

Offre de formation en langue anglaise

Mécanique numérique en Ingénierie _ Computational engineering

Semestre 1	Project management and communication (Gestion de projet et communication)
	Numerical resolution techniques (Techniques de résolution numérique)
	Practical work on numerical resolution techniques (TP de techniques de résolution numérique)
	Mathematical methods for physics
	Computational fluid dynamics, incompressible flows
	Material modelling and simulations I: elasticity, visco-elasticity and creep
	Modelling of mechanical systems
	Constitutive laws for rheological fluids
	Material modelling and simulations II: plasticity, visco-plasticity and damage
	Microelectronics CAD
Semestre 2	Simulation of Multiphysics (simulation multiphysique)
	Practical work of simulation of Multiphysics (TP de simulation multiphysique)
	Study and research work (Travail d'étude et de recherche)
	Finite elements
	Thermal systems
	Computational fluid dynamics, compressible flows
	Turbulence modelling
	Parallelisation, big data, data processing
	Composite materials and homogenization techniques
	Measurement and identification
	Computational methods for structural dynamics, shock and vibration
Semestre 3	Quality assurance (Assurance qualité)
	Applied computational engineering for heat and mass transfer
	Development and use of simulation tools for chemical engineering
	Advanced use of computational solid mechanics codes, CSM project
	Visualization and grid generation
	Advanced use of computational fluid mechanics codes, CFD project
	Advanced computation in bio-mechanics
	Free software in CFD
	Applied computational engineering for bio-mechanics

Génie industriel

Semestre 1	Gestion de projet
Semestre 3	SAP Academy
	Supply Chain Management