



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Nanotechnology Applications in Agriculture							
Course Code		TBY327		Couse Level		First Cycle (Bachelor's Degree)			
ECTS Credit	3	Workload	69 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		Providing detailed information to students on Nanotechnological applications in agriculture.							
Course Content		Definition and history of Nanotechnology. Agriculturally important nanotechnology materials. Usage of nanotechnology materials in cultivation. Nanotechnology in plant breeding Nanotechnology in seed science Application of Nanotechnology in Animal Sciences							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation)					
Name of Lecturer(s)									

Assessment Methods and Criteria

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

Recommended or Required Reading

1	Nanotechnology in agriculture and food production, Kuzma J, VerHage P, 2006
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Week	Weekly Detailed Course Contents	
1	Theoretical	Definition and history of Nanotechnology and Introduction
2	Theoretical	Agriculturally important nanotechnology materials
3	Theoretical	Usage of nanotechnology materials in cultivation
4	Theoretical	Nanobiotechnology-I
5	Theoretical	Nanobiotechnology-II
6	Theoretical	The relationships of nanotechnology with other disciplines-I
7	Theoretical	The relationships of nanotechnology with other disciplines-II
8	Theoretical	Nanotechnology in plant breeding
9	Theoretical	Nanotechnology in seed science
10	Intermediate Exam	Midterm Exam
11	Theoretical	Nano-fertilizers
12	Theoretical	Nano-herbicides and Nano-pesticides
13	Theoretical	Application of Nanotechnology in Animal Sciences
14	Theoretical	Nano technology application in fisheries and aquaculture
15	Theoretical	Nano-food industry
16	Final Exam	Final Exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	2	2	56
Midterm Examination	1	5	1	6
Final Examination	1	6	1	7
Total Workload (Hours)				69
[Total Workload (Hours) / 25*] = ECTS				3
*25 hour workload is accepted as 1 ECTS				



Learning Outcomes

1	Students learn Nanotechnology Applications in Agriculture
2	Students learn nanotechnological applications used in plant breeding.
3	Students learn nanotechnological applications used in Animal Science.
4	Nanotechnology and its future is learned
5	Learning the use of nanotechnology in the field of health

Programme Outcomes (Agricultural Biotechnology)

1	To be able to develop skills in identifying, modeling and solving problems in agricultural biotechnology
2	To be able to synthesize life and engineering sciences for the effective resource planning of agricultural biotechnology applications
3	To be able to interpret about living organisms structure, metabolic and physiological processes in order to propose biotechnological solutions to the agricultural problems
4	To be able to analyze genomic, metabolomic and proteomic information via bioinformatic tools.
5	To have the ability to analyze collected data and interpret the results.
6	To have the ability of individual working ability and to make independent decisions, to work in inter-disciplinary and interdisciplinary teamwork, to communicate by expressing their ideas orally and in writing, clearly and concisely
7	To have the awareness of professional liabilities and ethics
8	To be able to follow current national and international problems

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	4	4	4	4	4
P2	4	4	4	5	5
P3	4	4	4	4	3
P4	4	4	4	3	4
P5	4	4	4	5	4
P6	4	4	4	4	3
P7	4	4	4	3	3
P8	4	4	4	3	3

