

نموذج مواصفات المقرر

كلية : التربية

جامعة : الفيوم

Relevant Program: B.Sc. (Science & Education), Mathematics ,Basic Education

Major or minor element of programmes : Major

Department offering the program: Educational Depts. + Math Department
Faculty of Science

Department offering the course: Mathematics

Academic year / Level First Year (First Term)

Date of specification approval : 20 / 10 / 2008

A- Basic Information

Title Algebra

Code: ١٧١١٢ Mat

Credit Hours:--

Lecture: 3

Tutorial: 2

Practical:

Total: 70

B- Professional Information

1- Overall Aims of Course

On completion of this course, students will understand and learn the concepts of mathematical induction, partial fractions, sum of finite series, binomials theory, complex numbers, general theory of equation.

2- Intended Learning Outcomes of Course (ILOs):

A- Knowledge and understanding:

- ١- أ. Students will Know and understand the fundamental concepts of algebra such as mathematical induction, partial fractions, sum of finite series, binomials theory, complex numbers
- ١- أ. able to convey the meaning of these concepts to others.

B- Intellectual Skills:

- ١- ب. Show logical thinking and be self dependent in problem solving.
- ١-٢. ب. Obtain formulae for some finite sums.

C- Professional and Practical Skills:

- ١- ت. Construct different kinds of proofs using the principle of Mathematical induction.
- ١-٢. ت. Solve nonlinear equations approximately.

D- General and Transferable Skills:

١-٢. Group working.

١-٤. Problem solving.

١-٥. Able to convey the meaning of the above concepts to others .

3- Contents:

Topic	No. of Hours	Lecture	Tutorial / Practical
1- Mathematical induction (principle of mathematical induction. Modified form of mathematical induction principle, proof of some formulae depending on the natural number N).	12	4	8
2- Partial fractions, general term, sum of some finite series.	12	4	8
3- Binomial theory.	6	2	4
4- Complex numbers.	6	2	4
5- General theory of equation.	6	2	4

4- Teaching and Learning Methods:

4-1: Lectures.

4-2: Discussion sessions.

4-3: Research Assignments.

5- Student Assessment Methods:

5-1: Written exam (mid-term) to assess the level of knowledge and understanding.

5-2: Class work (quizzes) to assess the level of Intellectual skills to discuss and solve some problems .

5-3: Written exam (at the end of term) to assess the ability to pass the exam.

Assessment Schedule:

Assessment 1 : Written exam(mid-term) Week 7

Assessment 2 : Class work (quizzes) Week 4 - 8 - 12

Assessment 3 : Written exam(at the end of term)Week at the end term .

Weighting of Assessments:

Mid-Term Examination	30	%
Final-Term Examination	70	%
Oral Examination		%
Practical Examination		%
Semester Work		%
Other Types of Assessment		%
Total :	100%	
Any formative only assessments: Homework .		

6- List of References :

6-1: Course Notes:

Course note prepared by staff members of Math. Deptment.

6-2: Essential Books (Text Books):

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6-3: Recommended Books:

1-College algebra and trigonometry, by Aufmann, Barker and Nation, 3rd Edition (1997) Houghton com.

2- Algebra and trigonometry by Larson, Hostetler and Edwards,, 2nd Edition (1997), Houghton Mifflin com. Boston.

6-4: Periodicals, Web Sites... etc:

<http://mathworld.wolfram.com/topics/algebra.html>

7- Facilities Required for Teaching and Learning

Library contains new edition books with enough copies.

Data show

Internet networks

Course Coordinator: Dr.Mahmoad El Sawfy

Head of Department Prof. Kamal Ahmed El Dab

Date: //