Course Specifications

Program(s) on which this course is given:	Aerospace Engineering
Department offering the program:	Aerospace Engineering
Department offering the course:	Aerospace Engineering
Academic Level:	2nd year
Date	October , 2015
Semester (based on final exam timing)	☐ Fall ■ Spring

A- Basic Information

1. Title:	Mechanics of Structures			**Code:**	AER 203 A			
2. Units/Credit hours per week:	Lectures	3	Tutorial	2	Practical	**0**	Total	5

B- Professional Information

1. Course description:	To compute the stresses and displacements due to bending shear and torsional loads.
2. Intended Learning Outcomes of Course (ILOs):	**a) Knowledge and Understanding**
	1. The student should know shear flow 2. The student should know bending principles 3. The student should know shear flow in tapered beams 4. The student shout know critical buckling loads 5. The student shout know bending in curved beams
	b) Intellectual Skills
	6. The student should calculate critical buckling loads 7. The student should analyze curved beams
	c) Professional and Practical Skills
	8. The student should be able to calculate structural deformations using NASTRAN
	d) General and Transferable Skills

3. Contents

Topic	Total hours	Lectures hours	Tutorial/ Practical hours
General Bending of Beams	14	8	6
Analysis of Torsion	12	8	4
Analysis of shear	18	10	8
Structural Instability	10	6	4
Curved Beams	6	4	2
Revision	6	2	4
	66	38	28

4. Teaching and Learning Methods	Lectures (√)	Practical Training/ Laboratory ( )	Seminar/Workshop ( )

	Class Activity (√)	Case Study ( )	Projects ( )
	E-learning ( )	Assignments /Homework ( )	Other:

5. Student Assessment Methods	
• **.Assessment Schedule**	**Week**
-Assessment 1; Class test	4, 7, 11, 14
-Assessment 2; Project Assignment	--
-Assessment 3; Presentations	--
-Assessment 3; Midterm Exam	8
-Assessment 4; Final Exam	17
• **Weighting of Assessments**	
-Mid-Term Examination	20 %
-Final-term Examination	68 %
-Project	0 %
-Class Test	12 %
-Presentation	0 %
-Total	100 %
6. List of References	
6.1- Course Notes: Aircraft Structures for Engineering students, T.H.G. Megson, Edward Arnold Publishing London.	
6.2- Essential Books (Text Books): Aircraft Structures, H.Peery	
7. Facilities Required for Teaching and Learning	
. Screen, new reference in library Enhancing the ability to think for students in secondary schools	
Course Coordinator:	Dr. Edward Sadek
Head of Department:	Dr. Aymin Hamdy