



University/Academy: Arab Academy for Science and Technology & Maritime Transport

Faculty/Institute: College of Engineering & Technology

Program: Electrical & Control Engineering

**Form no. (12)
 Course Specification**

1- Course Data

Course Code: EE 548	Course Title: Design of Electrical and Electromechanical Systems for Commercial and Industrial Installations	Academic Year/Level: 5
Specialization: Electrical & Control Engineering	No. of Instructional Units: 3	Lecture 2 Practical 2

2- Course Aim	<ul style="list-style-type: none"> - To introduce students to the general and special design requirements in industrial and commercial installations. - To enable students to use standards and codes of general and special design requirements in commercial and industrial applications
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3- Intended Learning Outcome

a- Knowledge and Understanding	A.1 Concepts and theories of mathematics and sciences, appropriate to the discipline A.6 Quality assurance systems, codes of practice and standards, health and safety requirements and environmental issues. A.14 Design methods and tools for electrical power and machines equipment and systems.
b- Intellectual Skills	B.17 Analyze power system behavior and suggest appropriate protection scheme
c- Professional Skills	C.2 Professionally merge the engineering knowledge, understanding, and feedback to improve design, products and/or services
d- General Skills	D.3 Communicate effectively

4- Course Content According to Course Matrix (Form 11a), Course File Summary (ISO MPC 3/2-1 and session Plan (ISO MPC 3/3-1)	<i>Week Number 1:</i> Characteristics of Industrial & Commercial Loads <i>Week Number 2:</i> Selection of distribution system <i>Week Number 3:</i> Wiring systems <i>Week Number 4:</i> Wiring systems <i>Week Number 5:</i> System protection & coordination <i>Week Number 6:</i> System protection & coordination <i>Week Number 7:</i> Controllers & MCC <i>Week Number 8:</i> Power factor and p.f. correction <i>Week Number 9:</i> Lighting <i>Week Number 10:</i> Heating and Air Conditioning <i>Week Number 11:</i> Special Loads <i>Week Number 12:</i> Lifts and escalators <i>Week Number 13:</i> Grounding. <i>Week Number 14:</i> Safety and Fire Alarm Safety. <i>Week Number 15:</i> Codes and Standards. <i>Week Number 16:</i> Final Exam														
5- Teaching and Learning Methods	<ul style="list-style-type: none"> - Lectures - Tutorials - Reports & sheets - Laboratories - Seminars 														
6- Teaching and Learning Methods for Students with Special Needs	<ul style="list-style-type: none"> - Lectures - Tutorials - Reports & sheets - Laboratories - Condensed office hours 														
7- Student Assessment:	Written Examinations to asses The Intended Learning Outcomes Class Activities (Reports, Discussions, -----) to asses The Intellectual Skills														
a- Procedures used:	Written Examinations to asses The Intended Learning Outcomes Class Activities (Reports, Discussions, -----) to asses The Intellectual Skills														
b- Schedule:	<table border="0" style="width: 100%;"> <tr> <td style="width: 60%;">Assessment 1</td> <td style="text-align: right;">7th Week Written Exam</td> </tr> <tr> <td>Assessment 2</td> <td style="text-align: right;">12th Week Written Exam</td> </tr> <tr> <td>Assessment 3</td> <td style="text-align: right;">Continuous Assessments</td> </tr> <tr> <td>Assessment 4</td> <td style="text-align: right;">16th Week Final Written Exam</td> </tr> </table>	Assessment 1	7 th Week Written Exam	Assessment 2	12 th Week Written Exam	Assessment 3	Continuous Assessments	Assessment 4	16 th Week Final Written Exam						
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c- Weighing of Assessment:	<table border="0" style="width: 100%;"> <tr> <td style="width: 60%;">7th Week Examination</td> <td style="text-align: right;">30 %</td> </tr> <tr> <td>12th Week Examination</td> <td style="text-align: right;">20 %</td> </tr> <tr> <td>Final-term Examination</td> <td style="text-align: right;">40 %</td> </tr> <tr> <td>Oral Examination</td> <td style="text-align: right;">0 %</td> </tr> <tr> <td>Practical Examination</td> <td style="text-align: right;">0 %</td> </tr> <tr> <td>Semester Work</td> <td style="text-align: right;">10 %</td> </tr> <tr> <td>Total</td> <td style="text-align: right;">100%</td> </tr> </table>	7 th Week Examination	30 %	12 th Week Examination	20 %	Final-term Examination	40 %	Oral Examination	0 %	Practical Examination	0 %	Semester Work	10 %	Total	100%
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8- List of References:	Gupta, J.B., "Electrical Installation Estimating and Costing", S.K. Kataria, 2006
a- Course Notes	
b- Required Books (Textbooks)	C. Shelton, "Electrical Installations", Longman Group
c- Recommended Books	
d- Periodicals, Web Sites, ..., etc.	

Course Instructor

Name: **Dr. Amani Hanafi**

Signature:



Head of Department

Name: **Prof. Hamdy Ashour**

Signature:

Dean of College of Engineering and Technology of AASTMT

Name: **Prof. Moustafa Hussein Aly**

Signature:

Executive Manager of Quality Assurance Center of AASTMT

Name: **Prof. Aziz Ezzat**

Signature: