



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Molecular Biology							
Course Code		BDB305		Course Level		First Cycle (Bachelor's Degree)			
ECTS Credit	4	Workload	94 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		To give nutrition and dietetic students basic information about molecular biology							
Course Content		The content of the course is chemical evolution of biomolecules, chemical bonds and molecule concept, structure and function of carbohydrates, lipids. Structure and function of amino acids,proteins, chemical properties of nucleic acids.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Individual Study, Problem Solving					
Name of Lecturer(s)									

### Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

### Recommended or Required Reading

1	Klug & Cummings: Concepts of Genetics Gözükar M.E: Biyokimya Evin Matbaası, 1994.
2	Campbell, N.A., Reece, G.: Biology, Benjamin and Cummings, 2001

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction to Molecular Biology
2	Theoretical	Atom, elements and structures, chemical bonds
3	Theoretical	Water and precaution for creatures
4	Theoretical	Carbohydrates
5	Theoretical	Lipids and fatty acids
6	Theoretical	Aminoacids, Proteins
7	Theoretical	Enzymes and Inhibition Plants
8	Intermediate Exam	Midterm Exam
9	Theoretical	Structure of nucleic acids
10	Theoretical	DNA replication
11	Theoretical	Transcription
12	Theoretical	Energy molecules
13	Theoretical	Energy molecules
14	Theoretical	General Exam Preparation
15	Final Exam	Final Exam

### Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	13	3	2	65
Midterm Examination	1	12	1	13
Final Examination	1	15	1	16
Total Workload (Hours)				94
[Total Workload (Hours) / 25*] = ECTS				4

\*25 hour workload is accepted as 1 ECTS

### Learning Outcomes

1	Will be able to describe DNA replication.
2	Will be able to define the mechanism and regulation of protein synthesis.



3	Explain the transport of proteins to membranes and organelles.
4	Define the role of molecular motors in the transport of molecules in the cytoplasm.
5	Describe the immunoglobulins and their molecular mechanisms.

### Programme Outcomes (Nutrition and Dietetics)

1	Assess, apply and evaluate the accuracy, reliability and validity of basic knowledge and evidence based current scientific developments on nutrition and dietetics.
2	Assess scientifically the energy and nutrients need of individuals and develop nutrition plans and programs for the clients according to the principles of adequate and balanced nutrition and assessment of energy and nutrient requirements
3	Develop food and nutrition plans and policies for the prevention and promotion of healthy lifestyle applying the methods of nutritional assessment for the population.
4	Assess the nutritional status of the patients, evaluate the clinical symptoms, plan and apply individualized medical nutrition therapy for the patients.
5	Evaluate the factors affecting the quality of food consumed by the individuals and populations from production to consumption and implement the legal standards and legislations on food safety and food security.
6	Consider, interpret and apply the basic scientific knowledge on nutrition and dietetics especially have skills on critical thinking, problem solving and decision making and use effectively the appropriate current technologies and computer, demonstrate skills in preparing research manuscripts, project proposals, collecting and verifying data and writing report.
7	Assess, evaluate and interpret the nutritional status of the individuals and population groups using current knowledge, develop preventive measures, apply medical nutrition therapy, demonstrate active participation, teamwork and contributions with national and international stakeholders in health and social areas, in terms of ethical principles.
8	Plan menus in the institutional food service systems depending on the energy and nutrient requirements of target groups in the scope of nutrition and dietetic principles, take care of food safety in all settings from purchase of food to service, apply appropriate service using technological developments.
9	Develop and use effective strategies for the education, counseling and encouragement of individuals and population groups to facilitate behavior change and choose healthy and safety foods, prepare and update the related educational materials.
10	Apply laboratory work on product development, food analysis and related factors effecting food quality and interpret the results and evaluate them according to the legal arrangements.
11	Plan, manage, evaluate, monitor and report researches and programs to educate and increase and improve the knowledge and awareness of individuals and population groups on healthy nutrition during all lifecycle period, and lead such activities, support and take role in the preparation and implementation of national and international food and nutrition plans and policies.
12	Work and perform duties in the scope of occupational responsibilities and ethical principles, understand the importance of lifelong learning, follow the latest developments (innovations) in science, technology and health, demonstrate professional attributes for the enhancement of nutrition and dietetics profession.
13	Use, apply, discuss and share scientific and evidence based knowledge in nutrition and dietetics practice with team and team members, develop and demonstrate effective skills using oral, print, visual methods in communicating and expressing thoughts and ideas, communicate with all stakeholders within ethical principles. Develop and demonstrate effective communications skills using oral, print, visual, electronic and mass media methods
14	Plan, apply, monitor and evaluate individualized medical nutrition therapy within interdisciplinary approaches, considering the sociocultural, economical status of patients in various age groups and also contribute to clinical researches.

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

	L1	L2	L3	L4	L5
P1	2	4	2	3	4
P2	2	4	2	3	4
P3	5	2	3	3	4
P4	2	2	3	2	2
P5	2	3	4	2	2
P6	2	3	4	2	2
P7	3	3	4	3	3
P8	3	5	2	3	3
P9	2	2	2	3	2
P10	1	4	3	4	3
P11	2	2	2	2	3
P12	2	2	2	3	3
P13	4	3	4	3	2
P14	2	3	2	3	2

