

Applied Science Private University

Faculty of Engineering
Mechanical and Industrial Engineering Dept.

Study Plan Industrial Engineering Graduation Requirements **160 C.H.**



First Semester 2021/2022

First: University Requirements 24 Credit hours.				
1) Mandatory Courses (15) credit hours , include the following subjects				
Code	No.	Course Name	C.H.	Prerequisite
	1401146	Entrepreneurship and innovation	1	concurrent
	1401147	Leadership and social accountability	1	
	1401148	Life skills	1	
	100103	Military Sciences*	3	
	1401116	Islamic Education	3	-
	1401123	Communication skills (Arabic)**	3	-
	1401124	Communication skills (English)**	3	-
	1401150	National Education	3	-
2) Elective Courses:(9) credit hours, selected from the following subjects:				
	501114	Palestinian Cause & Contemp. Arab History	3	-
	1401126	Human Rights	3	-
	1401151	Campus Life Ethics	3	-
	1401130	Sports and Health	3	-
	1401131	Introduction to Sociology	3	-
	1401127	Environmental Development	3	-
	1401210	Arabic Language (2)	3	1401123
	1401220	English Language (2)	3	1401124
	1401221	Foreign Languages	3	-
	1501127	Green Energy	3	-
	1501154	Health Education	3	-
	1501164	Digital Culture	3	-
	1501163	Introduction to the future	3	-
	1211110	Art Education	3	-
	1401118	Ethics in Islam	3	-
	1501128	Communication and Social Media Technology	3	-

Second) Faculty Requirements (25) credit hours				
ME107	0802107	Engineering Workshop	1	-
IE323	0803323	Economy & Eng. Management	3	0810112
CE107	0805107	Engineering Drawing	1	-
CE203	0805203	Ethics & Technical Writing	2	1401120
PE201	0809201	Renewable Energy Applications & Sustainability	1	-
EE112	0810112	Calculus 2	3	1501110
EE201	0810201	Computer Skills 2	3	Passing Test
MATH110	1501110	Calculus 1	3	-
PHYS120	1501120	General Physics 1	3	-
PHYS121	1501121	General Physics Lab 1	1	1501120***
PHYS220	1501220	General Physics 2	3	1501120
PHYS221	1501221	General Physics Lab 2	1	1501220***

Third) Department Requirements (111) credit hours				
A- Mandatory Courses (69) credit hours				
IE231	0803231	Statistics and Probability 1	3	0810112
IE232	0803232	Statistics and Probability 2	3	0803231
IE233	0803233	Object Oriented Programming for Industrial Engineering	3	0802337
IE234	0803234	Statistics & Excel Lab.	1	0803232
IE310	0803310	Manufacturing Processes 1	3	0802205
IE312	0803312	Manufacturing Processes Lab.	1	0803310
IE330	0803330	Operations Research 1	3	0803231
IE331	0803331	Operations Research 2	3	0803330
IE334	0803334	Work Measurements	3	0803231
IE370	0803370	Quality Control	3	0803232***
IE413	0803413	Introduction To Data Analytics And Machine Learning	3	0803331

Code	No.	Course Name	C.H	Prerequisite
IE420	0803420	Engineering Cost Analysis	3	0803323
IE439	0803439	Systems Modeling and Optimization Lab	1	0803331
IE465	0803465	Automation and Control	3	0803310
IE466	0803466	Automation and Control Lab.	1	0803451
IE471	0803471	Production Planning and Control	3	0803330
IE457	0803457	Human Factors and Safety Eng.	3	0803334
IE478	0803478	Human Factors Eng. and Time and Motion Study lab.	1	0803457***
IE482	0803482	Simulation	3	0803330
IE551	0803551	Computer Aided Design and Manufacturing	3	0803310
IE556	0803556	Computer Aided Design and Manufacturing Lab	1	0803551
IE561	0803561	Project Management	3	0803331
IE565	0803565	Industrial Facility Planning	3	0803323
IE570	0803570	Supply Chain Management	3	0803471***
IE574	0803574	Product Development and Entrepreneurship	3	0803565***
IE585	0803585	Graduation Project 1	1	Dept. Approval
IE587	0803587	Graduation Project 2	2	0803585
IE589	0803589	Engineering Training	3	Dept. Approval

B- Elective Courses (9) credit hours				
IE311	0803311	Manufacturing Processes 2	3	0803310
IE463	0803463	Maintenance management	3	0803323
IE498	0803498	Computer Application in IE	3	0803323+0803233
IE 557	0803557	Additive manufacturing		0803551
IE560	0803560	Management Information System	3	0803323
IE566	0803566	Total Quality Management	3	0803370
IE572	0803572	Lean Production systems	3	IE565***
IE573	0803573	Data Sci. Applications For Eng. And Business Intel.	3	0803413
IE575	0803575	Design Of Experiments	3	0803232
IE576	0803576	Enterprise Resource Planning	3	0803471
IE577	0803577	Risk Management	3	0803457
IE578	0803578	Artificial Intelligence	3	0803413
IE579	0803579	IoT Applications For Industrial Engineering	3	0803413
IE582	0803582	Safety Management Systems	3	0803457
IE592	0803592	Special Topics in Industrial Eng. 1	3	Dept. Approval
IE597	0803597	Special Topics in Industrial Eng. 2	3	Dept. Approval

C- Support Mandatory Courses from other departments (33) credit hours				
ME108	0802108	Descriptive Geometry	1	-
ME205	0802205	Engineering Materials	3	1501130
ME206	0802206	Engineering Materials lab.	1	0802205***
ME227	0802227	Applied Mechanics	3	0802107
ME228	0802228	Applied Mechanics Lab	1	0802227
ME337	0802337	Discrete mathematics	3	0803330
ME345	0802345	Thermal Fluid Sciences	3	0810203
ME461	0802461	Engineering Measurements and Instrumentation	3	0803310
ME462	0802462	Engineering Measurements and Instrumentation Lab	1	0802461***
EE203	0810203	Advanced Engineering Math 1	3	0810112
EE204	0810204	Principles of Electrical Eng.	3	1501220
EE205	0810205	Principles of Electrical Eng. Lab	1	0810204
EE302	0810302	Numerical Analysis	3	0810201
CHEM130	1501130	General Chemistry	3	-
CHEM131	1501131	General Chemistry Lab	1	1501130

*Non-Jordanian students may take any subject offered instead of Military Science.
 All students must take a skill level test in Arabic and English languages. Students failing any of the tests shall register for a remediation course in the subject they failed which will be outside their study plan. *simultaneously with, or prerequisite.
 **** Students need to finish Community Service
 C.H. : Credit Hour