AEROSPACE ENGINEERING (LM52)

(Brindisi - Università degli Studi)

Insegnamento AERONAUTIC PROPULSION MOD. 1 C.I.

GenCod A003309

Docente titolare Maria Grazia DE GIORGI

Insegnamento AERONAUTIC PROPULSION MOD. 1 C.I.

Anno di corso 1

Insegnamento in inglese AERONAUTIC PROPULSION MOD. 1

Lingua

Settore disciplinare ING-IND/07

Percorso PERCORSO COMUNE

Corso di studi di riferimento AEROSPACE ENGINEERING

Tipo corso di studi Laurea Magistrale

Sede Brindisi

Crediti 6.0

Periodo

Ripartizione oraria Ore Attività frontale: 54.0

Tipo esame Orale

Per immatricolati nel 2016/2017

Valutazione

Erogato nel 2016/2017

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

BREVE DESCRIZIONE DEL CORSO	This course presents aerospace propulsive devices with particular focus on air-breathing engine
PREREQUISITI	-Fluid dynamic and fluid machinery
OBIETTIVI FORMATIVI	1 Gain knowledge of different types of aero-engines (turbojets, turbofans, ramjets) and to understand the aerodynamic and thermodynamic characteristics of major engine components. 2 Develop the knowledge and skills to analytically and numerically solve problems related to aerospace propulsion systems. 3 Develop skills in working independently. 4 Develop skills in critical evaluation of scientific literature. 5 Develop skills in planning and presentation of scientific talks and reports.
METODI DIDATTICI	Theory and practical activities (Tutorials devoted to discussion and problem solving referred to the aeroengine.)
MODALITA' D'ESAME	The final exam consist of two part: 1)Written and oral examination covering all material covered in course 2)assignments and individual project
PROGRAMMA ESTESO	1) Types of Airbreathing Engines. Aircraft Propulsion Requirements. 2)Elements of Thermodynamics for Aero Propulsion ; Ideal & Real Engine Cycle Analysis. Parametric Cycle Analysis. 3) Subsonic & Supersonic Inlets. 4) Turbomachiney: Axial Flow Compressors and Axial Flow Turbines. 5) Combustors. 6) Nozzles. 7) Airbreathing Engine System Considerations.

TESTI DI RIFERIMENTO

- Aerothermodynamics of Gas Turbine and Rocket Propulsion Gordon C. Oates eISBN: 978-1-60086-134-5 print ISBN: 978-1-56347-241-1 DOI: 10.2514/4.861345
- Hill, P., and Peterson, C., Mechanics and Thermodynamics of Propulsion, Addison-Wesley Publishing Co., 1992,
- Course notes