# AEROSPACE ENGINEERING (LM52)

(Brindisi - Università degli Studi)

## Insegnamento COMPUTER AIDED DESIGN FOR AEROSPACE APPLICATIONS

GenCod A005152

**Insegnamento** COMPUTER AIDED DESIGN FOR AEROSPACE

**Insegnamento in inglese** COMPUTER AIDED DESIGN FOR AEROSPACE

**Settore disciplinare** ING-IND/15

**Corso di studi di riferimento** AEROSPACE ENGINEERING

**Tipo corso di studi** Laurea Magistrale

**Crediti** 6.0

**Ripartizione oraria** Ore Attività frontale: 54.0

**Per immatricolati nel** 2020/2021

**Erogato nel** 2020/2021

**Anno di corso** 1

**Lingua** INGLESE

**Percorso** Percorso comune

**Docente** Marta DE GIORGI

**Sede** Brindisi

**Periodo** Secondo Semestre

**Tipo esame** Orale

**Valutazione** Voto Finale

**Orario dell'insegnamento** https://easyroom.unisalento.it/Orario

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| BREVE DESCRIZIONE DEL CORSO | Computer aided design aims at provide to the students the knowledge regarding the design process and 3d modelling from a theoretical and practical point of view. The course includes the teaching of the 3D modelling software Catia V5, with particular attention to the surface modelling in the Generative Shape Design module. |
| PREREQUISITI | Sufficiency in geometry and linear algebra. |
| OBIETTIVI FORMATIVI | **Overview**<br>Computer aided design aims at developing engineering design skills with a particular focus on the proficient use of modern CAD-integrated analysis tools.<br><br>**Learning Outcomes**<br>After the course the student should be able to<br>* acquire detailed knowledge and understanding of the most recent advances in 3D computer aided design.<br>* know the fundamental building blocks for creating parametric geometry. |
| METODI DIDATTICI | Theoretical and practical lessons |
| MODALITA' D'ESAME | The exam consists of two cascaded parts (maximum overall duration: two hours).<br>The first part is closed book; the student is asked to illustrate some theoretical topics.<br>The second part, that starts when the student has completed the first part, consists in modelling, using CATIA, a given mechanical/aeronautical component and outputting the detail drawing. |
| APPELLI D'ESAME | |

ALTRE INFORMAZIONI UTILI

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| PROGRAMMA ESTESO | Introduction: CAD/CAM/CAE systems in the industrial product development cycle.<br>Geometric modeling methods and techniques. CAD tools evolution and wireframe modelling. Surface modelling. Solid modelling.<br>The representation schemes of solid geometry: CSG, B-rep, finite elements, schemes by enumeration of occupied spaces .<br>Curves and surfaces used in the CAD modelling .<br>CATIA V5: Introduction<br>CATIA V5: The sketching<br>CATIA V5: Part Design<br>CATIA V5: Assembly Design<br>CATIA V5: Generative Shape Design<br>CATIA V5: Drawing |
| TESTI DI RIFERIMENTO | Lee Kunwoo, "Principles of CAD/CAM/CAE Systems", Addison Wesley Longman<br>▪Mortenson M.E.,"GeometricModelling",John Wiley and Sons,1997.<br>▪Ibrahim Zeid,"Mastering CAD/CAM", McGrawHill<br>▪Michel Michaud,CATIA-Core Tools, McGrawHill<br>▪slides of the lessons |