

Dentistry			
Bachelor	TR-NQF-HE: Level 6	QF-EHEA: First Cycle	EQF-LLL: Level 6

## Course Introduction and Application Information

Course Code:	UNI273		
Course Name:	Biotechnological Transformation and Bioentrepreneurship		
Semester:	Fall		
Course Credits:	<div>ECTS</div> <div>5</div>		
Language of instruction:	Turkish		
Course Condition:			
Does the Course Require Work Experience?:	No		
Type of course:	University Elective		
Course Level:	<div> <div>Bachelor</div> <div>TR-NQF-HE:6. Master`s Degree</div> <div>QF-EHEA:First Cycle</div> <div>EQF-LLL:6. Master`s Degree</div> </div>		
Mode of Delivery:	Face to face		
Course Coordinator:	Dr. Öğr. Üy. POLEN KOÇAK		
Course Lecturer(s):	Dr. Öğr. Üyesi Polen Koçak Denizci, Araş. Gör. Beyzanur Erk		
Course Assistants:			

## Course Objective and Content

Course Objectives:	This course aims to inspire students by learning the basic principles of bio-entrepreneurship and to help them assimilate an entrepreneurial mindset.
Course Content:	The program consists of several short courses, each of which focuses on a specific entrepreneurial knowledge or skill requirement, such as creative thinking, communication, risk-taking and flexibility, and helps them be career-ready, whether it's entrepreneurship or another

## Learning Outcomes

The students who have succeeded in this course;

- 1) Defines the basic concepts of bioentrprenership
- 2) Learns the basics of being a bio-entrepreneur from the perspective of biomedical engineering.
- 3) Develops an entrepreneurial mindset by learning the basic skills such as design, sales and communication necessary to turn a business idea into a start-up.

## Course Flow Plan

Week	Subject	Related Preparation
1)	Introduction and Overview of Bioentrepreneurship	
2)	Idea Formation and Evaluation	
3)	Market Research and Analysis	
4)	Business Model Creation in Bioentrepreneurship	
5)	Financing and Resources	
6)	Patents and Intellectual Property Rights	
7)	Product Development and Manufacturing Processes	
8)	Midterm 1	
9)	Marketing and Sales Strategies	
10)	Risk Management and Sustainability	
11)	Leadership and Team Management in Bioentrepreneurship	
12)	Start up presentation_biotechnology	
13)	Start up presentation_biomedical engineering	
14)	Start up presentation_bioinformatics and genetics	

## Sources

Course Notes / Textbooks:	ADIM ADIM BİYOGİRİŞİMCİLİK: BİYOTEKNOLOJİ GİRİŞİMCİ VE YATIRIMCILARINA YOL HARİTASI Elif Damla Arısan, Sevgi Salman Ünver, Işıl Aksan Kurnaz
References:	Lecture Notes

## Course - Program Learning Outcome Relationship

Course Learning Outcomes	1	2	3
Program Outcomes			
1) Has basic and up-to-date knowledge in the field of dentistry, follows scientific publications, and applies evidence-based data to his/her professional practice.			
2) Knows well and effectively uses devices, tools, and materials specific to diagnosis and treatment in the field of dentistry.			
3) Evaluates the knowledge in the field of dentistry critically, integrates it with the knowledge of disciplines in the field of health, uses it by analyzing and synthesizing it.			
4) Produces projects related to the field of dentistry, can work with other health disciplines, takes part as a member of the research team and evaluates and reports the results obtained at a scientific level.			
5) Uses information that will contribute to the dentistry profession during practice, takes responsibility, and produces solutions in unforeseen situations.			
6) Shares, compares, and exchanges dental knowledge with professional colleagues in social and scientific environments in written, verbal, and visual forms.			
7) Within the framework of social, scientific, and ethical values including patient privacy, communicates with patients and their relatives, knows all the characteristics of the patient, and recommends the most appropriate treatment with a patient-centered approach.			
8) Follows technological developments, participates in national and international studies, and shares and presents own observations, experiences, and research to further advance dental practices.			
9) By adopting the principle of lifelong learning throughout the dentistry profession, follows current evidence-based dental knowledge and uses it during his professional practice.			
10) During dental practice, in cases such as abuse and addiction, performs the treatment by exhibiting the behaviors required by social ethics and legal rules, and collects and records the relevant data.			
11) Uses basic and current knowledge in the field of dentistry during professional practice for the benefit of society within the framework of national values and country realities.			
12) In natural disasters and emergency cases, takes the protective measures required by the dentistry profession; performs professional practices that benefit patients and society			
13) Generates ideas regarding health policy in dentistry, prioritizes individual and public health, and carries out preventive and therapeutic medical practices within the framework of scientific,			

ethical, and quality processes.	1	2	3
<b>Course Learning Outcomes</b>			
14) Differentiates the signs and symptoms commonly encountered in the dentistry profession, makes a treatment plan and refers when necessary, and manages diseases and clinical situations regarding their urgency and patient priority.			
15) Can assume the leadership responsibility of the team he/she works for, manage it following scientific criteria, and support the professional development of the team.			

### Course - Learning Outcome Relationship

No Effect	1 Lowest	2 Average	3 Highest

	Program Outcomes	Level of Contribution
1)	Has basic and up-to-date knowledge in the field of dentistry, follows scientific publications, and applies evidence-based data to his/her professional practice.	
2)	Knows well and effectively uses devices, tools, and materials specific to diagnosis and treatment in the field of dentistry.	
3)	Evaluates the knowledge in the field of dentistry critically, integrates it with the knowledge of disciplines in the field of health, uses it by analyzing and synthesizing it.	
4)	Produces projects related to the field of dentistry, can work with other health disciplines, takes part as a member of the research team and evaluates and reports the results obtained at a scientific level.	
5)	Uses information that will contribute to the dentistry profession during practice, takes responsibility, and produces solutions in unforeseen situations.	
6)	Shares, compares, and exchanges dental knowledge with professional colleagues in social and scientific environments in written, verbal, and visual forms.	
7)	Within the framework of social, scientific, and ethical values including patient privacy, communicates with patients and their relatives, knows all the characteristics of the patient, and recommends the most appropriate treatment with a patient-centered approach.	
8)	Follows technological developments, participates in national and international studies, and shares and presents own observations, experiences, and research to further advance dental practices.	
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12)	In natural disasters and emergency cases, takes the protective measures required by the dentistry profession; performs professional practices that benefit patients and society	
13)	Generates ideas regarding health policy in dentistry, prioritizes individual and public health, and carries out preventive and therapeutic medical practices within the framework of scientific, ethical, and quality processes.	
14)	Differentiates the signs and symptoms commonly encountered in the dentistry profession, makes a treatment plan and refers when necessary, and manages diseases and clinical situations regarding their urgency and patient priority.	
15)	Can assume the leadership responsibility of the team he/she works for, manage it following scientific criteria, and support the professional development of the team.	

### Assessment & Grading

Semester Requirements	Number of Activities	Level of Contribution
Project	1	% 30
Midterms	1	% 30
Final	1	% 40
<b>total</b>		<b>% 100</b>
PERCENTAGE OF SEMESTER WORK		% 60
PERCENTAGE OF FINAL WORK		% 40
<b>total</b>		<b>% 100</b>

### Workload and ECTS Credit Calculation

Activities	Number of Activities	Preparation for the Activity	Spent for the Activity Itself	Completing the Activity Requirements	Workload
Course Hours	13	0	3		39

Project	13	0	1		13
Midterms	1	0	8		8
Final	1	0	15		15
Total Workload					75