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

Faculty of Engineering and Technology

Total Credit Hours (160) Hrs.

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

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.
(611) Renewable Energy 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
610216	Electrical Circuits Lab.	1	610218(*)	Physical
620213	Solid Mechanics	3	620211	Physical
620434	Machine Design (1)	3	620213	Physical
620211	Statics	3	250102+216131	Blended
620212	Dynamics	3	620211	Blended
610242	Electronics (1)	3	610218	Blended
610332	Instruments and Measurements	3	610242	Physical
610310	Electrical Machines	3	610218	Physical
620320	Fluid Mechanics (1)	3	620212	Blended
620429	Fluid Mechanics Lab.	1	620320(*)	Physical
620323	Thermodynamics (1)	3	216132	Physical
620420	Heat transfer (1)	3	620323	Physical
620427	Thermal Lab.	1	620420(*)	Physical
620373	Properties of Engineering Materials	3	216141	ONLINE

Course No.	Course Title	Cr .Hrs.	Prerequisite	Kind of Learning
611341	Introduction to Renewable Energy	3	216132	ONLINE
610414	Automatic Control	3	610332+640263	Physical
611312	Energy Economics and Management	3	611341	Physical
611411	Energy Legislations	3	611312	Blended
611421	Solar Thermal Energy	3	611341 +620420	Physical
611422	Photovoltaic Energy System	3	611341	Physical
611440	Engineering Project (1)	1	(100) Cr.Hr	Physical
611511	Environmental Impact of energy	3	611312	Physical
611531	Wind Energy Systems	3	620320	Physical
611526	Solar Energy Lab.	1	611421(*) +611422(*)	Physical
611536	Wind Energy Lab.	1	611531(*)	Physical
610530	Power Electronics	3	610242	Physical
611533	Energy Storage Systems and Fuel Cells	3	216141	Physical
611540	Engineering Project (2)	2	611499+611440	Physical
611499	Engineering Training (**)	3	Cr.Hr (115) +611490	Physical

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

Course No.	Course Title	Cr.H.r	Prerequisite	Kind of Learning
216141	General Chemistry (1)	3	---	Physical
250202	Calculus (3)	3	250102	Physical
250205	Linear Algebra and Vector Calculus	3	250102	Blended
610262	Engineering Analysis (2)	3	250205	Blended
611301	Engineering Statistics	3	610260	Blended
640263	Modeling & Simulation in Engineering Applications	3	610266	Blended
611490	Vocational Qualification	2	(100) Cr. Hr.	Physical
610260	Engineering Analysis (1)	3	250102	Blended

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

Course No.	Course Title	Cr.Hrs	Prerequisite	Kind of Learning
611541	Bioenergy Systems	3	611341	Blended
611542	Geothermal Energy	3	611341 +620420	Blended
611543	Hydraulic and Waves Energy	3	611341+620320	Blended
611544	Special Topics in Renewable Energy	3	Dept. Approval	Blended
611546	Smart Grids	3	610266+610310	Blended
611547	Renewable Energy Systems Design	3	611531+611422	Blended

(*) Concurrent
(**) Seven weeks (280 working hours) for training after completing (115) Gr.Hr.

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