



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Food-Borne Pathogenic Microorganisms							
Course Code		GMP615		Course Level		Third Cycle (Doctorate Degree)			
ECTS Credit	8	Workload	200 (Hours)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		Gaining advanced knowledge of the students about the mechanisms of action of food-borne pathogenic microorganisms and controlling them in food, Critically evaluating the scientific articles about food-borne pathogenic microorganisms and giving conclusions.							
Course Content		Classification of foodborne pathogenic microorganisms and parasites; Factors affecting development; Foodborne pathogenic bacteria, virulence factors and pathogenicity mechanisms; Food-borne molds: Mycotoxin formation mechanism, health effects, foodborne viruses; Foodborne parasites; Toxins of aquatic products, adverse health effects; New food preservation methods and effects on pathogenic microorganisms; Advanced techniques in pathogen microorganism analysis.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion					
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	30
Final Examination	1	70

Recommended or Required Reading

1	Blackburn, C., McClure.2002. Foodborne Pathogens. Woodhead Publishing Limited. Cambridge, England.
2	Adams, M. R., & Moss, M. O. (2000). Food Microbiology, 2 nd ed. RSC, Cambridge
3	Miliotis, M. D. and Bier, J.W. 2003. International Handbook of Foodborne Pathogens, CRC Press 2003

Week Weekly Detailed Course Contents & Teaching Methods

Week	Weekly Detailed Course Contents & Teaching Methods	
1	Theoretical	Classification of patojen microorganizms and parasites
2	Theoretical	Factors effect on patojen microbial growth
3	Theoretical	Foodborne pathogen bacteria,virulans factors and pathogenity mechanisms-1
4	Theoretical	Foodborne pathogen bacteria,virulans factors and pathogenity mechanisms-2
5	Theoretical	Foodborne molds,mycotoxin production mechanisms
6	Theoretical	Factors that effect mycotoxin occurance and harmful effects on health
7	Theoretical	Foodborne viruses
8	Theoretical	Foodborne parasites
9	Theoretical	Seafoods toxins
10	Theoretical	Food preservation methods and evaluation of effects on pathogenic microorganisms-1
11	Theoretical	Food preservation methods and evaluation of effects on pathogenic microorganisms-2
12	Theoretical	Advanced techniques in pathogenic microorganism assays: rapid and automated methods; Genetic and immunological techniques-1
13	Theoretical	Advanced techniques in pathogenic microorganism assays: rapid and automated methods; Genetic and immunological techniques-2
14	Theoretical	Seminar

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	9	3	168
Quiz	1	15	1	16
Final Examination	1	15	1	16
Total Workload (Hours)				200
[Total Workload (Hours) / 25*] = ECTS				8

*25 hour workload is accepted as 1 ECTS



Learning Outcomes

1	
2	
3	
4	
5	

Programme Outcomes (Food Engineering Doctorate)

1	Developing and investigating the details of current and advanced knowledge in the field of Food Engineering by original thought and/or research on the level of expertise based on the graduate qualification and reaching to the original definitions that bring innovation to science.
2	Gain of ability of develop strategies, policies and implementation plans in the field of food engineering and evaluate the results within the framework of quality processes.
3	Gain of ability to perceive, design, evaluate and finish an original process by using and following the knowledge of the recent developments in the engineering fields.
4	Gain of ability of making critical analysis, synthesis and evaluation of ideas and development in food engineering field
5	Having advanced knowledge of food science and its applications based on doctoral level qualifications.

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	2	1	2	3
P2	1	1		1	2
P3	2	3	2	3	3
P4		2	2	3	3
P5	2		4	4	3

