University / Academy : Menoufiya University

College / Institute : Faculty of Electronic Engineering

Department : Electronics and Electrical Communications Engineering

Course Specification

1- Course basic information :		
Course Code: EC 125	**Course Title: *Electronic Circuits Drafting***	**Academic year: 2011/2012** **Level (1) – Semester : 2**
Faculty requirement	**Teaching hours: Lecture** 2 **Tutorial** 3 **Lab** 0	

2- Aim of the course	• To make students familiar with electronic components and various electronic circuits representations. • To learn how to draw and understand various electronic circuits representations (electronic symbol, block diagram, flow chart, logic diagram, schematic diagram, and wiring connection diagrams). • To develop the student's skills to design the schematic diagrams for a practical circuit. • To know the construction of the commonly used electrical components through assembly drawing of these components.
3- Intended Learning Outcomes:	
A- Knowledge and Understanding:	a4) Principles of design including elements design, process and/or a system related to specific electronic circuits drafting. a8) Current engineering technologies as related to electronic circuit drafting.
B- Intellectual Skills	b4) Combine, exchange, and assess different ideas, views, and knowledge from a range of sources. b5) Assess and evaluate the characteristics and performance of components, systems and processes.
C- Professional Skills	c2) Professionally merge the engineering knowledge, understanding, and feedback to improve design, products and/or services. c3) Create and/or re-design a process, component or system, and

	carry out specialized engineering designs.
D- General Skills	d1) Collaborate effectively within multidisciplinary team. d7) Search for information and engage in life-long self learning electronic circuits drafting. d8) Acquire entrepreneurial skills.
4- Course Contents	**Drafting techniques of electronic designs-Symbols of electronic Circuits drafting Assembly and detail drawing-Electron-Component symbols – Schematic -diagram drawing-Wiring and printed circuit board diagrams-Draw Proper Schematic diagrams of pictorial diagrams-Computer-aided-drawing of electronic Components and circuits- Computer-aided-drawing of printed circuit boards.**
5- Teaching and Learning Methods	- **Lectures** - **Tutorials** - **Labs and/or case studies** - **Research assignments**
6- Teaching and Learning Methods for disable students	**NA**
7- Student Assessment	
a- Assessment Methods	**- Weekly sheet exercises at class room** **- Quizzes** **- Labs and/or case study for more demonstration.** **- Mid term, and final exams**
b- Assessment Schedule	**- Exercise sheet/ Lab assignment : Weekly** **- Quizz-1: Week no** **- Mid-Term exam: Week no 8** **- Quizz-2: Week no** **- Lab exam: Week no** **- Final – term examination: Week no**
c- Weighting of Assessment	**- Class tutorial and quizzes : 10 %** **- Mid-term examination: 15 %** **- Case study and/or practical exam: 0 %** **- Final – term examination: 70 %** **- Other types of assessment: 5 %** **Total 100 %**
8- List of text books and references:	
a- Course notes	There are lectures notes prepared in the form of a book authorized by the department

b- Text books	[1] James M. Kirkpatrick, Electronic drafting and printed circuit board design, Delmar Publishers, ISBN 0827323158, 1988. [2] Robert S. Villanucci, Electronic drafting – printed circuit design, Macmillan Publishing company, ISBN 0024230502, 1985.
c- Recommended books	[1] James D. Bethune, Basic electronic and electrical drafting, Princes-Hall, ISBN 0130603368, Second edition 1985. [2] K. Karl Kuller, Electronics Drafting, McGraw Hill Book Company, 1962. [3] Charles J. Baer, Electrical and electronic drawing, McGraw-Hill, ISBN 0070030081, 1960.
d- Periodicals, Web sites ……etc	Web Sites related to electronic circuits projects.

Course contents - ILOs Matrix

Content Topics	Week	A- Knowledge & Understanding	B- Intellectual skills	C- Professional and practical skills	D- General and transferable skills
Drafting techniques of electronic designs-Symbols of electronic Circuits drafting Assembly and detail drawing	1-2	A4, A8	B4, B5	C2	D1, D7
Electron-Component symbols – Schematic - diagram drawing	3-5	A8	B4	C3	D1, D9
Wiring and printed circuit board diagrams-Draw Proper Schematic diagrams of pictorial diagrams	6-7	A4	B5	C2, C3	D1, D7, D9
Computer-aided-drawing of electronic Components and circuits	9-11	A4, A8	B4, B5	C2	D1, D7
Computer-aided-drawing of printed circuit boards	13-14	A8	B4	C3	D1, D9

Course coordinator: **Head of Department:**

Date: / /