INDUSTRIAL CHEMISTRY

ABOUT US

Industrial Chemistry or applied chemistry education had its beginnings at the Department of Chemistry since 1972 by several subjects offering to students as one of the alternatives. As industrial chemistry has played a key role on development and solution for Thailand community, it had been, therefore, considered to multiply the knowledge of academic staffs in aboard. In early age, with a support from France especially University of Toulouse (Chemical Engineering) and University of Montpellier (Science & Technology) under the Industrial Chemistry Project, many academic staffs of Chemistry Department had accomplished Ph.D degree in the field.

In 1977, apart from Chemistry students, additional 17 students had been enrolled for onset of industrial chemistry project. In the following year (1979), Industrial Chemistry education had been set up as Plan 2 in additional, at which Plan 1 was Pure Chemistry. The first student group under Industrial Chemistry Scheme graduated in 1980. Considered by Higher Education Commission, Industrial Chemistry had been officially approved as one of the fields in Chemistry Department that was written in the 5th National Economic & Society Development Plan (1982-1986). Japan International Cooperation Agency (JICA) also helped setting up Silicate Science &Technology Programme in Industrial Chemistry Plan.

In 1992, Industrial Chemistry Department was established and officially offered Bachelor Degree (B.Sc. in Industrial Chemistry). The Department comprised Plan 1 of General Industrial Chemistry and Plan 2 of Silicate Science and Technology. Master and Doctorate Degrees have also been offered after that since 1999 and 2011, respectively.

ACADEMIC

The Department of Industrial Chemistry offers a BS degree program with two sub-disciplines: general industrial chemistry and silicate technology. Students in both plans have an option to take Cooperative Education program during their fourth year of study where they will be exposed to real-world industry problems and attempt to solve these problems based on their academic experience trained by the department.

Faculty Members

Adisak SIYASUKH, PhD (Chemical Engineering)
Apinon NUNTIYA, PhD (Materials Science)
Datchanee PATTAVARAKORN, PhD (Polymer Science)
Jantrawan PUMCHUSAK, PhD (Polymer Science and Engineering)
Kedsarin PIMRAKSA, Dr.techn. (Chem Tech of Inorg Mat - Ceramics)
Nongnuch RUEANGJITT, PhD (Petrochemical Technology)
Parimanan CHERNTONGCHAI, PhD (Chemical Engineering)
Sankum NUSEN, PhD (Materials Science)
Satit PHIYANALINMAT, MS (Petrochemical Technology)
Sukdipown THIANSEM, PhD (Chemistry)
Sunsanee KAMBOONCHO, Dr.rer.nat. (Natural Sciences)
Suparin CHAIKLANGMUANG, PhD (Fuel and Energy)
Torranin CHAIRUANGSRI, PhD (Metallurgy)
Worapong THIAMSORN, PhD (Materials Science)
Yothin CHIMUPALA, PhD (Chemical and Process Engineering)

http://www.inc.science.cmu.ac.th

Undergraduate Curriculum

B.S. (INDUSTRIAL CHEMISTRY)
Plan I: General Program

First Year

Fundamental English 1
The World of Science
Biology 1
Chemistry 1
Calculus 1

Fundamental English 2
Chemistry 2
Calculus 2
Physics 1
Science & Mathematics (3)
Free Elective (3)

Second Year

Critical Reading & Effective Writing
Organic Chemistry 1
Analytical Chemistry
Chemical Stoichiometry
Introduction to Ceramics
Humanities & Social Sciences (3)

English in Science & Technology
Physical Chemistry 1
Transport Phenomena of IC
Unit Operation of IC 1
Major Elective (3)
Free Elective (3)

Third Year

Instrumental Meth. of Chem Anal.
Industrial Process Chemistry
Characterization of Indus. Materials
Unit Operation of IC 2
Environ Safety & Manage. in Industry

Learning through Activities (2)
Statistics for IC
Kinetic Chem & Reactor Design
Unit Operation of IC 3
Intro to Quality Assurance

Fourth Year

Industrial Chemistry Training
Major Elective (1)
400-Level Major Elective (6)
Learning through Activities (1)

Seminar in IC
Special Problems in IC
400-Level Major Electives (5)
Humanities & Social Sciences (3)

Note: Both plans of BS (Industrial Chemistry) also offer a Cooperative Education program.

B.S. (INDUSTRIAL CHEMISTRY)
Plan II: Silicate Technology

First Year

Fundamental English 1
The World of Science
Biology 1
Chemistry 1
Calculus 1

Fundamental English 2
Chemistry 2
Calculus 2
Physics 1
Science & Mathematics (3)
Free Elective (3)

Second Year

Critical Reading & Effective Writing
Analytical Chemistry
Chemical Stoichiometry
Introduction to Ceramics
Humanities & Social Sciences (6)

English in Science & Technology
Physical Chemistry 1
Production of Pottery
Unit Operation of IC 1
Major Elective (3)
Free Elective (3)

Third Year

Instrumental Meth. of Chem Anal.
Industrial Process Chemistry
Characterization of Indus. Materials
Silicate Science 1
Drying & Firing Tech in Ceramic Proc
Environ Safety & Manage. in Industry

Learning through Activities (2)
Statistics for IC
Silicate Science 2
Silicate Technology
Refractory
Intro to Quality Assurance

Fourth Year

Industrial Chemistry Training
Major Elective (6)
400-Level Major Elective (3)
Learning through Activities (1)

Seminar in IC
Special Problems in IC
400-Level Major Electives (3)
Humanities & Social Sciences (3)

Available Graduate Programs:

- MS & PhD (Industrial Chemistry)

For more detail about the program, electives and course description, please visit the following website.