

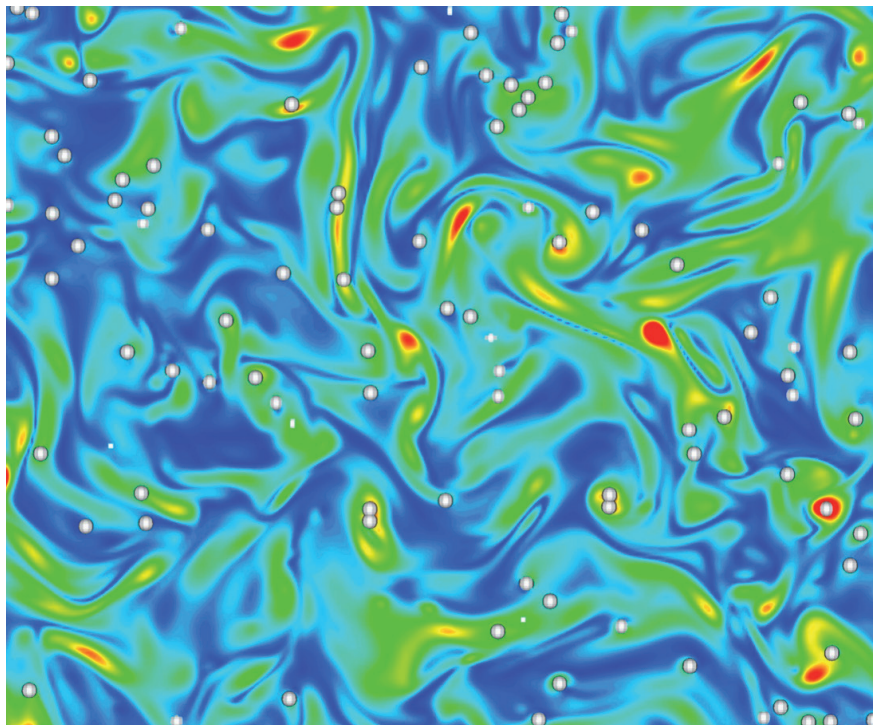
MSC FLUIDS ENGINEERING FOR INDUSTRIAL PROCESSES

THIS EDUCATION PROGRAM IS FOCUSED ON FLUIDS ENGINEERING FOR INDUSTRIAL PROCESSES.

Applications are related to fluid flows in petroleum engineering, chemical engineering, energy transformation... The purpose of the lectures is concerned with the physics and modelling of transport phenomena in multiphase flows (bubbles, drops, granular media, emulsions and foams).

AIMS OF THE PROGRAM

It will give you state of the art expertise in Fluids Mechanics and its application to raw material and energy transformation processes. Multiphase flows are of major importance for modelling the behaviour of industrial processes. Advanced courses on turbulence, coupling chemical reactions and flows, heat and mass transfer are complemented by exercises and practical training. The students will be trained to work with Computational Fluid Dynamics tools (commercial codes but also research and industrial softwares).



CONTACT

master_fluids@univ-toulouse.fr
<http://masterfluidsprocesses.inp-toulouse.fr>



APPLICATION

Deadline: April 15th
 Tuitions fees: 9000€/year
 Reduction down to 5000€/year
 for academic partners and selected students
www.toulousetech.net

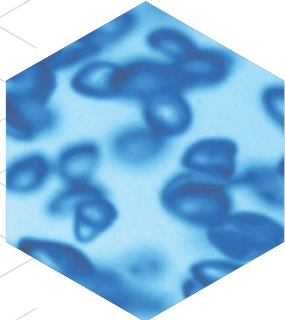
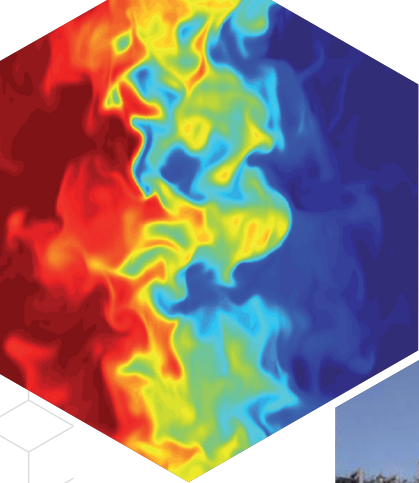
FOCUS

Masters of Science are national degrees accredited by the French ministry of higher education
 Further studies: PhD program (3 years)
 All MSc Degree holders are allowable to take a step forward in the academic track to get the PhD degree
 Pre-requisite: Bachelor's degree
 Programs are taught in English

INP - ENSEEIHT, INP-ENSIACET and INSA are members of the N+i network

www.nplusi.com





PROGRAM CONTENT

Fluids Mechanics and CFD

- Process Engineering and Industrial systems
- Compressible flows and Turbo-machines
- Advanced courses in Fluid Mechanics
- Numerical Analysis and Simulations
- Practical training on Fluid Mechanics

Multiphase Flows and Reactions

- Reaction Engineering, Transport Phenomena
- Turbulence in Fluids, Numerical Simulations
- Complex Fluids and Interfacial Phenomena
- Heterogeneous media and Multiphase Flows
- Transfer and Reactions

Industrial Project

RESEARCH INSTITUTIONS &

INDUSTRIAL PARTNERS

All teachers are part of major research institutions affiliated to the French National Scientific Research Center (CNRS): IMFT (Fluids Mech.) / LISBP (Bio-processes and Water management) / LGC (Chem Eng.)

Several opportunities for internships in industrial corporate (production, research...):

- Petroleum and Gas Engineering: TOTAL – SAIPEM – IFP-EN - GDF - BP Chemical - TECHNIP
- Transformation of ground material: ARCELOR/ MITTAL, Saint-Gobain, Air Liquide
- Nuclear Engineering and Energy: AREVA – EDF – CEA - IRSN
- Water Management and Production: SUEZ Environnement – VEOLIA - DEGREMONT

JOB OPPORTUNITIES

- PhD - around 30% of the graduate students
- R&D positions in petroleum, nuclear or chemical engineering major companies. Process of raw material, Water management and Waste treatment, Food manufacture

Required documents:

- 2 passport-size photos
- Photocopy of passport or ID card
- English language test (if your native language is not English): TOEIC (750) or TOEFL (80), IELTS (6.5)
- Certified academic transcripts
- Certified copies of academic diplomas
- Curriculum Vitae in English (max. 2 pages)
- Short statement of motivation in English

The real cost is 9000 euros per year. Acceptance to scholarships of INP-INSA can reduce the course fees to a minimum of 5000 euros per year. Scholarship through a reduction of the fees can be offered to students coming from partner universities. Exceptionnaly the same kind of scholarship can be given to top level students.

Scholarships (based upon eligibility and acceptance)

Scholarships from the French government (Eiffel, Embassies,..)

Scholarships from the European Union (Erasmus, Leonardo, etc.),

Scholarships from French regional authorities (cities, Regions, etc..)

Stipends for the internships in academic labs or industrial companies.