Contact Details

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Advanced Metal Forming & Metallurgy


Assoc. Prof. Dr. Yingyot Aue-u-lan


Asst. Prof. Dr.-Ing. Kumpanat Sirivadin


Asst. Prof. Dr. Peerawatt Nunthawarawong


Asst. Prof. Dr.-Ing. Pruet Kowitwarangkul

Polymer Composites


Prof. Dr.-Ing. habil. Suchart Siengchin


Assoc. Prof. Dr. Rungsima Yeetsorn

Production Management & Logistics


Assoc. Prof. Dr. Srisawat Supsomboon

Website

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

Materials and Production Engieneering
http://mpe.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 Engineerting (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)

1518 Pracharat 1 Road, Wongsawang, Bangsue, Bangkok 10800, Thailand

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

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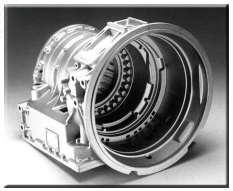
The Sirindhorn International
TGGS
Thai-German Graduate School of Engineering

Materials and Production Engineering

วิศวกรรมวัสดุและการผลิต



- 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

Materials and Production Engineering (MPE) program has been developed to meet the industrial needs though practical training in industries or manufacturing enterprises, which are one of the main educational philosophies.

This Program will cover into 3 majors: a) Process and Manufacturing Technology, b) Metallurgical and Material processing technology and c) Production Engineering and Logistics. This program is disigned to provide and enhance the learning experience with in-dept knowledge not only in all three disciplines but also the solving of management related problems, the skill of leading and functioning in project team, and ability to communicate effectively will be enhanced and strengthened throughout the whole study period. An integral part of the program exposes students to industry-related activities. These are included in a mandatory four month internship in industry and an opportunity to work on advanced research projects.

Outstanding students may have an opportunity to conduct their internship and Master thesis at the well-known industries and institutes Germany, European countries and other world leading countries.

For Master Degree, MPE offers two study plans as follow:

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.

Plan A2 Curriculum (Course work + Thesis)

Year	Course	Credits
1	**1st Semester**	
	▪ Munufacturing Technology	3
	▪ Production Management	3
	▪ Elective Course	3
	▪ Elective Course	3
	▪ Elective Course	3
	2nd Semester	
	▪ Materials Testing	3
	▪ Elective Course	3
	▪ Elective Course	3
	▪ Elective Course	3
	▪ Elective Course	3
2	**3rd Semester**	
	▪ Industrial Internship	4
	4th Semester	
	▪ Master Thesis	12
	Total Credits	**46**

Available Elective Courses:

Metal Fields
- Materials Science of Steel
- Machine Tools
- Chemical Metallurgy for Ferrous Metals
- Finite Element Method Simulation Technologies
- Transport Phenomena in Materials Engineering
- Modelling of Metallurgical Process
- Etc.

Metal/Polymer
- Materials Characterization
- Materials Science for Engineerings

Polymer Fields
- Polymer Processing
- Rubber Technology
- Plymer Recycling and Biodegradable Polymer
- Etc.

Production Management
- Industrial Logistics
- Quality Systems Management
- Etc.

Tuition Fees

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

Scholarships

For qualified students who need financial aids, the TGGS coordinators and leadership will make a serious effort to organize scholarships from industries or government organizations.

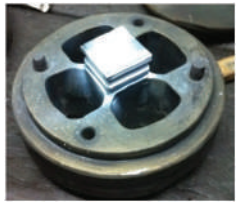
Entrance Requirements

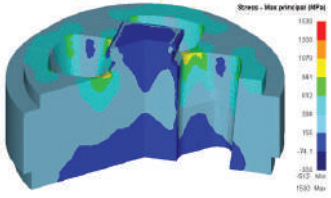
Bachelor Degree in Mechanical Engineering awarded by an internationally recognized university with a minimum GPA of 3.0 (or 2.75 plus adequate experience), good reading, writing and communication skills in English. To obtain the TGGS M.Eng. Degree, TOEFL 525+ or equivalent has to be passed within 2 years following registration.

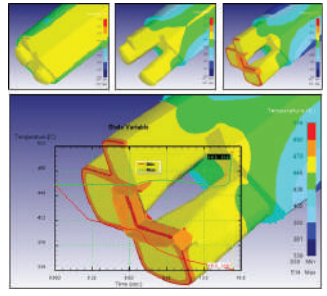
Fields of Research

Advanced Metal Forming & Metallurgy	Polymer Composites	Production Management & Logistics
• Phase Transformation Control • Metal forming technology • Manufacturing processes • Materials testing & Characterization	• Polymer & composite Processing • Polymer& composite materials • Biopolymer/Natural Fiber materials • Polymer Rheology	• Production Management Quality Management • Logistic & Supply Chain Management • Operations Research and Optimization

Modelling and Simulation Design of Experiments
Material Behaviour , Process Control







Prospects

The graduates will be able to select proper materials in difference applications and design their production processes accordingly as well as manage and control quality of the production in the industries. Moreover, they can facilitate in with appropricated calculation and simulation tools. They will also learn how to create and apply research work for the industry.