

FACULTY OF ENGINEERING, ARCHITECTURE AND DESIGN															
INDUSTRIAL ENGINEERING															
CURRICULUM															
1. SEMESTER							2. SEMESTER								
C.Code	Course Name	Type	T	A	L	C	ECTS	C.Code	Course Name	Type	T	A	L	C	ECTS
PHYS 121	Physics I	C	3	0	2	4	6	PHYS 122	Physics II	C	3	0	2	4	6
MATH 121	Calculus I	C	4	0	0	4	6	MATH 122	Calculus II	C	4	0	0	4	6
CHEM 121	General Chemistry	C	3	0	0	3	5	IE 102	Introduction to Industrial Engineering	C	3	0	0	3	4
ENGR 101	Introduction to Engineering	C	2	0	0	2	2	ENGR 102	Computer Aided Design	C	2	0	2	3	5
CENG 151	Introduction to Information Technologies and Programming	C	2	0	2	3	5	CENG 152	Computer Programming	C	2	0	2	3	5
ENG 101	English for Academic Purposes I	C	3	0	0	3	3	ENG 102	English for Academic Purposes II	C	3	0	0	3	3
TRD 101	Turkish Language I	C	2	0	0	2	2	TRD 102	Turkish Language II	C	2	0	0	2	2
CAP 002	Career Planning and meeting with the sector	C	1	0	0	1	2								
<b>TOTAL</b>			<b>20</b>	<b>0</b>	<b>4</b>	<b>22</b>	<b>31</b>	<b>TOTAL</b>			<b>19</b>	<b>0</b>	<b>6</b>	<b>22</b>	<b>31</b>
3. SEMESTER							4. SEMESTER								
C.Code	Course Name	Type	T	A	L	C	ECTS	C.Code	Course Name	Type	T	A	L	C	ECTS
ATA 101	Ataturk's Principles and History of Revolutions I	C	2	0	0	2	2	ATA 102	Ataturk's Principles and History of Revolutions II	C	2	0	0	2	2
OHS 201	Occupational Health and Safety I	C	2	0	0	2	2	OHS 202	Occupational Health and Safety II	C	2	0	0	2	2
MATH 221	Differential Equations	C	4	0	0	4	6	MATH 124	Linear Algebra	C	3	0	0	3	5
MATH 225	Probability and Statistics	C	3	0	0	3	5	ENGR 202	Applied Statistics	C	2	0	2	3	6
ECON 151	Fundamentals of Economics	C	3	0	0	3	4		Departmental Elective	E	3	0	0	3	5
IE 203	Work Methods and Measurement	C	3	0	0	3	5	IE 204	Engineering Economics	C	3	0	0	3	5
IE 205	Materials and Processes in Manufacturing	C	3	0	0	3	5	IE 200	Practical Training I	C	0	0	0	0	5
	University Elective	E	2	0	0	2	3	IE 202	Systems Analysis and Design	C	3	0	0	3	5
<b>TOTAL</b>			<b>22</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>32</b>	<b>TOTAL</b>			<b>18</b>	<b>0</b>	<b>2</b>	<b>19</b>	<b>35</b>
5. SEMESTER							6. SEMESTER								
C.Code	Course Name	Type	T	A	L	C	ECTS	C.Code	Course Name	Type	T	A	L	C	ECTS
IE 301	Operations Research I	C	2	2	0	3	5	IE 302	Operations Research II	C	2	2	0	3	5
IE 303	Production Management I	C	2	2	0	3	5	IE 304	Production Management II	C	2	2	0	3	5
	Departmental/Non-departmental Elective	E	3	0	0	3	5	IE 306	Systems Modelling and Simulation	C	2	0	2	3	5
	Departmental Elective	E	3	0	0	3	5		Departmental Elective	E	3	0	0	3	5
	Departmental/Non-departmental Elective	E	3	0	0	3	5		Departmental/Non-departmental Elective	E	3	0	0	3	5
	University Elective	E	2	0	0	2	3		University Elective	E	2	0	0	2	3
<b>TOTAL</b>			<b>15</b>	<b>4</b>	<b>0</b>	<b>17</b>	<b>28</b>	IE 300	Practicum II	C	0	0	0	0	5
7. SEMESTER							8. SEMESTER								
C.Code	Course Name	Type	T	A	L	C	ECTS	C.Code	Course Name	Type	T	A	L	C	ECTS
IE 401	Graduation Seminar	C	2	4	0	4	5	IE 402	Graduation Project	C	2	4	0	4	10
IE 403	Quality Engineering	C	2	0	2	3	5		Business Experience*	C	0	24	0	12	15
	Departmental Elective	E	3	0	0	3	5		Departmental Elective	E	3	0	0	3	5
	Departmental Elective	E	3	0	0	3	5								
	Departmental/Non-departmental Elective	E	3	0	0	3	5								
	Departmental/Non-departmental Elective	E	3	0	0	3	5								
<b>TOTAL</b>			<b>16</b>	<b>4</b>	<b>2</b>	<b>19</b>	<b>30</b>	<b>TOTAL</b>			<b>5</b>	<b>28</b>	<b>0</b>	<b>19</b>	<b>30</b>

*BUSINESS EXPERIENCE APPLIED COURSES							
C.Code	Course Name	Type	T	A	L	C	ECTS
IE 404	Vocational Training in Business	C	0	24	0	12	15
IE 406	Industrial Engineering Applications	C	0	24	0	12	15

\* Alternatively, one of the two courses will be taken

<b>CREDIT / ECTS TOTAL</b>	<b>250</b>
<b>ELECTIVE COURSE CREDIT / ECTS TOTAL</b>	<b>64</b>
<b>ELECTIVE COURSE RATIO (%)</b>	<b>25,60</b>

**Prerequisites:** MATH 225 is prerequisite course for the course ENGR 202, MATH 225 is prerequisite course for the course IE 306, MATH 124 is prerequisite course for the course IE 301, IE 303 and IE 401 are prerequisite courses for the courses IE 402 and Business Experience (IE 404 and IE 406), and GPA greater than or equal to 2.00 is a must.

DEPARTMENTAL ELECTIVE COURSES															
C.Code	Course Name	Type	T	A	L	C	ECTS	C.Code	Course Name	Type	T	A	L	C	ECTS
ECON 152	Cost Accounting	E	3	0	0	3	5	IE 373	Sustainability and Green Engineering	E	3	0	0	3	5
IE 350	Project Management	E	3	0	0	3	5	IE 374	Database Management	E	3	0	0	3	5
IE 351	Total Quality Management	E	3	0	0	3	5	IE 375	Decision Analysis	E	3	0	0	3	5
IE 352	Enterprise Resource Planning	E	3	0	0	3	5	IE 376	Liderlik ve Takım Çalışması	E	3	0	0	3	5
IE 353	Introduction to Data Science	E	3	0	0	3	5	IE 450	Computer Integrated Manufacturing	E	3	0	0	3	5
IE 354	Modeling and Analysis of Manufacturing Systems	E	3	0	0	3	5	IE 451	Marketing Management	E	3	0	0	3	5
IE 355	Small and Medium Enterprises (SME) Management	E	3	0	0	3	5	IE 452	Network Optimization	E	3	0	0	3	5
IE 356	Group Technology and Flexible Manufacturing Systems	E	3	0	0	3	5	IE 453	Introduction to Scheduling	E	3	0	0	3	5
IE 357	Production Information Systems	E	3	0	0	3	5	IE 454	Technology Management	E	3	0	0	3	5
IE 358	Entrepreneurship and Innovation	E	3	0	0	3	5	IE 455	Design of Experiment	E	3	0	0	3	5
IE 359	Assembly Line Balancing	E	3	0	0	3	5	IE 456	Introduction to Fuzzy Logic	E	3	0	0	3	5
IE 360	Special Topics in Industrial Engineering I	E	3	0	0	3	5	IE 457	Introduction to Heuristics	E	3	0	0	3	5
IE 361	Special Topics in Industrial Engineering-II	E	3	0	0	3	5	IE 458	Stochastic Processes	E	3	0	0	3	5
IE 362	Revenue Management	E	3	0	0	3	5	IE 459	Advanced Quality Control Techniques	E	3	0	0	3	5
IE 363	Problem Solving and Innovation	E	3	0	0	3	5	IE 460	Inventory Systems	E	3	0	0	3	5
IE 364	Risk Analysis	E	3	0	0	3	5	IE 461	Discrete Optimization	E	3	0	0	3	5
IE 365	Ergonomics	E	3	0	0	3	5	IE 462	Constraint Programming	E	3	0	0	3	5
IE 366	Financial Management	E	3	0	0	3	5	IE 463	Game Theory	E	3	0	0	3	5
IE 367	Applied Optimization	E	3	0	0	3	5	IE 464	Design for Sustainability	E	3	0	0	3	5
IE 368	Inventory Control and Planning	E	3	0	0	3	5	IE 465	Applied Data Science	E	3	0	0	3	5
IE 369	Multi-Criteria Decision Making	E	3	0	0	3	5	IE 466	Dynamic Programming	E	3	0	0	3	5
IE 370	Supply Chain and Logistics Management	E	3	0	0	3	5	IE 467	Facilities Design and Planning	E	3	0	0	3	5
IE 371	Lean Production	E	3	0	0	3	5	IE 468	Artificial Intelligence Applications in Industrial Engineering	E	3	0	0	3	5
IE 372	Time Series and Forecasting	E	3	0	0	3	5								