

Course 28123

Chemical/Biochemical Engineering Laboratory

4 weeks Summer University 2017 in Copenhagen
for non-European university students.

June 30 – July 28, 2017



The Department of Chemical Engineering at the Technical University of Denmark (DTU) invites non-European chemical engineering students to participate in an experimental course in chemical engineering/process technology. The course takes place in up-to-date pilot plant facilities in a programme, which combines detailed theoretical and practical engineering experiences with an international student atmosphere, close to wonderful Copenhagen and the historic and scenic countryside.

ENTRY REQUIREMENTS

The course is based on theoretical knowledge in unit operations, heat and mass balances, general process technology, reaction engineering and kinetics, process control, flow diagrams and simple chemical analytical methods.

In addition ordinary university level background in inorganic, organic, thermodynamics and mathematics is required.

The students must have acceptance from their home university to attend.



CONTENT

The course is a special designed version for non-European students of the ordinary DTU course in large scale unit operations laboratory. In teams of two persons 6 exercises including reports are performed. The offered exercises include: Liquid flow in pipes, gas flow, pump systems, flow in packed columns, agitation, aeration, filtration, drying in a tunnel, spray drying, fluidization and fluidized bed drying, distillation, absorption, membrane separation, ion exchange, heat transmission, evaporation, crystallisation, hydro cyclones, centrifugation, liquid and solid extraction, organic synthesis, fixed bed enzyme reactor, CIP technology, solids handling, combustion/ high temperature processes and process control experiments.

Each practical experiment will last ½ -1 day. Preparation of reports will take appr. 2 days each.

In addition every team shall give an oral technical presentation of one of the plants for a group of fellow students.

Also every team will make an oral presentation on a given non-technical subject (political, historic, social, art etc.).

Reporting and presentations will be supervised by the accompanying graders. In case the university is not sending a grader, this work will be dealt with by DTU. Excursions to chemical production sites are planned.

The course is rather intensive and demanding, and report work during the weekends must be expected. Time for larger tourist activities may not be expected and should take place either before or after the course.

LEARNING PHILOSOPHY

The experimental work takes place on process equipment as close to industrial reality as possible at a university. It is the goal to put the students into situations similar to what can be expected in real industrial life. The students must update their theoretical plant and process knowledge, plan their work, take the necessary process decisions including safety measures, control and react upon events, search their information, write industrial reports – all-in-all act and think as real process engineers.

COURSE FEE AND REGISTRATION

The student fee amounts 3200 Euro. This covers tuition, excursions and accommodation in single rooms with access to bathroom and kitchen facilities.

The home university must approve the students participation in the course. Registrations take place using an application agreement form, which can be down-loaded from our homepage (see below).

The ultimate date of registration is March 17th 2017. The registration is not accepted until the payment is received.

For accompanying graders please ask for conditions.

It will be possible to arrange for one week extension of the stay in the dormitories after the end of the course. The accommodation fee will be 100 Euro.



GENERAL INFORMATION

The course will take place at the Department of Chemical and Biochemical Engineering, Technical University of Denmark (DTU) located in Lyngby about 15 km north of central Copenhagen. The accommodation takes places in building blocks, each having 8-10 single rooms, bath rooms and kitchen.

Arrival date Friday, June 30. In this first weekend we will take you on a bus tour and introduce you to some sights and the Danish country side. The course work will start on Monday, July 3 and be terminated on Friday 28.

Maximum 75 students can be accepted in 2017.

FURTHER INFORMATION

See the full Summer University announcement at www.kt.dtu.dk/english/education/summer_university

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