

**ISTINYE UNIVERSITY
DEPARTMENT OF INDUSTRIAL ENGINEERING**

1st SEMESTER					
CODE	COURSE	T	P	ECTS	Language of Instruction
ENS101	Calculus 1	2	2	5	English
ENS103	Computational Thinking	3	2	6	English
ENS105	Physics 1	4	1	6	English
ENS107	Computer Literacy	2	2	4	English
ENS109	Engineering Design	3	0	4	English
ENS111	Occupational Health and Safety 1	2	0	2	English
TRK101	Turkish Language 1	2	0	2	Turkish
TOTAL		18	7	29	

2nd SEMESTER					
CODE	COURSE	T	P	ECTS	Language of Instruction
ENS102	Linear Algebra with Applications	2	2	5	English
ENS104	Computational Mathematics	3	2	6	English
ENS106	Physics 2	4	1	6	English
ENS108	Computer Aided Design	2	2	5	English
ENS110	Calculus 2	2	2	5	English
ENS112	Occupational Health and Safety 2	2	0	2	English
TRK102	Turkish Language 2	2	0	2	Turkish
TOTAL		17	9	31	

3rd SEMESTER					
CODE	COURSE	T	P	ECTS	Language of Instruction
ENS201	Differential Equations	2	2	6	English
ISE203	Engineering Economics	3	2	7	English
ISE207	Manufacturing Processes and Operations Analysis	3	2	6	English
UNI	University Elective	3	0	5	
DIL101	General English 1	2	0	2	English
ATA101	Atatürk's Principles and History of Turkish Revolution 1	2	0	2	Turkish
SEG001	Manifest of İstinye 1	0	1	1	
TOTAL		15	7	29	

4th SEMESTER					
CODE	COURSE	T	P	ECTS	Language of Instruction
ENS202	Probability and Statistics	3	2	6	English
ISE204	Database Systems	3	2	7	English
ISE206	Modelling and Optimization I	3	2	7	English
ENT	Department Elective	2	2	5	
DIL102	General English 2	2	0	2	English
ATA102	Atatürk's Principles and History of Turkish Revolution 2	2	0	2	Turkish
SEG002	Manifest of İstinye 2	0	1	1	
TOTAL		15	9	30	

5th SEMESTER					
CODE	COURSE	T	P	ECTS	Language of Instruction
ISE301	Modelling and Optimization II	3	2	7	English
ISE303	Production Planning and Control	3	2	7	English
ENS305	Machine Learning	3	2	6	English
ISE307	Summer Internship 1	0	1	1	
ENT	Department Elective	2	2	5	
UNI	University Elective	3	0	5	
TOTAL		14	9	31	

6th SEMESTER					
CODE	COURSE	T	P	ECTS	Language of Instruction
ISE302	Stochastic Models	3	2	7	English
ISE304	Systems Simulation	3	2	7	English
ISE306	Project Management	3	1	6	English
ENT	Department Elective	2	2	5	
ENT	Department Elective	2	2	5	
TOTAL		13	9	30	

7th SEMESTER					
CODE	COURSE	T	P	ECTS	Language of Instruction
ISE401	Capstone Project 1	3	2	7	English
ISE403	Quality and Reliability Engineering	3	2	7	English
ISE407	Summer Internship 2	0	1	1	
ENT	Department Elective	2	2	5	
ENT	Department Elective	2	2	5	
UNI	University Elective	2	2	5	
SEG003	Manifest of İstinye 3	0	1	1	
TOTAL		12	12	31	

8th SEMESTER					
CODE	COURSE	T	P	ECTS	Language of Instruction
ISE402	Capstone Project 2	3	2	7	English
ISE404	Systems Analysis and Design	3	2	7	English
ENT	Department Elective	2	2	5	
ENT	Department Elective	2	2	5	
ENT	Department Elective	2	2	5	
SEG004	Manifest of İstinye 4	0	1	1	
TOTAL		12	11	30	

Elective Major Area Courses					
CODE	COURSE	T	P	ECTS	Language of Instruction
ENT001	Directed Research	2	2	5	English
ENT002	Engineering Ethics	2	2	5	English
ENT003	Community Engagement Through Volunteering	2	2	5	English
ENT004	History of Science and Technology	2	2	5	English
ENT005	Innovation and Entrepreneurship	2	2	5	English
ENT006	Fundamentals of Machine Learning	2	2	5	English
ENT007	Principles of Artificial Intelligence	2	2	5	English
ENT080	Industrial Engineering Orientation	2	2	5	English
ENT081	Nonlinear Models in Operations Research	2	2	5	English
ENT082	Supply Chain Management	2	2	5	English
ENT084	Financial Engineering	2	2	5	English
ENT085	Decision Support Systems	2	2	5	English
ENT086	Integrated Manufacturing Systems	2	2	5	English
ENT087	Production and Operations Management	2	2	5	English
ENT088	Facilities Design and Planning	2	2	5	English
ENT089	Sequencing and Scheduling	2	2	5	English
ENT090	Heuristic Optimization	2	2	5	English
ENT092	Pricing and Revenue Optimization	2	2	5	English
ENT093	Multi-Objective Optimization	2	2	5	English
ENT094	Applied Statistics and Data Analysis	2	2	5	English

Elective Major Area Courses (continued)					
CODE	COURSE	T	P	ECTS	Language of Instruction
ENT095	Combinatorial Optimization	2	2	5	English
ENT096	Inventory Models	2	2	5	English
ENT097	Multi-Criteria Decision-Making	2	2	5	English
ENT098	Numerical Methods and Programming	2	2	5	English
ENT099	Quantitative Analysis	2	2	5	English
ENT100	Introduction to Dynamic Programming	2	2	5	English
ENT101	Robotic Process Automation	2	2	5	English
ENT102	Design Thinking	2	2	5	English
ENT105	Digital Manufacturing	2	2	5	English
ENT106	Introduction to Data Science	2	2	5	English
ENT108	Operations Research Modeling Applications	2	2	5	English
ENT109	Decision Theory	2	2	5	English
ENT110	Risk Modelling and Analysis	2	2	5	English
ENT111	Enterprise Information Systems	2	2	5	English
ENT112	Human Factors Engineering	2	2	5	English
ENT117	Forecasting Methods	2	2	5	English
ENT118	Machine Learning Applications in Industrial Engineering	2	2	5	English
ENT119	Sustainable Systems Engineering	2	2	5	English
ENT121	Introduction to Stochastic Processes	2	2	5	English

DESCRIPTIONS

T: Theoric

P: Practice

ECTS: European Credit Transfer System

Language of Instruction: Defines the medium of the course regardless of the language of instruction of the department.