Course unit title:	**Aircraft Aerodynamics**		
Course unit code:	ME422		
Type of course unit:	Technical Elective		
Level of course unit:	Bachelor (1st Cycle)		
Year of study:	3 or 4		
Semester when the unit is delivered:	Spring		
Number of ECTS credits allocated :	6		
Name of lecturer(s):	Professor Varnavas C. Serghides		
Learning outcomes of the course unit:	The course introduces students to the topic of Aerodynamics and its broad applications. It provides an overview of the associated fundamental theories and also the various practical methodologies that are available to Industry. It aims to teach students how to accurately predict Lift and Drag in general but with a special emphasis on Aircraft Aerodynamics.		
Mode of delivery:	Face-to-face		
Prerequisites:	None	Co-requisites:	None
Recommended optional program components:	None		
Course contents:	Introduction Applications Of Aerodynamics Future Aircraft Methodologies & Tools Aerofoil Design Characteristics Flying Surface Design Characteristics Flying Surface Lift Estimation Flight Control Surfaces and High-Lift Devices Aircraft Drag Contributions Subsonic, Transonic and Supersonic Drag Estimation Tail Design Characteristics Air Intakes Fuselage Aerodynamics Total Aircraft Lift And Drag Estimation Examples Modelling and Testing		
Recommended and/or required reading:			
Textbooks:	• John D. Anderson, Fundamentals of Aerodynamics, McGraw-Hill Education, 2001 • John J. Bertin, Aerodynamics for Engineers, 4th edition, Prentice Hall, 2001 • Raymer, D.P., Aircraft Design – A Conceptual Approach, American Institute of Aeronautics and Astronautics, 2012 • Abott & Von Doenhoff , “Theory of Wing Sections”, McGraw Hill, 1949		
References:			
Planned learning activities and teaching methods:	This course is presented with the aid of several PowerPoint slides and photos, while the whiteboard is used for analytical work. Copies of all the slides presented during the course are distributed to the students in the form of hand-outs, via the University’s E-learning platform. The course material is further enhanced with numerous real case studies, examples and detailed practical explanations.		
Assessment methods and criteria:	• Quizzes/Assignments 15% • Mid-Term Tests 25% • Final Exam 60%		
Language of instruction:	English		

Work placement(s):	No