



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Food Toxicology							
Course Code		BDB313		Course Level		First Cycle (Bachelor's Degree)			
ECTS Credit	4	Workload	100 (<i>Hours</i>)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		Definition of toxicology and food toxicology, examination of natural toxic compounds in foods and their effects on health, observation of chemical pollutants and their effects on food; examination of the the impact on health of toxic substances, taken from foods, that may occur during production, preparation, storage; and toxic compounds.							
Course Content		Natural compounds and chemical pollutants that may cause toxic impact on human health, legal arrangements related to food toxicology in Turkey and the world.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Case Study					
Name of Lecturer(s)									

Prerequisites & Co-requisites

ECTS Requisite	90
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Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	Altuğ, T., 2002. Introduction to Toxicology and Food, CRC Press. Florida, 152 s. Altuğ, T. (Ed.), 2009.
2	Tayfur M. Gıda hijyeni, gıda kaynaklı enfeksiyonlar ve zehirlenmeler, Hatiboğlu, Ankara, 2009.
3	Besinlerdeki Toksik Öğeler-I, Sağlık Bakanlığı Yayın No:727, 2008.
4	Besinlerdeki Toksik Öğeler-II, Sağlık Bakanlığı Yayın No:727, 2008.
5	European Food Safety Authority (EFSA), http://www.efsa.europa.eu

Week	Weekly Detailed Course Contents	
1	Theoretical	General information about toxicologyDefinition of toxicology and branches
2	Theoretical	Body uptake, distribution, metabolism, excretion of toxins
3	Theoretical	Toxicokinetic and toxicodynamic interactions
4	Theoretical	Acute toxicity, chronic toxicity, toxicity tests
5	Theoretical	Food safety and risk analysis
6	Theoretical	NOAEL, ADI, GRAS, ML values in food toxicology
7	Theoretical	Mutagen, carcinogen and teratogen compounds in foods (Quiz)
8	Theoretical	Toxic substances in foods-Natural food toxins
9	Theoretical	Toxic substances in foods -Microbial food toxins
10	Theoretical	Toxic substances in foods - Chemical pollutants present in foods
11	Theoretical	Toxic substances in foods –Pesticide residues in foods
12	Theoretical	Toxic substances in foods - Drugs used in veterinary medicine
13	Theoretical	Contaminants from packaging materials to food
14	Theoretical	Food additives and toxins

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	13	4	2	78
Midterm Examination	1	10	1	11



Final Examination	1	10	1	11
Total Workload (Hours)				100
[Total Workload (Hours) / 25*] = ECTS				4
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	Learn basic concepts of food toxicology
2	Know the toxicological features of naturally occurring toxic compounds that naturally exist or contaminate in food
3	Chemical pollutants present in foods
4	Pollutants that occur during cooking process
5	Has knowledge about properties and toxic effects of naturally occurring toxic substances
6	Learn legal arrangements related to food toxicology and safety in Turkey and the world

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	L6
P1	2	2	3	2	3	3
P2	2	2	2	2	2	3
P3	2	3	2	2	2	2
P4	1	3	1	3	1	4
P5	2	3	2	3	2	2
P6	1	2	2	3	1	3
P7	2	3	3	2	2	2
P8	5	2	2	4	3	1
P9	3	4	2	2	3	2



P10	2	2	1	4	3	3
P11	3	2	2	2	2	2
P12	2	3	3	3	4	1
P13	2	2	2	2	2	2
P14	4	3	1		2	2

