



FACULTY OF CHEMISTRY



FIELD OF STUDY: CHEMICAL AND PROCESS ENGINEERING

■ BACHELOR PROGRAMME ■ MASTER PROGRAMME ■ PHD PROGRAMME

CHEMICAL PROCESSES ENGINEERING (MASTER)

Selected specialist courses:

- Engineering of the product - e.g. ISO standards
- Biotechnological processes - application of microorganisms or enzymes in industry
- Biorafineries - obtaining energy and chemical substances from natural sources
- Modern methods of separation - membrane processes, chromatography, selective binding, precipitation
- Multiphase Systems
- Quality management in companies (REACH, BAT)

Job prospects:

The graduates have the opportunity to be employed not only in the classical chemical industry, but also in the pharmaceutical, agro-food processing, energy, environment - wherever the production is carried out or where the processes of the substance the transformation are being implemented. The graduates are essentially prepared to occupy executive positions and manage small companies (small business).

DESIGN OF CHEMICAL PROCESSES (MASTER)

Selected specialist courses:

- Chemical Microengineering
- Nanoengineering
- Bioreactors' processes description
- Modelling of processes in chemical engineering
- Simulations of processes in chemical apparatus using CFD

Job prospects:

The graduates are well prepared to work in design offices and research and development departments of large companies - wherever the new process solutions and technology are being designed and implemented.

APPLIED CHEMICAL ENGINEERING (MASTER)

The specialization is intended for foreign students and all those who want to study in English. It combines the leading courses of two Polish-language specializations.

PROPOSED SPECIALIZATION IN THE MASTER PROGRAMME

For every specialization there are courses such as:

- **Process apparatus** – course is conducted at the small semi-industrial plant
- **Renewable Energy Sources**
- **Economy of industrial pollution** (sewage, exhaust gases, solid waste)
- **Computer design of the unit processes** (e.g. Autodesk Inventor, Aspen Plus, Aspen Energy Analyzer packages) and **the entire system including economics** (based on the SuperPro Designer)

- The courses carried out by the staff from the Division of Chemical Engineering Z-7 (www.iic.pwr.wroc.pl) and the Division of Chemical and Biochemical Processes Z-11 (www.prochembio.pwr.wroc.pl).
- Cooperation with companies - meetings for students (at least once a month) with representatives of industrial companies; wide offer of internships.
- The opportunity to develop interests in the Students' Scientific Circle of Chemical and Process Engineering „Gambrinus”.

More information at: www.gambrinus.pwr.wroc.pl and www.facebook.com/KNGambrinus

