

Materials science and engineering section

Disciplinary Minor "Materials science and engineering"
Person in charge : Dr Homeira Sunderland

teachers, credits and semesters could be modified

| Courses (indicative list) | teachers | course book | Credits |
|--|--|-------------|---------|
| Advanced metallurgy | Weber | MX | 4 |
| Assembly techniques | Plummer/Leinenbach | MX | 2 |
| Ceramics, structures and properties + TP | Damjanovic | MX | 4 |
| Composites polymères + TP | Bourban/Michaud+Bourban | MX | 4 |
| Composites technology | Bourban/Michaud | MX | 3 |
| Corrosion et protection des métaux + TP | Mischler | MX | 3 |
| Crystallography and diffraction methods | Van Swygenhoven/Stolichnov | MX | 3 |
| Déformation des matériaux | Logé | MX | 4 |
| Dielectric properties of materials | Damjanovic | MX | 2 |
| Elaboration des céramiques et des colloïdes +TP | Bowen / Testino | MX | 4 |
| Fracture of materials | Plummer | MX | 4 |
| Fundamentals of solid-state materials | Marzari | MX | 4 |
| Introduction to nanomaterials | Tileli | MX | 3 |
| Materials selection | Vaucher/Michler/Siegmann | MX | 2 |
| Introduction à la microscopie+TP | Cantoni/Hessler/Tileli + Cantoni/Hessler | MX | 5 |
| Milieux continus | Drezet | MX | 4 |
| Organic electronic materials - Synthesis, applications, properties | Frauenrath | MX | 3 |
| Phénomènes de transfert en science des matériaux | Amstad | MX | 3 |
| Science des polymères | Frauenrath/Plummer + Plummer | MX | 6 |
| Projet Matériaux | Divers | MX | 7 |
| Propriétés fonctionnelles des matériaux | Fontcuberta i Morral | MX | 2 |
| Recycling of materials | Leterrier | MX | 2 |
| Résistance des matériaux | Bourban | MX | 3 |
| Rhéologie et mécanique des fluides | Leterrier | MX | 4 |
| Properties of semiconductors and related nanostructures | Fontcuberta i Morral | MX | 4 |
| Soft matter | Amstad | MX | 4 |
| Statistical mechanics | Cerioti | MX | 4 |
| Surface analysis | Muralt/Stoltchnov+Stolichnov/ Muralt/Mischler | MX | 3 |
| Theory of materials : from structure to properties | Stolichnov | MX | 3 |
| Thermodynamics for materials science | Stellacci | MX | 3 |
| Thin film fabrication processes | Muralt | MX | 2 |
| Transformations de phases | Weber | MX | 3 |
| Tribology | Mischler S. | MX | 2 |
| Wood structures, properties and uses | Zürcher E. | MX | 2 |
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| Legend : | A = Autumn, S = Spring 1 semesere includes 14 weeks | | |

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| Program/semester |
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| MA1-3 |
| MA2 |
| BA6 |
| BA5 |
| MA1-3 |
| BA5 |
| BA4 |
| BA5 |
| MA2 |
| BA5 |
| MA2 |
| MA1-3 |
| MA2 |
| MA2 |
| BA5 |
| BA3 |
| MA2 |
| BA4 |
| BA5 |
| BA6 |
| BA5 |
| MA2 |
| BA4 |
| BA4 |
| MA2 |
| MA1-3 |
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| BA5 |
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| MA1-3 |
| MA2 |
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