



Annual Course Report (٢٠١٢-٢٠١٣)

(ENGINEERING MATHEMATICS ٧)

A- Basic Information

- ١ Title and Code Engineering Mathematics (٧)
PM ٣٠١ CE
- ٢ Programme(s) on which this course is given
- ٣ Academic year / Level of programme Third year
Level (٣) – semester (١st)
- ٤ Units/Weekly hours

Lecture Tutorial/Practical Total

٥- Names of lecturers contributing to the delivery of the course

i- Prof. Dr. Emil Shoukralla

Course coordinator: Prof. Dr. Emil Shoukralla

External evaluators: Prof. Sayed M. Farag

B- Statistical Information

No. of students attending the course: No. %

No. of students completing the course: No. %

Results:

Passed: No. % Failed: No. %

Grading of successful students:

Excellent: No. % Very Good: No. %

Good: No. % Pass: No. %

C- Professional Information

1. Course Teaching

Topic	No of hours	Lecture/ hours	Tutorial/ Practical
1. Linear Algebra <ul style="list-style-type: none"> • Vector Spaces and subspaces • Span of a set • Linear Dependence, Independence • Dimension and Basis • Eigen Values & Eigen Vectors 	9	3	6
2. Inner Product and Orthogonality <ul style="list-style-type: none"> • Orthogonal set of vectors • Vector projection • Orthonormal set • Unitary and Orthogonal Matrices • Similarity of Matrices & Application to Quadratics 	9	3	6
3. The Z-Transform <ul style="list-style-type: none"> • Convergence of the Z-transform • Properties of the Z-transform • The Inverse Z-transform 	6	2	4
4. Probability Theory <ul style="list-style-type: none"> • Introduction • The Conditional Probability • The Elimination • Mutually Independent Events 	6	2	4
5. Distribution Function of Two Variables <ul style="list-style-type: none"> • The Marginal and Conditional p.d.f. • Mathematical Expectation • Some Probability Distributions 	9	3	6
Total sum	39	13	28

Topics taught as a percentage of the content specified:

>90 % 70-90 % <70%

1. Teaching and Learning

Methods:

Lectures:

- Practical Training/ Laboratory:
- Seminar/Workshop:
- Class Activity:
- Case Study:
- Other Assignments/Homework:

Case Study

Other assignments/homework:
A real world project assigned.

٢. Student Assessment:

Method of Assessment	Percentage of total
Written examination	٧٠
Midterm exams	١٥
Oral Examination	١٠
Practical/laboratory work	٠
Other Assignments/class work	٥
Total	١٠٠ %

Members of Examination Committee:

Prof. Dr. Magdy Kamel
Dr. Fahema Esawy
Prof. Gaber Allam

Role of external evaluator:

- Review examination to cover all objectives of the syllabus
- Confirming reliability and feasibility of the examination
- Determining repetition of the questions

٣. Facilities and Teaching

Materials:

- Totally adequate
- Adequate to some extent
- Inadequate

٤.

Administrative Constraints

- Students need extra hours to practice their exercises.
- Insufficient Lab. Technicians.

٢. Student Evaluation of the course: Response of Course Team

-Insufficient mathematical topics.

- An extra exercises and solved problems are added to the course.

٣. Comments from external evaluator(s):

There is a gap between up-to-date information and reference text books.

٤. Course Enhancement:

Action Plan for Academic Year ٢٠١٢ – ٢٠١٣:

Improvement Field	Weak points	Action required	Person Responsible	Completion Date
Assessment Methods	Midterm only & Reports	- add quizzes - Research, survey	Lectures	٢٠١٣
Quality of Teaching and Learning	- lack of facilities - Huge number of students	- Increasing data show numbers -Dividing the students into subgroups	Faculty	٢٠١٢
Learning resources	Lack of availability of teaching & learning resources	Increasing number of computers and Labs workshop facilities	- Faculty - Department	٢٠١٤
Course content	١-To be renewed and developed ٢- Insufficient mathematical topics.	١- ٢٠% of courses to be reviewed and replaced by new topics. ٢- Adding new mathematical topics	- Lectures - Department, faculty	٢٠١٢

Head of Department:

Prof. Dr. Magdy Kamel

