

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

Course Introduction and Application Information

Course Code:	UNI253		
Course Name:	Decision Making and Problem Solving Techniques		
Semester:	Fall Spring		
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:	E-Learning		
Course Coordinator:	Dr. Öğr. Üy. TAYFUN UTAŞ		
Course Lecturer(s):	Tayfun Utaş		
Course Assistants:			

Course Objective and Content

Course Objectives:	The aim of this course is to provide students with the ability to analyze complex decision-making processes and produce solutions. Throughout the course, students will understand decision-making processes through statistical and optimization models, develop their analytical thinking skills and have the opportunity to apply problem-solving techniques.

Course	1. Decision Making Process and Models
Content:	2. Statistical Decision Making Techniques
	3. Optimization Models and Solution Techniques
	4. Problem Solving Approaches and Techniques
	5. Real Life Applications of Decision Making and Problem Solving Techniques

Learning Outcomes

The students who have succeeded in this course;

- 1) Ability to understand and analyze decision-making processes and models.
- 2) Ability to analyze data through statistical and optimization models.
- 3) Developing analytical thinking abilities.
- 4) Ability to apply effective problem solving techniques.
- 5) Ability to apply decision-making and problem-solving techniques to real-life situations.

Course Flow Plan

Week	Subject	Related Preparation
1)	Introduction to Decision Making Process and Models	
2)	Statistical Decision Making Techniques - I	
3)	Statistical Decision Making Techniques - II	
4)	Introduction to Optimization Models	
5)	Optimization Solution Techniques - I	
6)	Optimization Solution Techniques - II	
7)	Introduction to Problem Solving Approaches	
8)	Midterm exam	
9)	Problem Solving Techniques - I	
10)	Problem Solving Techniques - II	

Sources

Course Notes / Textbooks:	1. Bazerman, M.H. & Moore, D.A. (2012). Judgment in Managerial Decision Making. Wiley. 2. Dyer, J.S. & Watson, G. (2013). Analytic Decision Making. Springer.
References:	1. Hammond, J.S., Keeney, R.L., & Raiffa, H. (2006). Smart Choices: A Practical Guide to Making Better Decisions. Broadway Business. 2. Ullman, D.G. (2010). The Mechanical Design Process. McGraw-Hill.

Course - Program Learning Outcome Relationship

Course Learning Outcomes	1	2	3	4	5
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 Course Learning Outcomes	1	2	3	4	5
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.					

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.	
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.	
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
Midterms	1	% 40
Final	1	% 60
total		% 100
PERCENTAGE OF SEMESTER WORK		% 40
PERCENTAGE OF FINAL WORK		% 60
total		% 100

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	14	3	2		70
Midterms	1	20	2		22
Final	1	30	3		33
Total Workload					125