



OSTİM TECHNICAL UNIVERSITY
FACULTY OF ECONOMICS AND ADMINISTRATIVE SCIENCES

COURSE SYLLABUS FORM
2022-2023 FALL

BUS 305 Problem Solving Techniques							
Course Name	Course Code	Period	Hours	Application	Laboratory	Credit	ECTS
Problem Solving Techniques	BUS 305	5	4	3	1	3	5

Language of Instruction	English
Course Status	Compulsory
Course Level	Bachelor
Learning and Teaching Techniques of the Course	Lecture, Question-Answer, Problem Solving, Teamwork, Report Writing

Course Objective
Within the scope of the course, the methods that students can use to solve the problems they may encounter in business life will be explained. It covers a wide range of problem-solving theories and methodologies, showing how they may be applied to handle a variety of management challenges through case studies and examples from various business contexts. The course includes; 1- advice on overcoming blocks to creativity, 2- key techniques, including lateral thinking, morphological analysis, synectics, and group problem solving, 3- use of computers to stimulate creative thinking.

Learning Outcomes
On successful completion of this course, students should be able to: <ol style="list-style-type: none">1. demonstrate the ability to contextualize and critically reflect on creative thinking and problem-solving (CTPS) approaches and techniques and successfully apply them to a variety of different problems and issues requiring creative thinking.2. take responsibility for his/her own learning development and academic integrity;3. manage their time and resources as an independent learner.4. demonstrate knowledge and understanding of a broad yet highly developed understanding of creativity (theory and practice) together with the principles of idea generation.

Course Outline
This course addresses the need for individuals and teams who can "think outside the box" and apply new thinking to practical, "real world" business challenges. Its goal is to promote and improve CTPS abilities. The first part of the course program looks at the definition of creativity and the traits of creative individuals. After that, it examines what inhibits human creativity and how to avoid or get over these obstacles. The term "lateral thinking" and procedures for using it to approach issues that call for original thinking will be introduced. In order to employ as "tools" for reinterpreting issues, coming up with solutions, and producing ideas, students will be introduced to a range of creative problem-solving approaches and methodologies. Students ability to reapply or promote the application of these creative tools to develop concepts and ideas will increase as a result of practical demonstrations, exercises, and task simulations.

Weekly Topics and Related Preparation Studies		
Weeks	Topics	Preparation Studies
1	Creativity and its Importance in Business	<ul style="list-style-type: none"> • Changing times • Some definitions of creativity • Invention and creativity • The importance given to creativity in business • How creative thinking may be used in management • Conditions in which creative thinking is needed most • Paradigm shift
2-3	How to overcome creative blocks and 'mindsets'	<ul style="list-style-type: none"> • The need to be ready for change • Mindset • When mindset blocks us • Other barriers to an individual's creativity • Dealing with an individual's blocks to creativity • Diagnosing whether someone is blocked in their thinking • How techniques help to overcome blocks • Blocks to organizational creative thinking and ways of dealing with them • Elements and conditions of creative organizations
4	Theories of creativity and the creative problem-solving process	<ul style="list-style-type: none"> • Creative thinking • The investment theory of creativity • The brain as an information processor • Convergent and divergent thinking • The conditions of creative thinking • Origin of creativity • The cognitive theory of creativity • How we get ideas: the index metaphor • Problem-solving mechanisms • Analogical reasoning
5	Problem Solving and Improvisation	<ul style="list-style-type: none"> • Problem-solving • Models • The problem-solving process • The problem-solving process and the creative process • Compositional and improvisational creativity • Some limitations on formal problem-solving approaches
6	Factors influencing people's ability to undertake ideation	<ul style="list-style-type: none"> • What helps people get ideas • The techniques • Qualities of a creative person • Thinking style & Personality & Learning style & Mood or emotions • Problems in groups • The range of techniques and their suitability for solving different types of problem

7	Objective finding, fact finding and problem finding/definition	<ul style="list-style-type: none"> • Objective finding • Fact-finding and problem definition/redefinition • Dimensional analysis • Redefinition approaches: laddering • Redefinition approaches: goal orientation • Redefinition approaches: boundary examination • Redefinition approaches: progressive abstractions • Redefinition approaches: the ‘why’ method • Analytical techniques: decomposable matrices • Analytical techniques: cause-and-effect diagrams
8	MIDTERM EXAM	
9	Brainstorming and its variants	<ul style="list-style-type: none"> • Classical brainstorming & The process of brainstorming • Wildest-idea variant • Stop-and-go brainstorming & Round-robin brainstorming • Gordon–Little variation • Trigger method • Problems with brainstorming • Brainwriting • Brainlining
10	Lateral thinking and associated methods	<ul style="list-style-type: none"> • Awareness & Assumptions • Alternatives & Provocative methods • Metaphorical thinking • Analogy • The discontinuity principle • Six Thinking Hats
11	Synectics	<ul style="list-style-type: none"> • Synectics • Conducting synectics sessions • Synectics in action
12	Paradigm breaking techniques	<ul style="list-style-type: none"> • Weights for thought • Paradigm breaking techniques • Disruptive technology
13	Miscellaneous ideation techniques	<ul style="list-style-type: none"> • Suggestion box, exhibits and competitions • Clichés, proverbs and maxims • Storyboarding & Scenario writing • Scenario day-dreaming & Bionics • Free association & Two words • Story writing & Mind map • TRIZ & Vision building
14	Evaluation & Implementing Ideas	<ul style="list-style-type: none"> • Sorting & Evaluation methods • The process of choosing • Qualitative evaluation: reverse brainstorming • Financial and Mathematical evaluation • Pay-off tables & Decision trees & Exercising choice • Ideas are not readily implemented • Sources of resistance to change & Role of communication in overcoming resistance to change

		<ul style="list-style-type: none"> • Putting ideas into practice • Reducing resistance to change & Climate for change
15	Computer-assisted creative problem solving	<ul style="list-style-type: none"> • History of development • Structured approach to creative problem solving in computer programs • Types of computer-assisted stimuli • Conventional software
16	FINAL EXAM	

Textbook(s)/References/Materials:	
<p>TEXTBOOK: Proctor, T. (2018). Creative problem solving for managers: developing skills for decision making and innovation. Routledge.</p> <p>OTHER REFERENCES:</p> <p>Cottrell, S. (2023). Critical thinking skills: Effective analysis, argument and reflection. Bloomsbury Publishing.</p> <p>Butterworth, J., & Thwaites, G. (2013). Thinking skills: Critical thinking and problem solving. Cambridge University Press.</p>	

Assessment		
Studies	Number	Contribution margin (%)
Attendance		
Lab		
Classroom and application performance grade	1	10
Field Study		
Course-Specific Internship (if any)		
Quizzes / Studio / Critical		
Homework	4	10
Presentation		
Projects		
Report		
Seminar		
Midterm Exam/Midterm Jury	1	30
General Exam / Final Jury	1	50
Total		100
Success Grade Contribution of Semester Studies		50
Success Grade Contribution of End of Term		50
Total		100

ECTS / Workload Table			
Activities	Number	Duration (Hours)	Total Workload
Course hours (Including the exam week: 16 x total course hours)	16	3	48
Laboratory			
Application			
Course-Specific Internship			
Field Study			
Study Time Out of Class	16	3	48
Presentation / Seminar Preparation			
Projects			
Reports			
Homework	4	4	16
Quizzes / Studio Review			
Preparation Time for Midterm Exam / Midterm Jury	1	4	4
Preparation Period for the Final Exam / General Jury	1	4	4
Total Workload/25 hours	(120/25 = 4.8)		
ECTS	5		

Relationship Between Course Learning Outcomes and Program Competencies						
No	Learning Outcomes	Contribution Level				
		1	2	3	4	5
LO1	demonstrate the ability to contextualize and critically reflect on creative thinking and problem-solving (CTPS) approaches and techniques and successfully apply them to a variety of different problems and issues requiring creative thinking.					X
LO2	take responsibility for his/her own learning development and academic integrity					X
LO3	manage his/her time and resources as an independent learner					X
LO4	demonstrate knowledge and understanding of a broad yet highly developed understanding of creativity (theory and practice) together with the principles of idea generation					X

Relationship Between Course Learning Outcomes and Program Competencies)						
No	Program Competencies	Learning Outcomes				TOTAL EFFECT (1-5)
		LO1	LO2	LO3	LO4	
1	Know the basic concepts and practical information about the science of business administration and core business activities	x	x	x	x	4
2	Evaluate global and local issues by using ideas and concepts from the field of business administration; examine and analyze management related information and applications in line with scientific principles by using appropriate qualitative and quantitative methods; interpret and synthesize the data and find solutions to business related problems	x	x	x	x	4
3	Take responsibility as a member of an interdisciplinary team to solve unpredictable and complex business problems; be able to work effectively in teams of various functions and disciplines; effectively carry out project activities	x	x	x	x	4
4	Carry out independent studies in the field by utilizing obtained knowledge and skills			x	x	2
5	Set goals and objectives for the institution he/she works at; detect and solve basic problems; analyze the internal and external environment of the business; evaluate the developments, support continuous improvement and provide innovative strategies	x	x	x		3
6	Acquire the skill to manage activities aimed at the improvement of the employees as a leader, make decisions and implement them	x	x		x	3
7	Acquire the entrepreneurship skill; design and manage a business; promote innovativeness and sustainability	x	x		x	3
8	Maintain life-long learning activities; achieve self-improvement; follow higher level educational programs			x	x	2
9	Inform stakeholders with a sense of social responsibility as an individual with effective communication skills; share his/her emotions, thoughts and solutions to problems verbally and in writing; understand the behaviors and psychology of his/her colleagues	x	x	x	x	4
10	Use the information and communication technologies and computer software required by the field	x	x			2
11	Effectively use English to follow, read, write and speak about the universal information in the field of business and management sciences and be able to communicate with colleagues in a foreign language with professional proficiency				x	1
12	Act according to the law in all his/her affairs; have a sense of professional and ethical responsibility and code of business conduct and act in line with social values	x			x	2
13	Be aware of the contemporary business problems as well as the interdisciplinary scope of business administration and analyze these; have the competence to understand the effects of business and management sciences on these problems on a universal,	x	x		x	3

	environmental, legal, social and societal level and in terms of health, security and globalization					
14	Give research proposals, be able to design research studies, prepare and present research reports	x	x			2
15	Manage work time and personal time; fulfil the requirements of his/her duties on time			x	x	2
16	Have the competence to work in non-governmental organizations, private sector and public entities				x	1
	TOTAL EFFECT	11	10	8	13	42

Policies and Procedures	
Web page: https://www.ostimteknik.edu.tr/business-administration-1240/907	
Exams: The exams aim at assessing various dimensions of learning: knowledge of concepts and theories and the ability to apply this knowledge to real-world phenomena, through analyzing the situation, distinguishing problems, and suggesting solutions. The written exams can be of two types, ie. open-ended questions, which can also be in the form of problems or multiple-choice questions. The case could also be carried to the Dean's Office for additional disciplinary action.	
Assignments: Quizzes and Homework (Assignments) might be applicable. Scientific Research Ethics Rules are very important while preparing assignments. The students should be careful about citing any material used from outside sources and reference them appropriately.	
Missed exams: Any student missing an exam needs to bring an official medical report to be able to take a make-up exam. The medical report must be from a state hospital.	
Projects: Not applicable.	
Attendance: Attendance requirements are announced at the beginning of the term. Students are usually expected to attend at least 70% of the classes during each term.	
Objections: If the student observes a material error in his/her grade, he/she has the right to place an objection to the Faculty or the Department. The claim is examined and the student is notified about its outcome.	