MATERIALS SCIENCE & ENGINEERING

UNIVERSITE DE LORRAINE, FRANCE

(Nancy Campus)

Mobility for Training activity **Mines Nancy** **(Master students)**	**Mobility for Research activity** **Institut Jean-Lamour** **(Master & PhD students)**
contact : mines-nancy-dai@univ-lorraine.fr	**contact : mines-nancy-dai@univ-lorraine.fr**
5 months (1 semester)	**5 months**
MATERIAL SCIENCE & ENGINEERING DEPARTMENT **(program taught in French)** **Semester 7:** • Mechanical behaviour of materials, Atom and molecule stacking, Electric and thermal properties of materials, Phase diagrams and microstructures **Semester 8:** • Track Functional Materials Dielectric properties of materials, Properties of semiconductors, Magnetic properties of metallic materials and nanomaterials, Polymers for health care and medecine • Track Structural Materials Plasticity of crystalline structures, Microstructure development in metallic materials, Elaboration and mechanical properties of polymers, Properties and structures of ceramics **Semester 9:** • Materials by Design, Materials Characterization, Multiscale mechanics, Devices at different length-scales, Modeling at the atomic and molecular scales, From surfaces to coatings **GRADUATE PROGRAM ON "MULTISCALE MATERIALS"** **(program taught in English)** **Semester 9:** • Materials by Design • Materials Characterization • Multiscale mechanics. • Devices at different length-scales • Modeling at the atomic and molecular scales • From surfaces to coatings . • Materials Forming • Superconductors • Biomimicry • Artem Insight • Economics, Organization, Business seminar **Semester 10:** 6-Month Research Internship in Partner Labs or Industry	**(French or English speakers)** **Research Areas:** • Physics of Matter and Materials • Chemistry and Physics of Solids and Surfaces • Materials Science and Engineering - Metallurgy • Nanomaterials, Electronics and Living Systems