



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

EE585 Power Systems Operation
First Semester 2020-2021

Course Catalog
3 Credit Hours. Power system generation, transmission and distribution. Power generation resources. Overhead power lines; Underground power cables. Distribution system.

Text Book	
Title	Power Generation Operation and Control
Author(s)	Allen J. Wood
Edition	3rd Edition
Short Name	Textbook #1
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Textbook #2	Electric Power Transmission System Engineering: Analysis and Design	Turan Gonen	2nd Edition	
Textbook #3	Electric Power Distribution System Engineering	Turan G?nen	2nd Edition	
Ref #1	Transmission line Reference Book	Electric Power Research Institute	2nd Edition	
Ref #2	Electrical Transmission and Distribution Reference Book	2) Westinghouse Electric Corporation	1st Edition	

Instructor	
Name	Dr. AHMAD ABU ELRUB
Office Location	E1L2

Office Hours	Sun : 11:30 - 13:00 Mon : 11:30 - 13:00 Tue : 10:00 - 11:30 Wed : 11:30 - 13:00
Email	amabuelrub@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Mon, Wed : 13:00 - 14:30 Room: منصة الكترونية

Tentative List of Topics Covered		
Weeks	Topic	References
Weeks 1, 2	Power system generation	From Textbook #1
Weeks 3, 4	Power system state estimation	From Textbook #1
Weeks 5, 6	Transmission System Planning	From Textbook #2
Weeks 7, 8	Transmission Line Structures and Equipment	From Textbook #2
Weeks 8, 9	FACTS and Other Concepts	From Textbook #2
Weeks 10, 11	Overhead Power Transmission	From Textbook #2
Weeks 12, 13, 14	Load Characteristics	From Textbook #3
Week 15	Application of Distribution Transformers	From Textbook #3
Week 16	Design of Subtransmission Lines & Distribution Substations	From Textbook #3

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Study different systems of electrical power generation. and state estimation	30%	Midterm exam, Final exam, Quizzes
Study electrical design of transmission lines for overhead and underground cables.	40%	Homeworks, Final exam, Quizzes
Study distribution systems and load characteristics.	30%	Final exam, Quizzes

Relationship to Program Student Outcomes (Out of 100%)						
ABET1	ABET2	ABET3	ABET4	ABET5	ABET6	ABET7

Evaluation	
Assessment Tool	Weight
Midterm exam	12%

Homeworks	15%
Final exam	50%
Quizzes	23%

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