Philadelphia University
Study Plan (2026-2027)
B.Sc. in Mechanical Engineering

Faculty of Engineering and Technology

Student Name: _____
Student No : _____
Academic Advisor: _____

Total Credit Hours (160) Hrs.

First: University Requirements (27) Cr. Hr.

A. First Field: University Compulsory Requirements: (18) Cr. Hr.

Course No.	Course Title	Cr.Hrs	Prerequisite	Kind of Learning
116002	Military Science *	3	---	ONLINE
116101	National Education	3	---	ONLINE
116102	Entrepreneurship, Innovation, and Leadership skills	3	---	ONLINE
116103	Communication and Contact Skills (Arabic Language)	3	116099	Physical
116107	Communication and Contact Skills (English Language 1)	3	116098	Physical
116108	Communication and Contact Skills (English Language 2)	3	116107	Physical
116109	Voluntary Community Service	0	---	ONLINE

* Compulsory for Jordanian Students

B. University Elective Courses (9) Cr. Hr.

The student studies 9 credit hours from the table below:

Course No.	Course Title	Cr. Hr.	Prerequisite	Kind of Learning
116116	Personal and Professional Skills	3	Dept. Approval	Blended
116117	Financial and Economic Literacy	3	Dept. Approval	Blended
116111	Language Skills (1) (European or Eastern languages)	3	------	Blended
116112	Language Skills (2) (European or Eastern languages)	3	116111	Blended
116113	Language Skills (3) (European or Eastern languages)	3	116112	Blended
216113	Sustainable Development and the Environment	3	Dept. Approval	Blended

Notes: -

All students must take level examinations in Arabic Language, English language and Computer skills. Student who fails to pass in any examinations (less than 50 %) must successfully pass the remedial course which He / She did not pass.

Codes used in Curriculum:

(610) Electrical Eng. (620) Mechanical Eng.
(640) Mechatronics Eng. (670) Civil Eng.

Second: Faculty Requirements: (24) Cr. Hr.

Course No.	Course Title	Cr.Hr.	Prerequisite	Kind of Learning
216111	Calculus (1)	3	---	Physical
250102	Calculus (2)	3	216111	Physical
216131	General Physics (1)	3	---	Physical
216132	General Physics (2)	3	216131	Blended
620130	Manual Engineering Drawing	1	---	Physical
620132	Computer Engineering Drawing	1	620130	Physical
620173	Engineering Workshops	1	---	Physical
610266	Artificial Intelligence & Data analytics in Engineering	3	216099	Blended
610358	Engineering Innovation & Tech. Entrepreneurship	3	116108	ONLINE
670558	Engineering Economics & Digital Applications	3	610358	Blended

Third: Department Requirements (109) Cr.Hrs.

A. Compulsory Requirements: (80) Cr.Hrs.

Course No.	Course Title	Cr.Hr.	Prerequisite	Kind of Learning
610218	Electrical Circuits	3	216132	Physical
620211	Statics	3	216131	Blended
620212	Dynamics	3	620211	Blended
620213	Strength of materials	3	620211	Physical
620232	Mechanical Drawing	2	620132	Physical
620344	Engineering Measurements	3	610218	Physical
620274	Material Science	3	216141	ONLINE
620333	Theory of Machines	3	620212	Physical
620320	Fluid Mechanics (1)	3	620212	Physical
620323	Thermodynamics (1)	3	216132	Physical
620324	Thermodynamics (2)	3	620323	Physical
620428	Fluid Mechanics(2)	3	620320	Blended
620434	Machine Design (1)	3	620213	Physical
620435	Machine Design (2)	3	620434	Physical
620443	Automatic Control	3	640263	Physical
620420	Heat transfer (1)	3	620324	Physical
620436	Exercises in Machine Design	1	*620435	Physical
620477	Production Processes	3	620274	ONLINE
620414	Mechanical vibrations	3	620212	Physical
620529	Internal combustion engines	3	620324	Blended
620522	Air conditioning (1)	3	620420	Physical
620523	Design of Sanitary Systems	3	620320	Blended
610216	Electrical Engineering lab.	1	610218(*)	Physical
620427	Thermal Lab.	1	620420(*)	Physical
620520	Internal combustion engine Lab.	1	620529 (*)	Physical
620429	Fluid Mechanics Lab.	1	620428(*)	Physical
620415	Mechanical vibration lab.	1	620414(*)	Physical
620314	Strength of Material lab.	1	620213(*)	Physical
620345	Engineering Measurements Lab.	1	620344(*)	Physical
610416	Control systems Lab.	1	620443(*)	Physical
620440	Engineering project (1)	1	(100) Cr. Hrs.	Physical
620540	Engineering project (2)	2	620499+620440	Physical
620499	Engineering Training (**)	3	(115) Cr. Hrs. +620490	Physical

B. Compulsory Support Requirements: (20) Cr. Hr.

Course No.	Course Title	Cr.Hr	Prerequisite	Kind of Learning
216141	General Chemistry (1)	3	---	Physical
250202	Calculus (3)	3	250102	Physical
640263	Modeling & Simulation in Engineering Applications	3	610266	Blended
610262	Engineering Analysis (2)	3	610260	Blended
620490	Vocational Qualification	2	(100) Cr. Hr.	Physical
620301	Applied Engineering mathematics	3	610260	Physical
620302	Finite Element Method	3	610262	Physical
610260	Engineering Analysis (1)	3	250102	Blended

C. Elective Requirements: (9) Cr. Hr.

Course No.	Course Title	Cr.Hrs	Prerequisite	Kind of Learning
620538	Computer aided design	3	620436	Blended
620449	Refrigeration Systems	3	620324	Blended
620528	Hydraulic Machines	3	620320	Blended
620535	Power Plants	3	620324	Blended
620555	Special Topics in Mechanical Engineering	3	Dep. Approval	Blended
620437	Reverse Engineering	3	640263	Blended

(*) *Concurrent*

(**) *Seven weeks (280 hours) of Training after completing (115) Cr.Hrs.*

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