FOOD TOXİCOLOGY

Course Title	Code	Semester	Theoretical (hours/week)	Practice (hours/week)	Laboratory (hours/week)	ECTS
FOOD TOXICOLOGY	BDB240	4. Semester / Spring	2	0	0	4
Prerequisites	None					
Language of Instruction	Turkish					
Course Type	Elective					
learning and teachingtechniques of the Course	Lecture Discussion					
Instructor(s)						
Goal	Definition of toxicology and food toxicology is to examine the effects of toxic substances that may occur in the natural, production, preparation and storage stages of food and chemical pollutants that can be transmitted to food on human health.					
Learning Outcomes	1. To gain basic knowledge about food toxicology 2. To know the toxicological properties of naturally occurring and contaminated toxic substances in foods 3. To learn the pollutants in foods 4. To be able to comprehend the effects of pollutants in foods on health 5. To be able to discuss about ready food and label reading 6. Turkey and to learn about the food toxicology and safety regulations in the world					
References	1. Codex Alimentaryus Commission, www.codexalimentarius.net 2. Ministry of Food and Agriculture and Livestock, Turkish Food Codex http://www.gkgm.gov.tr/mev Legislation/kodeks/kodeks_liste.html 3. Preedy VR., Watson RR. (2005). Reviews In Food and Nutrition Toxicity (Edited by) Volume 3, CRC press. 4. Nollet LM., Toldra F. (2011). Handbook of Analysis of Edible Animal By-Products (Edited by), CRC press. 5. Omaye ST. (2004). Food and Nutritional Toxicology (Edited by), CRC press. 6. Lu FC., Kacew S. (2009) Lu's Basic Toxicology, Fundamentals, Target Organs and Risk Assessment, (Edited by), Fifth Edition, CRC press. 7. Shibamato T, Bjeldanes LF, Introduction to Food Toxicology, Academic Press, Inc., San Diego, 1993. 8. Helferich W, Winter CK. Food Toxicology, CRC Press, Boaca Raton, 2000. 9. Altug T. Introduction to Toxicology and Food, CRC Press, Boca raton, 2003. 10. Tayfur M. Food hygiene, foodborne infections and poisoning, Kuban printing house, Ankara, 2009. 11. Deshpande S.S. (2002). Handbook of Food Toxicology, CRC press. 12. Centers for Disease Control and Prevention (CDC), http://www.cdc.gov 13. European Food Safety Authority (EFSA), http://www.efsa.europa.eu 14. World Health Organization (WHO), http://www.who.int					

Course Outline Weekly:

WEEKS	TOPICS
1. Week	Principles of food toxicology
2. Week	Determination of toxic compounds in foods
3. Week	Tests to measure poisoning
4. Week	Natural toxic compounds in foods
5. Week	Natural toxic compounds in foods
6. Week	Microbial toxins in foods
7. Week	Environmental pollutants in foods
8. Week	**MIDTERM EXAM**
9. Week	Toxic contamination by industrial wastes
10. Week	Pesticide residues and radionuclides in food
11. Week	Pollutants transported from food to packaging materials
12. Week	Pollutants in foods during cooking process
13. Week	Health effects of pollutants in foods
14. Week	Health effects of pollutants in foods
15. Week	Legal regulations on food pollution

ECTS (Student Work Load Table)

Activities	**Number**	**Duration**	**Total Work Load**
Course Duration (X14)	14	2	28
Laboratory			
Practice			
Field Study			
Study Time Of Outside Of Class (Pre-Study, Practice, Etc.)	14	4	56
Presentations (Video shoot/Poster preparation/Oral presentation, Etc.)			
Seminars			
Project			
Case study			
Role playing, Dramatization			
Writing articles, Critique			
Time To Prepare For Midterm Exam	1	6	6
Final Exam Preparation Time	1	10	10
Total Work Load (hour) / 25(s)	**100/25=4**		
ECTS	**4**		

Evaluation System

Mid-Term Studies	**Number**	**Contribution**
Midterm exams	1	%50
Quiz		
Laboratory		
Practice		
Field Study		
Course Internship (If There Is)		
Homework's		
Presentation and Seminar		
Project		
Other evaluation methods		
Total Time To Activities For Midterm		50
Final works		
Final	1	%100
Homework		
Practice		
Laboratory		
Total Time To Activities For Midterm		100
Contribution Of Midterm Studies On Grades		%50
Contribution Of Final Exam On Grades		%50
Total		100

The relationship between learning outcomes and the program qualifications of the courses

Program Qualifications	Learning outcomes					
	L.O.1	L.O. 2	L.O.3	L.O.4	L.O.5	L.O.6
1. To acquire information in the basic and social sciences as the Dietitian as he profession entails and make use of it for life.						
2. To develop personalized diet and programme in accordance with the principles of adequate and balanced nutrition.						
3. To improve and develop the food and nutrition plans and policy for the development of individuals with the energy and nutrient element requirements with scientific method detection, health protection	3	3	3	3	3	3
4. To determine and evaluate individual, the community and the patient's nutritional status by applying up-to-date information gained in the field of nutrition and dietetics. He/She can use the knowledge to raise the level of community health and the quality of life.	2	2	2	2	2	
5. Assess the nutritional status of the patients, evaluate the clinical symptoms, plan and apply individualized medical nutrition therapy for the patients.						
6. The student can understand the basic values and culture of the society he/she is living in and gain the skill to transform him/herself in a positive way						
7. Dietitian can improve products, make laboratory practice on elements affecting analysis and quality of nutrition, review and evaluate them regarding the legal regulations	2	2	2	2	2	5
8. The student embraces the concepts with regard to biological systems that form the basis of human health, Anatomy, Physiology, and the sustainability of them.						
9. The student can participate in Nutrition and Dietetics practices individually and/or with in a team, 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	3	3	3	3	3	5
10. Dietitian has knowledge to develop food and nutrition plans and policies for protection of health, in order to improvement and development by using methods for determining the nutritional status.	3	3	3	3	3	5

Contribution to the level of proficiency: 1. Lowest, 2. Low / Medium, 3. Average, 4. High, 5. Excellent