Objectives

This minor aims at providing a multidisciplinary and transversal training focused on the space domain, encompassing both space sciences and technologies.

Space sciences covers fundamental concepts on space physics and astrobiology. Space technologies covers satellite engineering, satellite-based communications and navigation, and space robotics for orbital and planetary environments.

Courses

- Orbital Mechanics (6 ECTS)
- Space Physics (6 ECTS)
- Space Robotics and Control Systems (3 ECTS)
- Satellite and Navigation Systems (3 ECTS)
- Satellite Engineering (3 ECTS)
- Astrobiology (6 ECTS)

To complete this minor, a total of 18 ECTS must be taken, where Orbital Mechanics and Space Physics are compulsory.

Departments

- Electrical and Computer Engineering (DEEC)
- Mechanical Engineering (DEM)
- Chemical Engineering (DEQ)
- Physics (DF)

Research centers

- Instituto de Sistemas e Robótica (ISR-Lisboa)
- Instituto de Telecomunicações (IT)
- Mechanical Engineering Institute (idMEC)
- Instituto de Plasmas e Fusão Nuclear (IPFN)
- Centro de Ciências e Tecnologias Nucleares (C2TN)
- Laboratory of Instrumentation and Experimental Particle Physics (LIP)
- Centro de Química Estrutural (CQE)

Coordination

Prof. Rodrigo Ventura
Institute for Systems and Robotics
Instituto Superior Técnico
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<td>Q1</td>
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<tr>
<td>Space Physics</td>
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<td>Prof. Patrícia Gonçalves, Prof. Mário Lino, and Prof. Raquel Crespo</td>
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<td>Space Robotics and Control Systems</td>
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<td>Satellite Engineering</td>
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ISTsat-1: RADEM: RADiation hard Electron Monitor for JUICE

Esther: European Shock-Tube for High-Enthalpy Research

ISTSat

SPHERES session on ISS

MIT-Portugal ReSwarm project

Space CoBot collaborative robot

CubeSat in an anechoic chamber

Radiation Hardness Assurance and testing of EEE components