



Course Specifications

Muharram 1437 H

Institution:	Majmaah University
Academic Department :	Electrical Engineering
Programme :	communication and power tracks
Course :	Fundamental of electric circuit
Course Coordinator :	Dr. Yazeed Qasaymeh
Programme Coordinator :	.....
Course Specification Approved Date :	11/3 / 1437 H



A. Course Identification and General Information

1 - Course title :	Fundamental of electric circuit	Course Code:	EE 101
2. Credit hours :	(3)		
3 - Program(s) in which the course is offered:	communication and power tracks		
4 – Course Language :	English		
5 - Name of faculty member responsible for the course:	Yazeed Qasaymeh		
6 - Level/year at which this course is offered :	spring semester, freshman year		
7 - Pre-requisites for this course (if any) :	MATH 107 Algebra and Analytical Geometry		
8 - Co-requisites for this course (if any) :	<ul style="list-style-type: none"> • 		
9 - Location if not on main campus :	College of Engineering		
10 - Mode of Instruction (mark all that apply)			
A - Traditional classroom	<input checked="" type="checkbox"/>	What percentage?	100%
B - Blended (traditional and online)	<input type="checkbox"/>	What percentage? %
D - e-learning	<input type="checkbox"/>	What percentage? %
E - Correspondence	<input type="checkbox"/>	What percentage? %
F - Other	<input type="checkbox"/>	What percentage? %
Comments :	..... .....	

B Objectives

<p>What is the main purpose for this course?</p> <ul style="list-style-type: none"> • Knowing basic Electric circuit elements. • Learning the basic concepts of electric circuits. • Mastering basic electric circuit theorems. • Learning the basic techniques of circuit analysis. • Understanding the concept of phasor and vectors in circuit analysis. • Learning the concept of power in electric circuits.
<p>Briefly describe any plans for developing and improving the course that are being implemented :</p> <ul style="list-style-type: none"> • Discussing all the topics of the course at the beginning of the semester. • Encourage the student to use the Internet and encyclopedias to get more information about these topics. • Let the student using the Internet to do a project to develop their knowledge and skills. • Introducing any of the CAD software in circuit analysis, such as PSpice.



C. Course Description

1. Topics to be Covered

List of Topics	No. of Weeks	Contact Hours
Basic circuit elements and concepts	2	8
Basic laws of circuit theory: Ohm's law, Kirchoff's law	3	12
Techniques of circuit analysis: Nodal and mesh analysis.	3	12
Circuit theorems: superposition principle, Thevenin theorems	3	12
Circuit theorems: Norton theorems; maximum power transfer theorem;	2	8
Electric circuit phasors and vectors, Analyzing electric circuit active and reactive powers.	2	8

2. Course components (total contact hours and credits per semester):

	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	45	15	0	0	0	60
Credit	3	0	0	0	0	3

3. Additional private study/learning hours expected for students per week.

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4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	Knowledge		
1.1	.....	.....	.....
1.2	.....	.....	.....
1.3	.....	.....	.....
1.4	.....	.....	.....
1.5	.....	.....	.....
1.6	.....	.....	.....
2.0	Cognitive Skills		
2.1	.....	.....	.....
2.2	An ability to design a system, component, or process to meet desired needs within realistic constraints	Lecture, small group work, , research activities, lab demonstrations, projects and individual presentation	Standardized exams, Oral exams, Micro projects
2.3	.....	.....	.....
2.4	.....	.....	.....
2.5	.....	.....	.....
2.6	.....	.....	.....
3.0	Interpersonal Skills & Responsibility		
3.1	.....	.....	.....
3.2	.....	.....	.....
3.3	.....	.....	.....
3.4	.....	.....	.....
3.5	.....	.....	.....
3.6	.....	.....	.....
4.0	Communication, Information Technology, Numerical		
4.1	An ability to apply knowledge of mathematics, science, and engineering	Lecture, research activities, lab demonstrations, projects, case studies, memorization and individual presentation	Standardized exams, Oral exams, Micro projects





	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
4.2
4.3
4.4
4.5
4.6
5.0	Psychomotor		
5.1
5.2
5.3
5.4
5.5
5.6

5. Schedule of Assessment Tasks for Students During the Semester:

	Assessment task	Week Due	Proportion of Total Assessment
1	Exams	9 th and 14 th	40 %
2	Quizzes and Assignments		20%
3	Final Exam	16 th	40%
4	.....	.....	.....
5	.....	.....	.....
6	.....	.....	.....
7	.....	.....	.....
8	.....	.....	.....





D. Student Academic Counseling and Support

1. Weekly office hours (1 hour per week)
2. Exam error analysis in class
3. Feedback for each student
4. Providing weekly guidelines on students' overall performance
5. Teacher's web page.

E. Learning Resources

1. List Required Textbooks :

- Sadiku, Fundamentals of Electric Circuits, 3rd Edition, McGraw-Hill Science, 2005.

2. List Essential References Materials :

- Boylestad, "Introductory Circuit Analysis", Prentice Hall, 1999

3. List Recommended Textbooks and Reference Material :

4. List Electronic Materials :

-
-
-

5. Other learning material :

-
-
-

F. Facilities Required

1. Accommodation

- Lecture rooms should be large enough to accommodate 25 students

2. Computing resources

- computer - projector system- smart board

3. Other resources

- Data show to facilitate going over student papers in class

G Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching:

- Completion course evaluation questionnaire,
- Classroom observations to measure student behavior through how well the student groups are interacting in-class activity and how well the in-class activity went.

2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor :





- Faculty Peer Assessment

3 Processes for Improvement of Teaching :

- Plan: The instructor will develop a strategy for teaching.
- Do: The strategy will be implemented for one semester.
- Study: The experiences of the students will be collected through a survey.
- Act: Effective teaching strategies will be implemented and revised as more experiences are gained.

4. Processes for Verifying Standards of Student Achievement

Check marking of a sample of examination papers

5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement :

- Continuous improvement is a circular process, encompassing student assessment, course planning and design, implementation, evaluation, and revision.
- A feedback from all relevant assessment tools must be considered in the continuous process of course objectives refinement and assessment.
- Continuous process for reviewing feedback from student on the quality of the course and planning for improvement.

Course Specification Approved
Department Official Meeting No (.....) Date ... / / H

Course's Coordinator

Name : Dr Yazeed Qasaymeh

Signature :

Date : 11/ 3 /1437 H

Department Head

Name : Dr Abdullah Almuhasien

Signature :

Date : .../ ... / H

