

**University of Jordan**  
**School of Engineering**  
**Department of Electrical Engineering**  
1<sup>st</sup> Term – A.Y. 2017-2018

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**Course:** Power Distribution Systems – 0943787. (3 Cr. – Obligatory Course)

Catalog Data: Electric power distribution system planning, design and operations; load characteristics and distribution transformers; design of subtransmission lines and distribution substations; primary and secondary feeder design considerations; distribution system voltage regulation, and protection.

**Prerequisites by Course:** **None**

**Textbook:** **None**

**References:** Electric power distribution system Engineering, Turan Gonen, McGraw-Hill, 1986

**Schedule & Duration:** 16 Weeks, 48 lectures, 50 minutes each (including exams).

**Course Objectives:**

Planning, design, analysis and operational concepts of the distribution system, including considerations of voltage regulation, and protection.

**Course Learning Outcomes and Relation to Program Learning Outcomes:**

Upon successful completion of this course, the student should be able to:

1. Understand the Load Characteristics [i, ii]
2. Design of Subtransmission Lines and Distribution Substations [i, ii]
3. Identify the voltage Drop and Power Loss Calculations [i, ii]
4. Understand Distribution System Protection [i, ii]

**Course Topics:**

Topic	Description	Contact Hours
T.1.	Load Characteristics	7
T.2.	Design of Subtransmission Lines and Distribution Substations	10
T.3.	Design Considerations of Primary Systems and Secondary Systems	10

T.4.	Voltage Drop, Power Loss Calculations and Distribution System Voltage Regulation	10
T.5.	Application of Capacitors to Distribution Systems	7

**Computer Usage:** students are encouraged to write/use computer programs for mathematical modelling.

**Attendance:** Class attendance will be taken and the University policy on absence will be followed.

**Assessments:** Exams

**Grading policy:**

Semester work	60 %
Final Exam	40 %
Total 100%	

**Instructor:**

Instructor Name	Office	Ext.	E-mail
Nabeel Tawalbeh	E 303	22841	<a href="mailto:ntawalbeh@ju.edu.jo">ntawalbeh@ju.edu.jo</a>

**Program learning outcomes**

- i Demonstate a sound, in-depth and up-to-date technical knowledge in the field of specialization.
- ii Ability to identify and solve engineering problems in their chosen field of study.
- iii Acquire the skills for continued professional development and independent self-study.
- iv Demonstrate the ability to communicate technical informatiom effectively and professionally both orally and in writing..

**Last Updated:** 2017-03-26