AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Biology								
Course Code	BYL113		Couse Level	First Cycle (Bachelor's Degree)					
ECTS Credit	3	Workload	77 *(Hours)*	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	to give biological knowledge that can constitute a basis of both theoretical and practical courses of students								
Course Content	The history of Biology, sub-disciplines of biology, scientific method, rules of scientific nomenclature, emergence of the livings and their basic characteristics, classification of the living things and taxonomical categories, physical and chemical structures of livings, inorganic and organic substances, structures of DNA and RNA, cell structure and function, general morphology of the cell, structure of the cell membrane and passage of substances through the cell membrane, cytoplasm and organelles, nucleus and chromosomes, cell division and protein synthesis, spermatogenesis, oogenesis, fertilization, development in the animals, animal tissues, metabolism, enzymes and vitamins, energy and ATP, phosphorylation in cells, Investigation of photosynthesis, chemosynthesis and respiration.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion								
Name of Lecturer(s)	Prof. Aziz AVCI, Prof. Nazan ÜZÜM								

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

Recommended or Required Reading	
1	Biology (Campbell & Reece, 2008) Palme Press
2	Afyon, A., Kaya, M. A. ve Yağız, D. 2009. Genel Biyoloji-Canlılar Bilimi. Nobel Yayıncılık, Ankara, syf. 324.
3	ktümsek, A. ve Konuk, M. 2010. Genel Biyoloji. Nobel Yayıncılık, Ankara, syf. 225.
4	Kiziroğlu, İ. 2010. Genel Biyoloji- Canlılar Bilimi, Okutman Yayıncılık, Ankara, syf. 607
5	Tanyolaç, J. ve Tanyolaç, T. 1999. Genel Zooloji. Hatiboğlu Yayınevi, Ankara, syf. 442.

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction, The history of Biology, Sub-disciplines of biology
2	Theoretical	Scientific method, Rules of scientific nomenclature, Classification of the livings and taxonomical categories
3	Theoretical	Emergence of the livings, Hypothesizes, Basic characteristics of the living things
4	Theoretical	Physical and chemical structure of living things: some physical concepts, physical properties of cell contents, some chemical concepts
5	Theoretical	Inorganic and organic substances: water, acids, bases, salts, minerals, carbohydrates, lipids, proteins, steroids, nucleic acids
6	Theoretical	Cell structure and function, general morphology of the cell, structure of the cell membrane and passage of substances through the cell membrane
7	Theoretical	Cytoplasm and organelles
8	Theoretical	Nucleus, chromosomes and chromosome types, protein synthesis
9	Intermediate Exam	mid term exam
10	Theoretical	Cell division: amitosis, mitosis, meiosis, oogenesis, spermatogenesis, fertilization
11	Theoretical	Development: Eggs types, segmentation, organogenesis
12	Theoretical	Tissues: epithelial tissue, connective tissue, muscle tissue, nerve tissue and blood tissue
13	Theoretical	Metabolizma, Enzimler ve özellikleri, Vitaminler ve çeşitleri
14	Theoretical	Energy and ATP: Phosphorylation types. Photosynthesis and chemosynthesis
15	Theoretical	Respiration: anaerobic and aerobic respiration, glycolysis, Krebs and ETS

16	Final Exam	FINAL EXAM

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Midterm Examination	1	22	1	23
Final Examination	1	25	1	26
			Total Workload (Hours)	77
			[Total Workload (Hours) / 25*] = **ECTS**	3
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	1. The graduate is able to comprehend the history of biology and define the sub-disciplines of biology
2	The graduate is able to follow the scientific method to solve a problem and apply scientific nomenclature
3	. The graduate is able to comprehend the characteristics of organic and inorganic substances that participate of the structures of living things.
4	The graduate is able to define general morphology and shape of cell, cell membrane and organelles
5	The graduate is able to know nucleus and its structures in it
6	The graduate is able to comprehend the protein synthesis and cell division
7	The graduate is able to distinguish egg types and which groups they belong to, and define the type of fertilization and segmentation.
8	The graduate knows animal tissues and is able to distinguish their types
9	The graduate is able to comprehend the importance of enzymes and vitamins for metabolism.
10	The graduate is able to distinguish the production of energy in the cell and the types of phosphorylation.
11	The graduate is able to identify photosynthesis and respiration, and distinguish their divisions.

Programme Outcomes *(Dairy Technology)*	
1	Having sufficient infrastructure in basic sciences and engineering subjects and ability to use the theoretical and applied info instantly in this field.
2	Determining the modern techniques, tools and information technologies required for applications related with his field and ability to use them efficiently
3	Ability for planning, projecting, and designing, following up, analyzing and finding target-driven solutions related with his field
4	Ability to have professional ethic and awareness.
5	Ability to work, decide, express opinions orally and in written individually
6	Ability to participate team studies, taking responsibility, making leadership.
7	Ability to conceive Ataturk’s principles and reforms, to communicate in Turkish and foreign language.
8	Ability to comprehend the necessity to learn for a life time, to monitor developments in science and technology and continuously renew himself.
9	Having sufficient level of information about production and quality control of milk and dairy products and also product development, increasing product quality and food security fields.
10	Ability to detect, define, solve problems related with his field and to select and apply suitable methods and modeling techniques for this purpose.
11	To be conscious about workplace applications, worker health, work security and environment subjects, to have knowledge about legal results of the engineering applications related with his subject.

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11
P1	4	4	4	4	4	4	4	4	4	4	4