

University :Menoufiya University

College : Faculty of Electronic Engineering

Department :Electronics and electrical communication engineering

Course Specification

| 1- Course basic information : | | |
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| Course Code:EC 429 | Course Title: Communication Network Planning | Academic year: 2012/2013 Level (¢) – Semester : 2 |
| Department requirement | Teaching hours: Lecture <input type="text" value="2"/> Tutorial <input type="text" value="2"/> Lab <input type="text" value="."/> | |

| 2- Aim of the course | <ul style="list-style-type: none">• Understanding the basic principles of Network Planning.• Knowing the different Fundamental Plans structures.• Understanding the basics of Routing Plan and Signaling Plan. |
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| 3- Intended Learning Outcomes: | |
| A- Knowledge and Understanding: | a1) Concepts and theories of mathematics and sciences, appropriate to the Communication Network Planning a2) Basics of information and communication technology (ICT) a8) Current engineering technologies as related to Communication Network Planning. a14) Basics of design and analyzing electronic engineering systems, while considering the constraints of applying inappropriate technology and the needs of commercial risk evaluation; a17) Communication systems |
| B- Intellectual Skills | b1) Select appropriate mathematical and computer-based methods for modeling and analyzing problems. b2) Select appropriate solutions for engineering problems based on analytical thinking. b5) Assess and evaluate the characteristics and performance of components, systems and processes. b15) Analyze the performance of decoding systems. |
| C- Professional Skills | c1) Apply knowledge of mathematics, science, information technology, design, business context and engineering practice integrally to solve engineering problems. c7) Apply numerical modeling methods to engineering problems. c12) Use appropriate mathematical methods or IT tools. |

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| D- General Skills | d1) Collaborate effectively within multidisciplinary team. d3) Communicate effectively. d4) Demonstrate efficient IT capabilities. d9) Refer to relevant literatures. |
| 4- Course Contents | Goal of Network Planning-Fundamental Plans-Financial Plan-Provision Timing Plan-Technical Plan -Forecasting Plan -Switching Plan -Numbering Plan -Routing Plan-Signaling Plan -Charging Plan-Evaluation and Development Plan - Transmission plan -Quality of Service -Grade of Service. |
| 5- Teaching and Learning Methods | <ul style="list-style-type: none"> - Lectures - Tutorials - case studies - Research assignments |
| 6- Teaching and Learning Methods for disable students | NA |
| 7- Student Assessment | |
| a- Assessment Methods | <ul style="list-style-type: none"> - Weekly sheet exercises at class room - Quizzes - case study for more demonstration. - Mid term, and final exams |
| b- Assessment Schedule | <ul style="list-style-type: none"> - Exercise sheet/ Lab assignment : Weekly - Quizz-1: Week <u>no</u>4 - Mid-Term exam: Week <u>no</u> 8 - Quizz-2: Week <u>no</u> 12 - Final – term examination: Week <u>no</u>16 |
| c- Weighting of Assessment | <ul style="list-style-type: none"> - Class tutorial and quizzes : 10 % - Mid-term examination: 15 % - Final – term examination: 70 % - Other types of assessment: 5 % <p style="text-align: right;">Total 100 %</p> |
| 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 | <ol style="list-style-type: none"> 1) Steve Reckey, Wireless Networking Technology, USA, 2007, ISBN 13:978-0-7506-6788-3 2) Regis J. "Bud" Bates, Broadband Telecommunications Handbook , Second editions, Copyright, 2002, USA |
| c- Recommended books | <ol style="list-style-type: none"> [1] Dov. Hazony, "Elements of Networks Synthesis", Rinhold Pub. corporation, 1962 [2] F. R. Conner, "Networks", Edward Arnold Publishing Ltd, 1979 |

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| d- Periodicals, Web sitesetc | 1- IEEE Transaction on Networks 2- IEEE Transaction on Communications Website of Networks and Filter |

Course contents - ILOs Matrix

| Content Topics | Week | A- Knowledge & Understanding | B- Intellectual skills | C- Professional and practical skills | D- General and transferable skills |
|---|-----------|------------------------------|------------------------|--------------------------------------|------------------------------------|
| Goal of Network Planning | 1-2 | A1 | B1 | C1 | D1 |
| Fundamental Plans-Financial Plan | 3-5 | A1,a2 | B1,b2 | C1,c7 | D1,d3 |
| Provision Timing Plan-Technical Plan | 6-7 | A2,a8 | B2 | C7,c12 | D3,d4 |
| Forecasting Plan -Switching Plan - Numbering Plan -Routing Plan | 9-10 | A2,a8,a14 | B2,b5 | C7,c12 | D3,d4 |
| Signaling Plan - Charging Plan- Evaluation and Development Plan | 11- 12 | A14,a17 | B5,b15 | C7 | D4,d9 |
| Transmission plan -Quality of Service -Grade of Service- Mobile Radio Network- Satellite Network. | 13- 14 | A14 | B15 | C12 | D9 |

Course coordinator:

Head of Department:

Date: / /