Menoufiya University
Faculty of Computers and Information
Department of Computer Science

جامعة المنوفية
كلية الحاسبات والمعلومات
قسم علوم الحاسب

COURSE SPECIFICATION

(ORGANIZATION FUNDAMENTALS)

Programme(s) on which the course is given	CS, IS, IT and OR
Major or Minor element of programs	Major
Department offering the program	Computer Science
Department offering the course	Operations Research
Academic year / Level	2nd Year /1st Semester
	9/5/2007

A- Basic Information

Title	Organization Fundamentals			Code	OD201	
Credit Hours	Lecture	3	Tutorial	3	Practical	-
	Total				6	

B- Professional Information

1- Overall aims of course

- Explain and apply the principles and theories of organization
- Define the Quantitative analysis
- Explain the linear programming.
- Differentiate between the linear and goal programming.
- Describe the DEA

2- Intended learning outcomes of course (ILOs)

a- Knowledge and understanding

a2 Understand and apply a wide range of principles and tools available to the software engineer, such as design methodologies, choice of algorithm, language, software libraries and user interface technique.

a7 Understand The basics of the software life cycle, from requirements definition to development and evaluation.

b- Intellectual skills

b7 Work with and model computer systems at different and appropriate levels of abstraction.

c- Professional and practical skills

d- General and transferable skills

d6 Employ discrete mathematical skills as appropriate.

3- Contents

Topic	No. of Hours	Lecture	Tutorial/ Practical
1 Introduction to Quantitative Analysis • Introduction. • What is Quantitative analysis. • The Quantitative analysis approach. • Possible problem in QA approach. • Development of QA within an organization.	12	6	6
2 linear Programming • History of linear programming. • Model formulation and examples. • The generalized linear programming model. • Graphical interpretation of linear programming. • Special cases • Summary.	18	9	9
3 Analytic Hierarchy Process • Introduction. • The principle of identity and decomposition. • The principle of discrimination and comparative judgment. • Synthesis of priorities. • Hierarchies as representations of complexity. • Comments on dependence. • Summary.	18	9	9
4 Data Envelopment Analysis • Definitions & Notation. • Nonlinear programming model. • DEA LP model. • DEA Dual LP model. • Examples. • Summary of strengths & weaknesses.	18	9	9
5 Goal Programming • Introduction. • Modified simplex method of goal programming. • Computer based solutions of goal programming. • Advanced topics in goal programming. • Summary.	18	9	9
Total number of Hours for the course	**84**	**42**	**42**

4- Teaching and learning methods

4.1 Research assignment
4.2 Lecture

4.3 Class activities
4.4 Sections

5- Student assessment methods

5-a Methods

5.a.1 Class test (1) ……. ***to assess*** …Understanding...
5.a.2 Class test (2) ……. ***to assess*** …Understanding...
5.a.3 Reports …… …. ***to assess*** Problem Solving
5.a.4 Mid term exam … ***to assess*** gains of completed topics….

5-b Assessment schedule

Assessment 1	5th week.
Assessment 2	8th week.
Assessment 3	10th week.
Assessment 5	17th -18th weeks *(final written exam)*

5-c Weighting of assessments

Final -term examination	70%
Mid-term examination	20%
Semester work	10%
Other types of assessment	-
Total	100%

6- List of references

6-a Course notes

There are lectures notes prepared in the form of a book authorized by the department

6-b Essential books (text books)

None

6-c Recommended books

None

6-d Periodicals, Web sites, … etc

None

7- Facilities required for teaching and learning

- Software program.
- White board and colored pens.
- Datashow, screen, and laptop computer.

Course coordinator:

Prof. Waiel Fathy

Head of Department:

Prof. Waiel Fathy

Date: / /