

Alanya Alaaddin Keykubat University | Rafet Kayış Faculty of Engineering
Genetics and Bioengineering Department
 2026-2027 Fall Semester

Syllabus

Code/Name	GBE 105 Biology
Type	Required
Credit/ECTS	3/5
Hour per Week	3 (3+0+0)
Level/Year	Undergraduate/1
Semester	Fall
Classroom	D406
Content	Basic principles of life; Atomic basis of life and biomolecules; cell structure and function; cell metabolism; transport of death across the cell membrane; photosynthesis, fermentation, and respiration; cell pack; gene expression control; evolution formation and evidence; the beginning and history of life; Ecological concepts and ecosystems.
Prerequisites	-
Textbooks	<i>Campbell, N.A., Reece, J.B., "Biology", Campbell-Reece, San Francisco</i>
Objectives	• To memorize information about the common characteristics of living things, the integrity and diversity of life, and the scientific method. • To learn the structure of the cell, the differences between nucleated and non-nucleated cells, the functions of organelles, and the endosymbiosis theory. • To identify reactions, energy conversions, enzymes, and the regulation of enzyme activities. • To define photosynthesis, stages of cellular respiration, fermentation, and the connection between anabolism and catabolism reactions.
Course Outcomes	In this course you will be able to: CO1 Define basic biology knowledge. CO2 Recognize basic information about study subjects related to biology. CO3 Distinguish the vital functions of living things. CO4 Discuss the relationships of living things with each other and with the environment. CO5 Identifying the benefit-harm approach by establishing a relationship between nature and humans.

Weekly Schedule of Topics

W	Topic
1	Introduction: Themes in the Study of Life
2	The Chemical Context of Life, Water and the Fitness of the Environment
3	The Structure and Function of Large Biological Molecules
4	A Tour of the Cell
5	Membrane Structure and Function
6	An Introduction to Metabolism, Cellular Respiration: Harvesting Chemical Energy
7	Cellular Respiration: Harvesting Chemical Energy
8	Cellular Respiration: Harvesting Chemical Energy, Fermentation
9	Photosynthesis
10	Cell Communication

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11	The Cell Cycle
12	Meiosis and Sexual Life Cycles
13	Plant Structure, Growth, and Development
14	Angiosperm Reproduction and Biotechnology

Professional Contribution	Ability to understand basic biological concepts and the basic rules of life
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Contribution to Program Outcomes*

	P01	P02	P03	P04	P05	P06	P07	P08	P09	P010	P011
CO1	5	3	3	3	5	4	4	5	5	2	5
CO2	5	4	3	4	5	4	4	5	5	2	5
CO3	4	4	3	4	5	4	4	5	5	2	4
CO4	5	4	4	4	5	4	4	5	5	4	5
CO5	5	4	3	4	5	4	4	5	5	4	5

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

Special Conditions	-
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Requirements	-
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Course Policy	• Be in the class on time. • English should always be used to communicate with one another. • At least 70% attendance is required, otherwise a grade of DZ will be assigned. • You must prepare a project, otherwise you will not be graded for the project.
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Cheating & Plagiarism	• Copying or letting someone copy your work on exams and assignments 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.
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Evaluation	Midterm Exam 40% <u>Final Exam</u> 60% Total 100%
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Rubric	A rubric will be announced before projects. The rubric has 2 main parts for the grading: technical assessment and writing.
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Instructor			
Name/Surname	Şurhan GÖL	Email	surhan.gol@alanya.edu.tr
Room	3 rd Floor,315	Office Hours	Monday 15:30-16:30 Friday 14:30-15:30

Prepared by Şurhan GÖL on October 5th, 2026