



### Courses in English Master in engineering ICM, 2017-2018

Majors in English	Kind of Courses	Pedagogical Group	Nb of hours
<b>GP 50% English 50% French</b>			
<a href="#"><u>Biomedical Engineering</u></a>	Major	Biomedical engineering	160h
<b>UP 50% English 50% French</b>			
<a href="#"><u>Supply chain management</u></a>	Major	Production and logistics management	39h
<a href="#"><u>Internet of Things</u></a>	Major	Computer science	40h
<a href="#"><u>Damage of Materials</u></a>	Major	Materials science	40h
<a href="#"><u>Introduction to Physical Metallurgy</u></a>	Major	Materials science	40h
<a href="#"><u>Heat Generation: Fission and Nuclear Reactor</u></a>	Major	Energy processes	36h
<a href="#"><u>Multiphase and turbulent flow</u></a>	Major	Energy processes	31h
<a href="#"><u>Electricity and Turbines</u></a>	Major	Energy processes	33h
<a href="#"><u>Statistical and machine learning</u></a>	Major	Data science	40h
<b>Societal Challenges in English</b>			
<b>GP in English</b>			
<a href="#"><u>Personalised Medicine and Healthcare</u></a>	Défi	Personalised medicine and healthcare	80h
<b>UP In English</b>			
<a href="#"><u>Transport Systems Management</u></a>	Défi S9	Intelligent transportation and mobility systems	40h

<a href="#"><u>Intelligent Transport System</u></a>	Défi S9	Intelligent transportation and mobility systems	40h
<b>UP 50% English 50% French</b>			
<a href="#"><u>Mathematical modelling and real applications</u></a>	Défi S9	Big data	15h
<a href="#"><u>Data Organisation</u></a>	Défi S8+S9	Big data	45h
<a href="#"><u>Manufacturing</u></a>	Défi S8	Design, conception and innovation	40h
<a href="#"><u>Design of lightweight systems</u></a>	Défi S8	Ecodesign	40h
<a href="#"><u>Design of metallic parts and additive manufacturing</u></a>	Défi S9	Ecodesign	40h
<a href="#"><u>Design of functionalised surfaces</u></a>	Défi S9	Ecodesign	40h
<a href="#"><u>New Performance Levers</u></a>	Défi S9	Levers and management of industrial renewal	45h
<a href="#"><u>Physics of Nanosystems</u></a>	Défi S8	Nanotechnologies	40h
<a href="#"><u>Energy Transition: Issues and scenarios</u></a>	Défi S8	Energy transition	12h
<a href="#"><u>Energy efficiency</u></a>	Défi S8	Energy transition	30h
<a href="#"><u>Oil refining and Nuclear fuel cycle</u></a>	Défi S8	Energy transition	40h
<b>Toolboxes in English</b>			
<b>GP in English</b>			
<a href="#"><u>International finance</u></a>	TB2	International finance	40h
<a href="#"><u>Material and process selection</u></a>	TB2	Material and process selection	40h
<a href="#"><u>Introduction to Image Processing</u></a>	TB1	Introduction to image processing	40h
<a href="#"><u>International management</u></a>	TB1	International management	40h
<a href="#"><u>Physical and mechanical modeling with finite elements</u></a>	TB1	Physical and mechanical modelling with finite elements	40h

<b>UP In English</b>			
<a href="#"><u>Application of tensors to crystallography</u></a>	TB2	Tensor calculus	12h
<a href="#"><u>PDE: physical introduction, mathematical analysis and numerical discretisatio</u></a>	TB3	Advanded numerical modelling and simulation	18h
<b>GP 50% English 50% French</b>			
<a href="#"><u>Artificial Intelligence</u></a>	TB3	Artificial intelligence	80h
<a href="#"><u>Experimental Methods</u></a>	TB2	Experimental methods	40h
<a href="#"><u>Systems Modelling</u></a>	TB2	Systems modelling	40h
<b>UP 50% English 50% French</b>			
<a href="#"><u>Hydrogeology</u></a>	TB3	Geology for civil engineering	18h
<a href="#"><u>Morphological and structural analysis</u></a>	TB1	Physical methods for matter characterization	13h30
<a href="#"><u>Transfer Phenomena</u></a>	TB3	Advanded numerical modelling and simulation	20h
<b>Core courses in English</b>			
English Courses 1A			50
English Courses 2A			50
<b>Liberal Arts in English</b>			
Musical composition	O1	Liberal Arts	21
<b>Professionalization Modules</b>			
O4 - Developing Intercultural Skills	O4	Developing intercultural skills	18