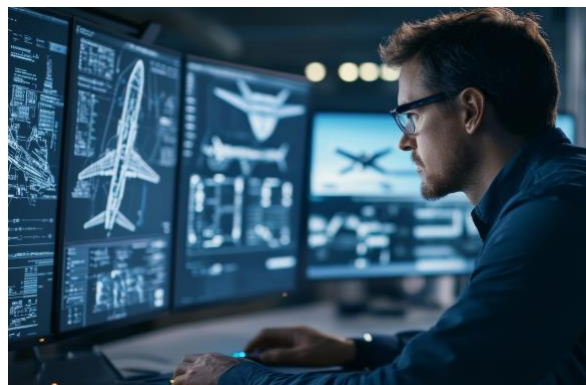
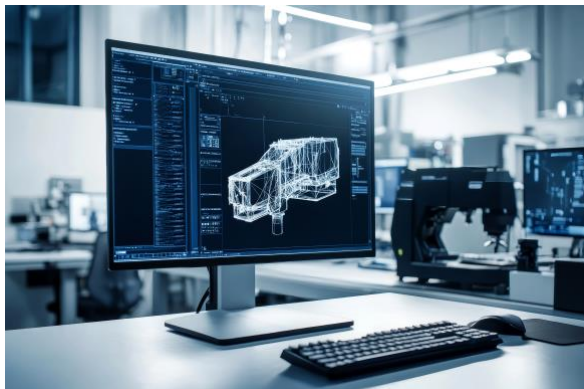


Track “Advanced Mechanical Design”

This track is focused on the latest mechanical design and simulation methodologies (static, fatigue, dynamic), including those necessary to effectively design advanced mechanical components with innovative materials such as composites, nanocomposites and polymers, also taking advantage of numerical tools.



Compulsory Courses (for all Tracks)

Year	Semester	Teaching	ECTS
I	1	Mechanics of Materials and Structures	9
I	1	Advanced Thermodynamics	9
I	1	Metallic alloys for product innovation	9
I	2	Dynamics and Vibrations	9
II	1	Product and manufacturing engineering	9
II	1	Assembly Systems and Logistics	9
II	1	Product Development and innovation	9

Compulsory Courses for the Track

Year	Semester	Teaching	ECTS
I	2	Lightweight design with composites	6
I	2	Finite Elements for structural design	6
I	2	Design of automatic machines	6
I	2	Applied Aerodynamics *	6
II	1	Advanced Design with polymers and polymeric composites*	6

* One course to be chosen from these two

Elective Courses for the Track

Year	Semester	Teaching	ECTS
II	1	Advanced Methods for Geometric Modeling	6
II	1	Digital twins for automation	6
I	2	Multibody system dynamics and simulation	6

Internship: 6 ECTS

Final Project: 15 ECTS