University: Cairo Faculty: Engineering Department: Aerospace Engineering

Course Specifications

Program: Aerospace Engineering
Major Field: Aeronautics
Department: Aerospace Engineering Department
Academic Year: First Year Undergraduate
Term: Second Term
Year of Approval: March, 2015.

A- Basic Information

Title: Introduction to Aeronautics
Code: AER101B
Credit Hours: 3
Weekly Hours: Lectures 2, Tutorials 1, Total 3
Prerequisite to: AER307a, AER 307b

B-Professional Information

1-Overall Aims of Course

Introducing the student to various disciplines of aeronautics together with terminology and problems outlines.

2-Intended Learning Outcomes

A-Knowledge and Understanding

- Aerodynamic shapes
- Elements of airplane performance
- Propulsion
- Elements of airplane stability and control

B-Intellectual Skills

- Terminology
- Cause-effect relations
- Design thinking

C-Professional and Practical Skills

- Ability to identify discipline
- Ability to write report
- Computer programming

D-General and Transferable Skills

- Computing

3-Course Contents

Topic	Number of hours	Lecture Hour	Tutorial Hour
Airfoils, wings, and other aeroshapes	8	4	4
Elements of airplane performance	8	4	4
Propulsion	8	4	4
Elements of airplane stability and control	6	3	3

4-Teaching and Learning Methods

- Lecture and tutorial
- Homework
- Computer assignments
- Three tests (no midterm)

5-Student Assessment Methods

- Test 1 to assess aero shapes terminology
- Test 2 to assess calculations of A/C performance
- Test 3 to assess understanding of basic propulsion

Assessment Schedule

Assessment 1 Week: 5
Assessment 2 Week: 10
Assessment 3 Week 15

Weighting of Assessments

Mid-Term exam 15% (Test 1+ Test 2+Test 3)
Final exam 70%
Other types of assessment 15%

6-List of References

Course Notes

Blackboard notes + various course handouts

Essential Textbooks

Anderson, J.D., "Introduction to Flight", 4th Edition, McGraw Hill, 2000

Recommended Books

Shevell, R.S., "Fundamentals of Flight", 2nd Edition, Prentice Hall, 1989.

7-Facilities Required for Teaching and Learning

- Library references
- Xerox machine for student handouts

Course Coordinator: Dr. Hesham. M. Elbanna

Head of Department: Prof. Ayman H. Kassem

Date: March, 2015.