



Jordan University of Science and Technology
Faculty of Engineering
Nuclear Engineering Department

NE200 Principles In Nuclear Energy And Its Peaceful Applications

First Semester 2021-2022

Course Catalog

3 Credit Hours. 3 Credit hours (3 h lectures). The course aims at introducing the principles of energy with more focus on nuclear power. It discusses, in a simplified manner, nuclear energy concepts, the nuclear fuel cycle, the types of nuclear reactors, and a general overview of the development of nuclear energy and the motives and incentives for its use in the production of electricity in addition to the challenges and obstacles in this field. The course also discusses other peaceful applications of nuclear energy technology, frameworks, and legislation and the role of international and national institutions in controlling and regulating the nuclear energy sector. The Jordanian nuclear program is also highlighted, as Jordan is a newcomer to nuclear power.

Text Book

Title	Notes compiled from experience
Author(s)	Various sources
Edition	1st Edition
Short Name	Ref #1
Other Information	

Instructor

Name	Dr. Khaled AL-Shboul
Office Location	E2 L-2
Office Hours	Sun : 10:30 - 11:30 Mon : 14:00 - 16:00 Tue : 10:30 - 11:30 Wed : 14:00 - 16:00
Email	kfshboul@just.edu.jo

Class Schedule & Room

Section 1:
 Lecture Time: Sun : 14:30 - 16:00
 Room: E2117

Section 2:
 Lecture Time: Tue : 14:30 - 16:00
 Room: E2117

Tentative List of Topics Covered

Weeks	Topic	References
Weeks 1, 2	Energy: concept, types, current international and domestic situation.	From Ref #1
Weeks 3, 4	Introduction to nuclear power and it's history	From Ref #1
Weeks 5, 6	Radiation basic concepts	From Ref #1
Weeks 7, 8	Nuclear fuel cycle	From Ref #1
Weeks 9, 10	Nuclear reactors	From Ref #1
Weeks 11, 12	Current world situation: facts and numers	From Ref #1
Weeks 13, 14	Peaceful uses of nuclear energy	From Ref #1
Weeks 15, 16	The nuclear program of Jordan	From Ref #1

Relationship to Program Student Outcomes (Out of 100%)

1	2	3	4	5	6	7

Policy

Additional Information	This course syllabus provides a general plan for the course; deviations may be necessary
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