

Kingdom of Saudi Arabia Ministry of Higher Education Qassim University College of Engineering		المملكة العربية السعودية وزارة التعليم العالي جامعة القصيم كلية الهندسة
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Selected Topics in Power System

College: Engineering

Department: Electrical (Power section)

First: Course Definition

1- Course Code: EE 649

2- Units: 3 credit Hrs.

3 – Semester:

4 -Prerequisite

5- Co-requisite

6- Location (if not on main Campus):

Second: Course Objectives

1. Update the power engineer with the most recent topics in power systems
2. Explore and discuss some of the updated topics as selected by the instructor

Third: Course Specifications

1- Topics to be covered		
Subject	No of Weeks	Units
Topics will be outlined by the instructor		
Total	15	45

2- Course components (Total hrs in the Semester: 45)

Lecture	Exercise or lab	Other
45	----	

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3- Intended Learning Outcomes of the Course (ILO's)

a. Knowledge

i) Description of the knowledge to be acquired :

- Will be assigned by the instructor

ii) Teaching strategies to be used to develop that knowledge

- Lectures
- Assignments, at home
- Discussions in the Class
- Case study Report (data collection, internet search, and reporting)

iii) Methods of assessment of knowledge acquired

- **Quizzes:** to assess understanding of the course knowledge.
- **Assignment reports:** to assess ability to answer some comprehensive questions.
- **Midterm Exams:** to assess understanding of the course knowledge.
- **Final Exam:** to assess understanding of the course knowledge.

b- Cognitive (Intellectual) Skills

i) Cognitive skills to be developed

- These skills will be outlined by the instructor

ii) Teaching strategies to be used to develop these cognitive skills

- Lectures
- Assignments, at home
- Discussions in the Class
- Case study Report (data collection, Internet search, and reporting)

iii) Methods of assessment of students cognitive skills

- **Quizzes:** to assess the ability to solve quickly some problems.

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- **Assignment reports:** to assess the ability to solve and analyze some comprehensive problems.
- **Midterm Exams:** to assess the ability to discuss, analyze, and solve the associated problems.
- **Final Exam:** to assess the intellectual skills such as analytical skills and ability to solve related problems.

c. Interpersonal Skills and Responsibility

- i) Description of the interpersonal skills and capacity to carry responsibility to be developed***
- Team work
 - Ideas development and sharing with others

- ii) Teaching strategies to be used to develop these skills***
- Assignments, at home
 - Discussions in the Class
 - Case study Report (data collection, Internet search, and reporting)-

- iii) Methods of assessment of students interpersonal skills and capacity to carry responsibility***
- **Unified reports and Seminars:** to assess the integration done by the student in a unified report and presentations.
 - **Oral Group Exams:** to assess interactive and communication abilities.

d. Communication, Information Technology and Numerical Skills

- i) Description of the skills to be developed in this domain***
- Use of the internet search
 - Technical report writing

- ii) Teaching strategies to be used to develop these skills***
- Assignments, at home
 - Assignment Reports (data collection, Internet search, and reporting)

- iii) Methods of assessment of students numerical and communication skills***
- **Assignment Reports:** to assess technical report writing abilities.
 - **Discussion Groups:** to assess interactive and communication abilities.-

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e. Psychomotor (if applicable) & Other Non-cognitive Skills

i) Description of the psychomotor or other skills to be developed and the level of performance required

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ii) Teaching strategies to be used to develop these skills-

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iii) Methods of assessment of student's psychomotor skills

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4- Student Assessment Schedule

Serial	Assessment tool (test, group project, examination etc.)	Week due	Weight
1	Quizzies	Weeks 1-15	5%
2	Assignments	Weeks 1-15	5%
3	Group reports and seminars	Week 1-15	10%
4	Mid Term Exam1	Week 6	15%
5	Mid Term Exam2	Week 12	15%
6	Final Exam	Week 16	50%

5- Student Support

6- Learning Resources

i) Essential Books (References)

Books and references will be tabulated by the instructor.

ii) Course Notes-

- Course materials are uploaded on the College Web-Site (www.qec.edu.sa) to be available for the students.
- Computer-based programs/CD, professional standards/regulations

iii) Recommended Books

- Books and references will be tabulated by the instructor.

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- iv) Electronic Books & Web Sites:**
- Course materials are uploaded on the College Web-Site (www.qec.edu.sa) to be available for the students
- v) Periodicals**
- IEEE Trans on Power Systems
 - IEEE Trans on Power Delivery
 - IJEPRS (power system research journal)

7- Course Evaluation and Improvement Processes

- i) Strategies for Obtaining Student Feedback on Effectiveness of Teaching**
- Carrying out extensive questioners by a sample of the distinguished students just after the graduation from the college.
 - Questionnaire,
 - Observing the students opinions recorded in the college student site
 - Appeal box

- ii) Other Strategies for Evaluation of Teaching by the Instructor or by the Department**
- Periodical review of the teaching methods by both the department council and the education affairs vice dean
 - Questionnaire,
 - Observing the students opinions recorded in the college student site

- iii) Processes for Improvement of Teaching**
- Evaluation of the course outlines by external staff member from outside the university
 - Periodical contact with the different engineering authorities and industries for evaluating and getting their feedback and suggestions concerning the course outlines.

- iv) Processes for verifying standards of student achievement (e.g. check marking by an independent faculty member of a sample of student work, periodic exchange and remarking of a sample of assignments with a faculty member in another institution)**
- It is planned to.
 - 1- Check marking of a sample of student work by an independent faculty member
 - 2- Exchange periodically, and remark a sample of assignments with a faculty member in King Saud University (KSU)

- v) Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.**
- Review of the course objectives, outcomes and curriculum each 2 years

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- Consequently, actions are to be taken to improve the course delivery when necessary.
- Assessment and evaluation of the level of achieving the course outcomes through a continuous improvement process (part of a quality assurance system established by the university)