

Course Specifications

Programme(s) on which the course is given M.Sc. of Computer Science

Major or minor element of programs	Major
Department offering the program	Mathematics
Department offering the course	Mathematics
Academic year / Level	Post-graduate studies
Semester	
Date of specification revision	2000-2010
Date of specification approval	2000-2010

A- Basic Information

Title: Computer Language	Code: M635
Credit Hours: 2	Total: 2 hr.
Lecture: 2 Tutorial: -	Practical: - Other: -

B- Professional Information

1 – Overall Aims of Course

-Understanding the different elements of programming languages. Evaluate the cost of programs and limits of computing power. How natural language is transformed to programs. Design and acquire the elements of programming languages.

2 – Intended Learning Outcomes of Course (ILOs)

a- Knowledge and Understanding:

The student should be able to

- a1- Revision of differences of programming languages.
- a2- Have the knowledge about the essential characteristics of programming languages.
- a3- Understand the computing power and limitations that affect program execution

b- Intellectual Skills

- b1- Understand how natural language can develop computer programs.

- b2- Knowing the different search and sort and elements of programming procedures.
- b3- Understanding the difficulty of such algorithms and the type of problems that can be represented and manipulated.

c- Professional and Practical Skills

- c1- Apply the knowledge representation techniques to different problems, while discussing the pros and cons.
- c2- Differentiating between problems that are solvable and that are not.
- c3- Getting to know differences of programming language.

d- General and Transferable Skills

- d1- Evaluate cost of programming language.
- d2- The use of algorithms and its factors to build good programs.

3- Contents

Topics	No. of hours	Lecture
Introduction to computing elements and measuring computing powers	4	2
Defining procedures: Language, programming with natural language	4	2
Data types, lists, and data abstraction	6	3
Analyzing procedures: machines and cost	6	3
Improving expressiveness: objects, recursion	4	2
Limits of computing	4	2

4- Teaching and learning methods

Lectures -4.1
Working on hand in assignments -4.2

Project and report knowledge collection -4.3

5- Student assessment methods

- 5.1 Mid term written exam to assess understanding
competencies
- 5.2 Programming Project to assess programming skills
- 5.3 Oral Exam to assess attendance and
interesting.
- 5.4 Semester hand in assignments to assess understanding
professionalism.
- 5.5 Final term written Exam to assess comprehension.

Assessment schedule

Assessment 1	Mid term	Week 4 and 7
Assessment 2	semester activities	Week 5 and 8
Assessment 3	Final Project/report	Week 13
Assessment 4	Final term written exam	Week 14

6- Weighting of assessments

Mid-Term Examination	20%
Semester Work (homework assignments + quizzes)	10%
Project	10%
Final-term written Examination	60%
Total	100%

Any formative only assessments

7- List of references

7.1- Course notes

Collected and prepared notes that cover the main topics in the course content

7.2- Essential books (text books)

Elementary text books under the title: *Introduction to computing: Explorations in Language, logic and machines*

7.3- Recommended books :

7.4- Periodicals, Web sites, ... etc Non.

8- Facilities required for teaching and learning

Lecture: PC's - packages for ready made scientific programs. - Data Show, instrumentation, and packages.

Names of professors/lecturers contributing to the design and delivery of the course

Dr. P El-Kafrawy

Course coordinator:

Head of Department: Mohamed A. Ramadan

Date: / /