University: Cairo Faculty: Engineering Department: Aerospace Engineering

Course Specifications

Program: Aerospace Engineering
Major Field: Structures
Department: Aerospace Engineering
Academic Year: Second Year Undergraduate
Term: Second Term
Year of Approval: 2015

A- Basic Information

Title: Mechanics of Structures
Code: AER203B
Credit Hours: 3
Weekly Hours: Lectures 3, Tutorials 2, Total 5

B-Professional Information

1-Overall Aims of Course

To use the energy principles and the stiffness method in the analysis of trusses, continuous beams and plane frame structures.

2-Intended Learning Outcomes

A-Knowledge and Understanding

Upon completion of this course the student should be able to:

- Basic information
- Concepts

B-Intellectual Skills

Upon completion of this course the student should be able to:

- Analyze different problems
- Creative thinking
- Problem solving

C-Professional and Practical Skills

- Computer programming
- Ability to identify the problem

D-General and Transferable Skills

- Computing
- Use of technological tool

3-Course Contents

Topic	Number of hours	Lecture Hour	Tutorial Hour
Energy Methods	36	22	14
The Stiffness Method	28	16	12
Revision	4	2	2
Total	68	40	28

4-Teaching and Learning Methods

- Class activities
- Lecture

5-Student Assessment Methods

- Class test 1 to assess understanding
- Class test 2 to assess understanding
- Reports to assess problem solving
- Mid-term exam to assess gains of completed topics
- Final exam to assess overall material comprehension

Assessment Schedule

Assessment 1	Week: 4
Assessment 2	Week: 7
Assessment 3	Week 11
Assessment 4	Week 14
Assessment 5	At the end of the term

Weighting of Assessments

Mid-Term exam	1	5%
Final exam		68%
Computer Lab examination		8%
Semester work		9%

6-List of References

Course Notes

T.H.G. Megson, “Aircraft Structures for Engineering Students”, Edward Arnold Publishing, London.

Essential Textbooks

H. Peery, “Aircraft Structures”

7-Facilities Required for Teaching and Learning

- Computer lab, with updated finite element packages
- White board

Course Coordinator: Dr. Ahmed Rashed

Head of Department: Prof. Ayman H. Kassem

Date: March, 2015.