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Websites

The Sirindhorn International Thai-German Graduate School of Engineering
https://tggs.kmutnb.ac.th

Chemical and Process Engineering
http://cpe.tggs.kmutnb.ac.th

TGGS International Programs

International Master Programs:

- **Chemical and Process Engineering (CPE)**
- **Mechanical and Automotive Engineering (MAE)**
  - **Minor:** Mechanical Engineering Simulation and Design (MESD)
  - **Minor:** Automotive Safety and Assessment Engineering (ASAE)
- **Materials and Production Engineering (MPE)**
- **Electrical and Software Systems Engineering (ESSE)**
  - **Minor:** Communication and Smart System Engineering (CSE)
  - **Minor:** Electrical Power and Energy Engineering (EPE)
  - **Minor:** Software Systems Engineering (SSE)
  - **Minor:** Smart Grids Engineering (SGE)
- **Railway Vehicles and Infrastructure Engineering (RVIE)**
  - **Minor:** Railway Vehicles Engineering (RVE)
  - **Minor:** Railway Infrastructure Engineering (RIE)

International Doctoral Programs:

- **Chemical and Process Engineering**
- **Mechanical and Automotive Engineering**
- **Materials and Production Engineering**
- **Electrical and Software Systems Engineering**

The Sirindhorn International Thai-German Graduate School of Engineering (TGGS)

King Mongkut's University of Technology North Bangkok (KMUTNB)

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มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ (มจพ.)
1518 ถ.ประชาราษฎร์ 1 วงศ์สว่าง บางซื่อ กรุงเทพมหานคร 10800

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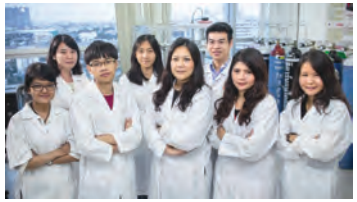
Chemical and Process Engineering

วิศวกรรมเคมีและกระบวนการ

- Language of Instruction: English
- Duration of Master Program: 2 years

The Sirindhorn International Thai-German Graduate School of Engineering (TGGS)

The Sirindhorn International Thai-German Graduate School of Engineering (TGGS) is a public-private partnership established with strong support from the Thai and German government for engineering education, technology, innovation, and business development in Thailand and South-East Asia. Its industry-oriented engineering master and doctorate education concept combines teaching and research based on the successful model of RWTH Aachen University, Germany, one of Europe's leading technical university.



Course Description

The curriculum of CPE program is designed along the same principles as the RWTH Aachen University German version, at the same time adapted to support the industrial development in Thailand. It is meant to create postgraduate engineers not only with hands-on knowledge, but also with research skills and competencies for chemical industry.

For master degree, CPE offers two study plans as follows.

1. Plan A1: Research only. This study plan is specifically designed for those who have some industrial experience and wish to emphasize on research and development. The students taking this plan will conduct research entirely for four semesters. Although coursework is not compulsory, they may be requested to sit-in some courses that will assist in their research work.

2. Plan A2: Coursework, Internship and Thesis. This intensive study plan is suitable for those who wish to master advanced knowledge as well as engineering skills and work competencies. The students will take ten advanced courses in the first year to strenghten their fundamental knowledge. In the second year, the students will learn how to apply their knowledge in a project-based internship and industrial research project.

Curriculum

Year	Course	Credits
1	**1st Semester**	
	▪ Heterogeneous Kinetics	3
	▪ Molecular Thermodynamics and Interfacial Properties	3
	▪ Chemical Product Design	3
	▪ Elective	3
	▪ Elective	3
	2nd Semester	
	▪ Molecular and Interfacial Transport Phenomena	3
	▪ Chemical Process Design	3
	▪ Seminar on Modern Aspects of Chemical and Process Engineering	3
	▪ Elective	3
	▪ Elective	3
2	**3rd Semester**	
	▪ Industrial Internship (18 weeks)	4
	4th Semester	
	▪ Master Thesis	12
	Total Credits	**46**

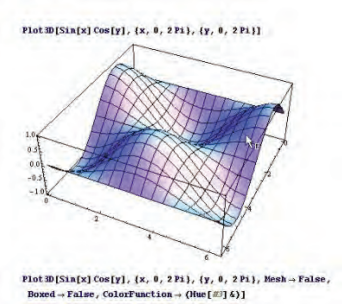
Elective Course:
Advanced Separation Technology, Multiphase Flow, Advanced Process Heat Integration, Biochemical Engineering, Membrane Technology, Energy Technology for Chemical Engineer, Industrial Enzymology, Catalytic Reaction Engineering, Biorefinery, Process Modeling and Simulation, Selected Topics in Chemical and Process Engineering I, and Selected Topics in Chemical and Process Engineering II (Topics are related to future trend of research and technology and/or recent industrial application).

Tuition Fees

Thai Students	60,000 Baht per semester
International Students	85,000 Baht per semester

Scholarships

For qualified students who need financial aids, TGGS coordinators and leadership will make a serious effort to organize scholarships from industries or government organizations.
Please find updates of available scholarships at:
www.cpe.tggs.kmutnb.ac.th



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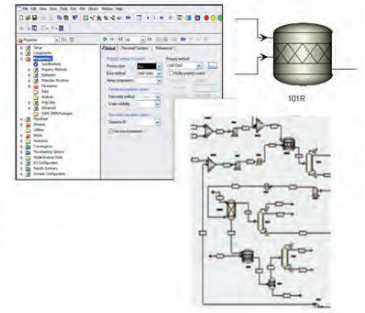

Entrance Requirements

Bachelor Degree in Chemical Engineering, Industrial Chemistry, Biotechnology, Materials Engineering or related fields and good skills in English. To demonstrate a satisfactory command of English, students whose first language is not English are required to take an English proficiency test by an internationally recognized university with a minimum GPA of 3.0 (or 2.75 plus adequate experience), good reading, writing and communication skills in English. To obtain the TGGS M.Eng. Degree, TOEFL 525+ or equivalent has to be passed within 2 years following registration.

Prospects

During their terms of study at TGGS, outstanding students may have the opportunity to do their internships and these in Germany.

Graduates will be of great interest to a wide range of industries, as they are not only well versed in fundamental principles, but will also have learnt to apply these principles to real industrial problems. For those who want to continue their study abroad, it is very likely to be accepted by leading international universities, particularly those in Germany.