysis of academic career opportunities by university-affiliated bioengineer scientists Assignment of the Course Project
12	How to prepare CV and Cover Letter
13	Project presentations
14	Project presentations

Professional Contribution	Understanding the field of Genetics and Bioengineering and its applications

Contribution to Program Outcomes*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	3	3	3						2
CO2	4	5	5	5	5						2
CO3	3	3	3	4	4						2
CO4						4	3	4	5	4	4
CO5	3	3	3	3	3						2

* Contribution Level | 0: None | 1: Very Low | 2: Low | 3: Medium | 4: High | 5: Very High

Special Conditions	
Requirements	
Course Policy	● Be in the class on time. ● English should always be used to communicate with one another. ● At least 80% attendance is required, otherwise, a grade of DZ will be assigned. ● You must be present in class for the presentations, otherwise you will not be graded.
Cheating & Plagiarism	● Copying or letting someone copy your work on exams, assignments, or reports is cheating. ● Cutting and pasting text, figures, and tables from web sources or any other electronic source is plagiarism. ● The consequence of academic dishonesty is to receive a grade of FF for the course.
Evaluation	Midterm 40% Project 60% Total 100%

Instructor

Name/Surname	Özgür Öztürk	Email	ozgur.ozturk@alanya.edu.tr
Room	314	Office Hours	Tuesday 14:30-15:15 and Wednesday 10:30-11:15/15:30-16:15

Prepared by Özgür Öztürk on November 18th, 2024