



Jordan University of Science and Technology
 Faculty of Engineering
 Aeronautical Engineering Department

Course name and number:

AE201 Introduction To Aeronautical Engineering

Credit, contact hours and categorization:

Credit and contact hours	Contact hours	Categorization
3 Credit Hours	Sunday-Tuesday-Thursday 1-hour lecture Or Monday-Wednesday 1.5-hours lecture	Engineering Topic

Instructor's or course coordinator's name:

Name	Dr. Montasir Hader
Office location	N1-L2
Email address	hader@just.edu.jo

Textbook and other supplemental materials:

Textbook			
Title	Class Handout		
Author(s)			
Edition			
References			
Book Name	Author(s)	Edition	Other Information
Introduction to Flight	J. D. Anderson	7th Edition	McGraw-Hill's
Fundamentals of Flight	Shevell, R. S.	2nd Edition	Prentice Hall, Inc, 2nd edition, 1988.

Course information:

Course Catalogue		
Role of professional aeronautical engineers, along with the development of fundamental engineering knowledge and skills for flight vehicle design, analysis performance and operation, Introduction to the multiple disciplines related to aeronautical engineering, Engineering ethics, Communication skills, Manufacturing technology.		
Course type : This course is required to fulfill the program.		
Prerequisites or co-requisites		
Line Number	Course Name	Prerequisite Type
251000	ME100 Engineering Workshops	Prerequisite /Study



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Specific goals of the course :

Specific outcomes of instruction and the student outcomes (SO) mapping		
Outcomes	SO Mapping	Course Outcome Weight (Out of 100%)
To introduce the student to the field of aeronautical engineering including vehicle types and definitions, historical perspective	5SO 2, 2SO 4, 3SO 7	20%
To teach the student the role of a professional engineer including responsibilities and ethics.	100SO 4	15%
To introduce the student to the various disciplines that make the aerospace engineering degree unique, including aerodynamics, propulsion, stability, structures, and materials.	20SO 1, 80SO 8	25%
To teach the students to work in teams to perform a preliminary design of an aerospace vehicle, including written and oral reports	5SO 3, 4SO 5, 1SO 6	20%
To familiarize students with practical workshop skills and familiarity with typical machine and hand tools used in aeronautical engineering	100SO 6	20%

Brief list of topics to be covered:

Tentative List of Topics Covered		
Weeks	Topic	References
Weeks 1, 2	Review of vehicles and aeronautical terminology	From Textbook
Week 3	Historical review of aeronautical engineering	From Textbook
Weeks 4, 5, 6, 7, 8	Overview of aeronautical engineering topics: Aerodynamics, Propulsion, Flight mechanics, performance, and stability Class Hanout d. Structures and materials	From Textbook
Weeks 9, 10	workshop skills and typical machine and hand tools used in aeronautical engineering.	From Textbook
Weeks 11, 12	Conceptual design of an aircraft	From Textbook
Weeks 13, 14	Communications skills, report writing	From Textbook
Weeks 15, 16	Professionalism and ethics	From Textbook