AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title		Cell Biology							
Course Code		TBY320		Couse Level		First Cycle (Bachelor's Degree)			
ECTS Credit	3	Workload	76 *(Hours)*	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		The aim of the course is to teach the students the cell biology as it is based on molecular biology, molecular structure of cell and cell. The structure and function of the cell will be given as a whole.							
Course Content		Introduction to Cell Biology, Chemical Structure of Cell, Water, Proteins, Carbohydrates, Lipids, Nucleic Acids, Enzymes, DNA, Protein Synthesis, Substance Exchange, Protista, Mushrooms,							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Case Study, Individual Study					
Name of Lecturer(s)									

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading	
1	Karol, S. Ayvalı, C. Suludere Z. Cell Biology, Meal Printing, ISBN 975-95520-1-9, 2000.
2	Rencüzoğulları E; cytology, Nobel yayın dağıtım ,ISBN 9786053207528, 2020.

Week	**Weekly Detailed Course Contents**	
1	Theoretical	Introduction to Cell Biology
2	Theoretical	General characteristics of cells
3	Theoretical	Chemical structure of cell, inorganic substances
4	Theoretical	Karbohydrates
5	Theoretical	Proteins, enzymes and lipits
6	Theoretical	Nücleic acids and Protein Synthesis
7	Theoretical	Cell surface coverage
8	Intermediate Exam	Exam
9	Theoretical	Cell skeleton
10	Theoretical	Mitochondria, chloroplast and peroxisome
11	Theoretical	Ribosomes and protein synthesis
12	Theoretical	Cellular transport and digestion
13	Theoretical	Mechanism of cell division, Cell cycle, mitosis
14	Theoretical	Meiosis
15	Final Exam	Final exam

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	3	2	70
Midterm Examination	1	2	1	3
Final Examination	1	2	1	3
			Total Workload (Hours)	76
			[Total Workload (Hours) / 25*] = **ECTS**	3

**25 hour workload is accepted as 1 ECTS*

Learning Outcomes	
1	To learn the concept of integration of cell biology and molecular biology
2	To understand cell organelles by taking into account the molecular organization of cells

3	To be able to comprehend protein structure and synthesis, properties of membranes and their roles in cellular functions, role of cell skeleton and its role in cellular functions.
4	To be able to discuss the relations between cell biology and other scientific fields such as genetics and biochemistry
5	To learn prokaryotic and eukaryotic cell organisms

Programme Outcomes *(Agricultural Biotechnology)*	
1	Mathematics, science and Agricultural Engineering, adequate knowledge of the subjects specific to the discipline of Agricultural Biotechnology; ability to use theoretical and applied knowledge in these fields in complex engineering problems.
2	Agricultural Engineering ability to define, formulate and solve complex problems in the field of Agricultural Biotechnology, to choose and apply appropriate analysis and modeling methods for this purpose.
3	Agricultural Engineering ability to design a complex system, process, device or product related to the field of Agricultural Biotechnology, under realistic constraints and conditions, in other words, by considering the available possibilities and the current state of the field, and the ability to apply modern design methods for this purpose.
4	Agricultural Engineering ability to choose and use modern tools necessary for the analysis and solution of complex problems encountered in Agricultural Biotechnology applications, the ability to use information technologies effectively.
5	Agricultural Engineering ability to design, conduct experiments, collect data, analyze and interpret results for the examination of complex problems or discipline-specific research issues in the field of Agricultural Biotechnology.
6	Ability to work effectively in disciplinary and multi-disciplinary teams; individual study skills.
7	Ability to write effective reports in the field and to understand written reports, to prepare design and production reports, to make effective presentations, to take and give clear and understandable instructions.
8	Awareness of the necessity of lifelong learning; the ability to access information, follow developments in science and technology, and constantly renew oneself.
9	Knowledge of ethical principles, professional and ethical responsibility, and standards used in engineering practices.
10	Agricultural Engineering Information about applications in business life such as project management, risk management and change management in the field of Agricultural Biotechnology; awareness of entrepreneurship, innovation; information about sustainable development.
11	Agricultural Engineering Information about the effects of Agricultural Biotechnology applications on health, environment and safety in universal and social dimensions and the problems of the age reflected in the field of engineering; awareness of the legal consequences of engineering solutions.