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Websites

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

Mechanical and Automotive Engineering
https://mpe.tggs.kmutnb.ac.th

TGGS International Programs

International Master Programs:

- **Chemical Engineering and Management (CEMP**
- **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 Computer Engineering (ECE)**
  - **Minor:** Communication and Smart System Engineering (CSE)
  - **Minor:** Electrical Power and Energy Engineering (EPE)
  - **Minor:** Computer Engineering (COM)
  - **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 Engineering and Management**
- **Mechanical and Automotive Engineering**
- **Materials and Production Engineering**
- **Electrical and Computer Engineering**

The Sirindhorn International Thai-German Graduate School of Engineering (TGGS)
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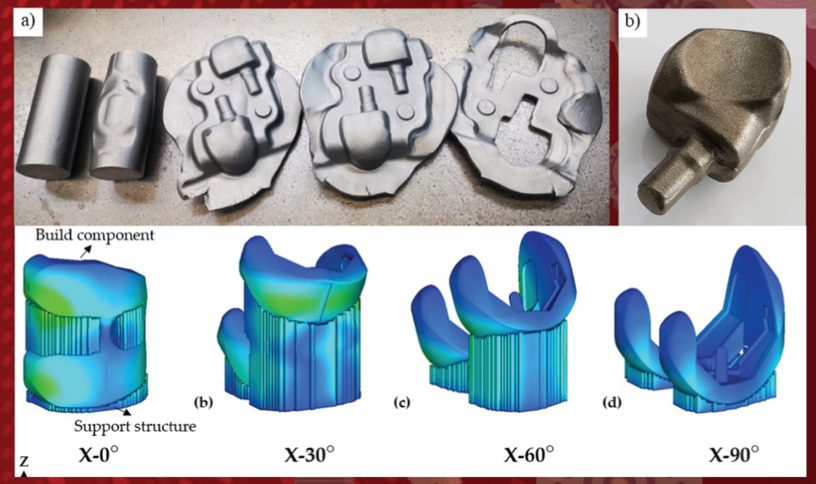
Last update: **25 April 2025**

Materials and Production 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	
	Manufacturing Technology	3
	Production Management	3
	Elective Course I	3
	Elective Course II	3
	Elective Course III	3
	2nd Semester	
	Materials Testing	3
	Elective Course IV	3
	Elective Course V	3
	Elective Course VI	3
	Elective Course VII	3
2	3rd Semester	
	Industrial Internship (18 weeks)	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.

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

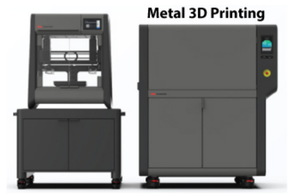
Production Management
- Industrial Logistics
- Quality Systems Management
- Etc.

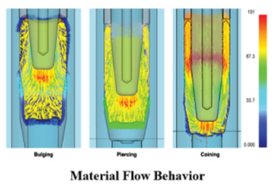
Metal/Polymer
- Materials Characterization
- Materials Science for Engineerings

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.





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.mae.tggs.kmutnb.ac.th

Tuition Fees

Thai and International Students 60,000 Baht per semester

*Only pay full tuition fees for 4 semesters. Student on fifth semester and onward only pay 10,000 THB to maintain student status.

Fields of Research

Advanced Metal Forming & Metallurgy	Polymer Composites	Production Management & Logistics
• Metal forming technology • Manufacturing processes • Materials testing & Characterization • Additive manufacturing • Tribology and coatings	• Polymer composites • Polymer processing • Biopolymer • Natural fiber composites • Composite materials for energy application	• Production Management Quality Management • Logistic & Supply Chain Management • Operations Research and Optimization

Modelling and Simulation, Design of Experiments
Material Behavior, Process Control