

# MECHANICAL ENGINEERING

## MANUFACTURE AND QUALITY OF PRESSURE VESSEL STRUCTURES



### Key Words

*Mechanical, pressure vessel manufacturing, conception, CAD, welding, manufacturing, metallurgy, quality, methods, non destructive tests, sandwich course.*

### Objectives

*The graduate engineer has the expertise to manage projects in manufacturing industries in close relation with research and development, conception, production and quality standards.*

### Employment Sectors

*All activities connected with the use of sheet metal, tubes and sections, in large and small manufacturing industries and of their use in transformation (nuclear, chemical, petrochemical, food, pharmaceutical, cosmetic...); transportation (rail, automobile, marine, aeronautical, space, bridges, water, gas, diverse ...); storage (gas, liquids, solids...), energies, and their ecological implications.*

*This sector has an important place in the mechanics industry, as much by its volume of activity as by the modern techniques it requires, notably in quality control.*

### Industrial Partnerships

In partnership with : le Syndicat National Chaudronnerie, Tôlerie, Tuyauterie industrielle (S.N.C.T.) (the National Union of Industrial Pressure Vessels, Sheet Metalwork and Piping) within the framework of French apprenticeship legislation.

Industrial partners are constantly involved in curriculum definition, in offering work placements, in defining industrial projects and presenting specialised lectures.

The sandwich scheme followed by the apprentices is made up of 70 weeks in school and 71 weeks in the company.

The average rotation between company and school is every 5 weeks in 1<sup>st</sup> and 2<sup>nd</sup> year, then every 10 weeks and 15 weeks in the 3<sup>rd</sup> year.  
Plus 5 weeks annual paid vacation.

These compulsory industrial placements and projects provide the students with the practical knowledge and know-how of the professional environment, as they put the students in real life technical situations.

They are carried out in regional, national and international industries and are directly linked to the potential job market.

### Academic Partnerships

Polytech Montpellier – UM2, France, has well-established agreements with several European and non-European universities. An intensive study visit is also organised with a sister school in the USA.

### Research Partnerships

Students are taught by academics and lecturers who also carry out research activities in the laboratories of the University of Science (Montpellier 2).

Some of these research activities are carried out in collaboration with industrial companies (large companies or small and medium enterprises) through industrial contracts or national (ANR, Competitiveness clusters, Oseo-Anvar...) or European projects.

Consequently, students are taught advanced state of the art industrial technology. They may then work directly in Research and Development Departments, or enrol in PhD studies.

The Department has developed privileged relationships with regional and national technology transfer centres.



HEAD OF DEPARTMENT : Fabien SOULIE

Administration : +33 (0)4 66 62 85 42 - fax +33 (0)4 66 62 85 91

E.mail [polytech.fqsc@univ-montp2.fr](mailto:polytech.fqsc@univ-montp2.fr)

[www.polytech.univ-montp2.fr](http://www.polytech.univ-montp2.fr)





FQSC

# MECHANICAL ENGINEERING MANUFACTURE AND QUALITY OF PRESSURE VESSEL STRUCTURES



**POLYTECH' MONTPELLIER also offers to foreign students who don't speak French the chance to study in their MUNDUS PROGRAMME.**

This is a special programme that enables foreign students who already have Master's level in their country of origin to come and spend a year learning intensive French and also specialised scientific subjects according to their choice of Speciality (Major). Upon successful completion of this year, they can join Years 4 and 5, and go on to obtain the prestigious French Engineering qualification.

For the apprenticeship course, this could be accessible to overseas students if they can obtain a contract with a company paying business tax in France.

For more details of this **MUNDUS PROGRAMME**, please contact us at the International Relations office : [relint@polytech.univ-montp2.fr](mailto:relint@polytech.univ-montp2.fr)

