

**INDUSTRIAL ENGINEERING DEPARTMENT  
UNDERGRADUATE CURRICULUM  
(2021-2022 Academic Year)**

**1st Semester Program**

Course Code	Course Name	T+U+L	Compulsory/Elective	Credit	ECTS
ATA 103	Principles of Atatürk and History of the Rev I	2+0+0	Compulsory	2	2
CENG 103	Introduction to Information Technologies	1+0+0	Compulsory	1	1
CHEM 101	Chemistry	3+0+0	Compulsory	3	4
ENG 113	Engineering English I	2+2+0	Compulsory	3	4
MAN 131	Fundamentals of Economics I	3+0+0	Compulsory	3	5
MAT 123	Engineering Mathematics I	4+0+0	Compulsory	4	6
PHY 101	Physics I	3+2+0	Compulsory	4	6
TUR 105	Turkish I	2+0+0	Compulsory	2	2
				<b>22</b>	<b>30</b>

**2nd Semester Program**

Course Code	Course Name	T+U+L	Compulsory/Elective	Credit	ECTS
ATA 104	Principles of Atatürk and History of the Rev II	2+0+0	Compulsory	2	2
ENG 114	Engineering English II	2+2+0	Compulsory	3	4
IE 104	Introduction to Industrial Engineering	3+0+0	Compulsory	3	4
MAN 132	Fundamentals of Economics II	3+0+0	Compulsory	3	5
MAT 124	Engineering Mathematics II	4+0+0	Compulsory	4	6
PHY 102	Physics II	3+2+0	Compulsory	4	6
TUR 106	Turkish II	2+0+0	Compulsory	2	2
IE 120	Occupational Health and Safety	1+0+0	Compulsory	1	1
				<b>22</b>	<b>30</b>

**3rd Semester Program**

Course Code	Course Name	T+U+L	Compulsory/Elective	Credit	ECTS
CENG 111	Computer Programming I	3+2+0	Compulsory	4	6
IE 211	Probability Theory	3+0+0	Compulsory	3	6
IE 223	Engineering Economics	3+0+0	Compulsory	3	6
MAT 221	Linear Algebra	3+0+0	Compulsory	3	6
MEC 231	Materials Science and Manufacturing Techniques	3+0+0	Compulsory	3	3
ELEC	Cultural Elective Course I	-	Elective	3	3
				<b>19</b>	<b>30</b>

**4th Semester Program**

Course Code	Course Name	T+U+L	Compulsory/Elective	Credit	ECTS
IE 200	Summer Practice I	0+0+0	Compulsory	0	5
IE 212	Statistics	3+0+0	Compulsory	3	5
IE 232	Operations Research I	3+0+0	Compulsory	3	5
IE 321	Ergonomics	2+2+0	Compulsory	3	4
MAN 324	Cost and Management Accounting	3+0+0	Compulsory	3	5
MAT 224	Differential Equations	3+0+0	Compulsory	3	6
				<b>15</b>	<b>30</b>

5th Semester Program					
Course Code	Course Name	T+U+L	Compulsory/Elective	Credit	ECTS
IE 331	Operations Research II	3+0+0	Compulsory	3	5
IE 341	Production Planning and Control I	3+0+0	Compulsory	3	5
IE 351	Systems Analysis and Design	3+0+0	Compulsory	3	5
ELEC	Technical Elective Course I *	-	Elective	3	6
ELEC	Technical Elective Course II *	-	Elective	3	6
ELEC	Cultural Elective Course II	-	Elective	3	3
				18	30

6th Semester Program					
Course Code	Course Name	T+U+L	Compulsory/Elective	Credit	ECTS
IE 300	Summer Practice II	0+0+0	Compulsory	0	5
IE 312	Simulation	3+0+1	Compulsory	3	5
IE 342	Production Planning and Control II	3+0+0	Compulsory	3	5
ELEC	Technical Elective Course III *	-	Elective	3	6
ELEC	Technical Elective Course IV *	-	Elective	3	6
ELEC	Cultural Elective Course III	-	Elective	3	3
				15	30

7th Semester Program					
Course Code	Course Name	T+U+L	Compulsory/Elective	Credit	ECTS
IE 401	Senior Design Project I	0+2+0	Compulsory	1	6
IE 451	Service Systems Management	3+0+0	Compulsory	3	4
IE 474	Project Management	3+0+0	Compulsory	3	5
ELEC	Cultural Elective Course IV	-	Elective	3	3
ELEC	Technical Elective Course V *	-	Elective	3	6
ELEC	Technical Elective Course VI *	-	Elective	3	6
				16	30

8th Semester Program					
Course Code	Course Name	T+U+L	Compulsory/Elective	Credit	ECTS
IE 402	Senior Design Project II	0+2+0	Compulsory	1	6
IE 448	Decision Analysis	3+0+0	Compulsory	3	6
IE 462	Quality Control Management	3+0+0	Compulsory	3	6
ELEC	Technical Elective Course VII *	-	Elective	3	6
ELEC	Technical Elective Course VIII *	-	Elective	3	6
				13	30

Total    140    240

\* At least 6 of the 8 technical elective courses must be department technical elective courses (IE coded technical elective courses), 2 of them can be selected from the technical elective courses of the Faculty of Engineering.

Department Technical Elective Courses					
Course Code	Course Name	T+U+L	Compulsory/Elective	Credit	ECTS
IE 222	Motion and Time Study	2+2+0	Elective	3	6
IE 301	Computing for Industrial Engineers	3+0+0	Elective	3	6
IE 363	Quality Assurance and Reliability	3+0+0	Elective	3	6
IE 372	Management Information Systems	3+0+0	Elective	3	6
IE 412	Decision Theory	3+0+0	Elective	3	6
IE 413	Management of Technology and Innovation for Engineers	3+0+0	Elective	3	6
IE 414	Decision Support Systems	3+0+0	Elective	3	6
IE 431	Applied Operations Research	3+0+0	Elective	3	6
IE 441	Facility Design	3+0+0	Elective	3	6
IE 442	Quantitative Models for Supply Chain Management	3+0+0	Elective	3	6
IE 443	Forecasting Methods and Applications	3+0+0	Elective	3	6
IE 444	Scheduling	3+0+0	Elective	3	6
IE 445	Pricing and Revenue Optimization	3+0+0	Elective	3	6
IE 446	Design and Analysis of Experiments	3+0+0	Elective	3	6
IE 447	Stochastic Models	3+0+0	Elective	3	6
IE 450	Fuzzy Sets Theory and Fuzzy Logic	3+0+0	Elective	3	6
IE 452	Basic Modeling Techniques and Applications	3+0+0	Elective	3	6
IE 453	Computing Tools for Engineers	3+0+0	Elective	3	6
IE 454	Fuzzy Logic and Modeling	3+0+0	Elective	3	6
IE 455	Discrete Optimization	3+0+0	Elective	3	6
IE 456	Heuristic Algorithms	3+0+0	Elective	3	6

Faculty Technical Elective Courses					
Course Code	Course Name	T+U+L	Compulsory/Elective	Credit	ECTS
AVM 475	Aviation Project Management	3+0+0	Elective	3	6
CENG 112	Computer Programming II	2+4+0	Elective	3	6
CENG 418	Statistical Computing	3+0+0	Elective	3	6
CENG 436	Introduction to Information Systems	3+0+0	Elective	3	6
CENG 463	Data Analysis	3+0+0	Elective	3	6
CENG 465	Machine Learning	3+0+0	Elective	3	6
CENG 472	Human-Computer Interaction	3+0+0	Elective	3	6
CENG 476	Introduction to Deep Learning	3+0+0	Elective	3	6
EEE 410	Fundamentals of Logic for Engineers	3+0+0	Elective	3	6
MAT 304	Numerical Methods	3+0+0	Elective	3	6
MAT 401	Mathematical Optimization and Algorithms	3+0+0	Elective	3	6
ME 431	Manufacturing Systems	3+0+0	Elective	3	6

Cultural Elective Courses					
Course Code	Course Name	T+U+L	Compulsory/Elective	Credit	ECTS
ANT 101	Anthropology, Anthropometrics and Ergonomics	3+0+0	Elective	3	3
BAA 102	Basic of Aircraft and Airport Activities	3+0+0	Elective	3	3
CHN 101	Chinese I	3+0+0	Elective	3	3
CHN 102	Chinese II	3+0+0	Elective	3	3
CTE 101	Contemporary Topics in Engineering	3+0+0	Elective	3	3
ENE 101	Energy	3+0+0	Elective	3	3
ENT 101	Entrepreneurship	3+0+0	Elective	3	3
FILM 123	Introduction to Cinema	3+0+0	Elective	3	3
FRN 101	French Language I	3+0+0	Elective	3	3
FRN 102	French Language II	3+0+0	Elective	3	3
FRS 127	Persian I	3+0+0	Elective	3	3
GER 101	German I	3+0+0	Elective	3	3
GER 102	German II	3+0+0	Elective	3	3
HIST 118	Political History	3+0+0	Elective	3	3
HIST 174	History of Aviation	3+0+0	Elective	3	3
HUM 101	Culture and History of Science I	3+0+0	Elective	3	3
HUM 102	Culture and History of Science II	3+0+0	Elective	3	3
HUM 103	World Civilizations	3+0+0	Elective	3	3
HUM 105	History of The Ottoman Modernization	3+0+0	Elective	3	3
INOV 101	Innovation Management	3+0+0	Elective	3	3
IRC 101	Introduction to Irish Culture and Literature	3+0+0	Elective	3	3
ITA 101	Italian I	3+0+0	Elective	3	3
ITA 102	Italian II	3+0+0	Elective	3	3
İTB 305	Institutional Reputation Management	3+0+0	Elective	3	3
KRY 101	Career Planning	3+0+0	Elective	3	3
MPLN 101	Model Uçak İmalatı ve Uçuşu	3+0+0	Elective	3	3
MUS 101	Music History	3+0+0	Elective	3	3
MUS 102	Jazz History	3+0+0	Elective	3	3
MUS 103	University Chorus	3+0+0	Elective	3	3
MYTH 101	Introduction to World Mythology	3+0+0	Elective	3	3
PHY 300	Introduction to Quantum Physics	3+0+0	Elective	3	3
RUS 103	Russian I	3+0+0	Elective	3	3
RUS 104	Russian II	3+0+0	Elective	3	3
SAN 101	Singing and Popular Music Education	3+0+0	Elective	3	3
SCN 103	Science Communication	1+2+0	Elective	3	3
SOC 101	Conflict Management	3+0+0	Elective	3	3
SOC 102	Business Communication	3+0+0	Elective	3	3
SOC 103	Fundamentals of International Relations	3+0+0	Elective	3	3
SOC 104	Popular Economics and Financial Subjects	3+0+0	Elective	3	3
SOC 105	Occupational Health and Safety	3+0+0	Elective	3	3
SOC 106	Entrepreneurship	3+0+0	Elective	3	3
SOC 107	European Union Development Phase	3+0+0	Elective	3	3
SOC 108	Europe and EU Policies	3+0+0	Elective	3	3
SOC 109	Democracy and Democratization Process	3+0+0	Elective	3	3
SOC 115	Gender in Turkey	3+0+0	Elective	3	3

SOC 125	Effective Use of Language and Public Speaking	3+0+0	Elective	3	3
SOC 127	Effective Speaking Techniques	3+0+0	Elective	3	3
SOC 176	Social Media and Digital Marketing	3+0+0	Elective	3	3
SOC 177	Digital Marketing Applications	3+0+0	Elective	3	3
SOC 182	Philosophy of Science	3+0+0	Elective	3	3
SPN 101	Spanish I	3+0+0	Elective	3	3
SPN 102	Spanish II	3+0+0	Elective	3	3
TBM 101	Combating Technology Addiction	3+0+0	Elective	3	3
THEA 101	Theater	3+0+0	Elective	3	3
TUR 203	Introduction to Text Linguistics	3+0+0	Elective	3	3
TUR 205	An Overview of World Literature	3+0+0	Elective	3	3

