

AEROSPACE ENGINEERING (LM52)

(Brindisi - Università degli Studi)

Insegnamento **ELECTRICAL ENERGY FOR AEROSPACE: GENERATION AND POWER MANAGEMENT (MOD.1)**

GenCod A006602

Docente titolare Marco PALMIERI

Insegnamento ELECTRICAL ENERGY FOR AEROSPACE: GENERATION AND

Insegnamento in inglese ELECTRICAL ENERGY FOR AEROSPACE: GENERATION AND POWER MANAGEMENT (MOD.1)

Settore disciplinare ING-IND/32

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 2021/2022

Erogato nel 2021/2022

Anno di corso 1

Lingua

Percorso CURRICULUM AEROSPACE SYSTEMS

Sede Brindisi

Periodo Primo Semestre

Tipo esame Orale

Valutazione

Orario dell'insegnamento

<https://easyroom.unisalento.it/Orario>

BREVE DESCRIZIONE DEL CORSO

The course introduces the main components of an aeronautical electrical system, with a particular focus on power electronics converters and electrical machines.

PREREQUISITI

Fundamentals of physics.
Fundamentals of electrotechnics.
Fundamentals of electric measurements theory.

OBIETTIVI FORMATIVI

At the end of the course the student will know the main aeronautical electrical system components used to generate and distribute the electrical energy on board. The autonomy of judgment will be developed by the critical analysis of simulations\experimental results. The part of the course dedicated to the exercises includes group work aimed at strengthening technical and soft skills. Communication skills and learning abilities will also be verified during the oral examination.

METODI DIDATTICI

Whole class teaching (lectures).
Computer-aided simulations and laboratory experiences.

MODALITA' D'ESAME

Oral exam (plus written report on the laboratory experiences)

TESTI DI RIFERIMENTO

M. Rashid: "Power electronics Devices, circuits and applications" – Pearson

N. Mohan, T. Undeland, W. Robbins: "Power Electronics: Converters, Applications and Design" – Wiley

A. Fitzgerald: "Electric machinery" – Mc Graw Hill

G. Conte: "Macchine elettriche" - Hoepli

I. Moir, A. Seabridge "Aircraft Systems: Mechanical, Electrical and Avionics Subsystems Integration" – Wiley.

USA Department of Transportation, Federal Aviation Administration, "Aviation Maintenance Technician Handbook"