

# INTERNATIONAL SEMESTER IN MATERIALS SCIENCE

Courses for foreign students - Master - Engineering degrees  
**SPRING SEMESTER ONLY (January - June) equivalent to Semester 8**

Module	Course	ECTS	Number of hours
<b>Humanities</b> (all courses are optional) :	☑ Intercultural exploration: how to live and work in another country?: 18h . Foreign language other than French and English: 18h . Sustainable development and corporate social responsibility: 9h . Physical education: 20h	5 ECTS	up to 65 h
	. Interdisciplinary engineering project:	2 ECTS	32h
Ceramics, glasses and thin solid film:	. Ceramics and glasses: 21h . Ceramics and inorganic materials - laboratory project: 32h . Thin film materials: 16h . Semiconducting materials and devices: 30h	7 ECTS	99h
Metallurgy and durability of materials:	. Metallic materials - laboratory project: 32h . Physical metallurgy: 18h . Welding and foundry: 18h . Fracture-Fatigue-Creep: 24h	6 ECTS	92 h
Polymers and composites:	. Adhesion, bonding, interfaces: 17h . Polymeric materials - laboratory project: 18h . Composite materials: 17h	4 ECTS	52 h
	Research project in laboratory The students must choose one of the projects proposed in the field of materials science and engineering of inorganic materials with mechanical and/or physical properties. The project is achieved under the supervision of a Professor or Assistant-Professor. The students have access to the facilities (synthesis, characterization, shaping, etc.) of Institut des Matériaux Jean Rouxel (UMR CNRS Université de Nantes 6509). Deliverables include a bibliography report at the beginning of the project, a mid-term report and oral presentation and a final report and oral presentation.	* Between 6 and 11 ECTS	

\*(depending on the chosen courses in Humanities, the total of S8 being 30 ECTS)