

MECH1907 Introduction to Aerospace Engineering

Course Code: MECH1907	Course Title: Introduction to Aerospace Engineering						
Required Course Or Elective Course: Required Course for BEng(AE)	Terms Offered (Credits): Spring (3 credits)						
Faculty In Charge: Rhea LIEM	Pre/Co-Requisites: NA						
Course Structure: 2 classes (1.5 hours each) per week							
Textbook/Required Material: Introduction to Flight by John D. Anderson, Jr. (main reference textbook but not compulsory for students to buy).							
Course Description: Introduction to the field of Aerospace engineering, discussion of basic aerospace systems and disciplines, working vocabulary of the field. Basic concepts. Demonstration through examples.							
Course Topics: Fundamental thoughts, Basic fluid dynamics, Principles in aerodynamics, Standard atmosphere, Aircraft performance and mission analysis, Structural technology, Materials technology, Thermodynamics and heat transfer, Propulsion, Introduction to space flight and rocket science, Aircraft design overview and future trends in aircraft design.							
Course Objectives:	Introducing the students to the various fields of aerospace engineering, the goals and importance of the different courses they will take, and their interconnections.						
Course Outcomes:	<ol style="list-style-type: none"> 1. Know vocabulary of the field 2. Basic principles in aerodynamics, structures, flight mechanics, propulsion 3. Relationship among the various disciplines 4. Impact of the various disciplines on aircraft performance and design 						
Assessment Tools:	<table> <tr> <td>Homework assignments</td> <td>15%</td> </tr> <tr> <td>Midterm exam</td> <td>25%</td> </tr> <tr> <td>Final exam</td> <td>60%</td> </tr> </table>	Homework assignments	15%	Midterm exam	25%	Final exam	60%
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