



Contact Details

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Website

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

<http://www.tggs.kmutnb.ac.th>

Department of Mechanical and Process Engineering

<http://mepe.tggs.kmutnb.ac.th>

Mechanical Engineering Simulation and Design Program

<http://mesd.tggs.kmutnb.ac.th>

Automotive Engineering Program

<http://ae.tggs.kmutnb.ac.th>

TGGS International Programs:

Mechanical and Process Engineering Department

International Master Programs:

- Chemical and Process Engineering Program (CPE)
- **Mechanical and Automotive Engineering Program (MAE)**
 - Minor: Mechanical Engineering Simulation and Design (MESD)
 - Minor: Automotive Engineering (AE)
- Materials and Production Engineering Program (MPE)

International Doctoral Program:

- Mechanical Engineering Program

Electrical and Software Systems Engineering Department

International Master Program:

- Electrical and Information Engineering Program (EIE)
 - Minor: Communications Engineering (CE)
 - Minor: Electrical Power and Energy Engineering (EPE)
 - Minor: Software Systems Engineering (SSE)

International Doctoral Program:

- Electrical and Software Systems Engineering Program

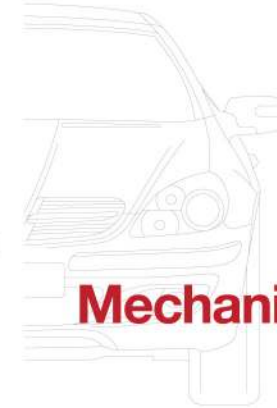
**The Sirindhorn International Thai-German
Graduate School of Engineering (TGGS)
King Mongkut's University of Technology North Bangkok (KMUTNB)
1518 Pracharat 1 Road, Wongsawang, Bangsue,
Bangkok 10800, Thailand**

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มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ (มจพ.)

1518 ต.ประชาราษฎร์ 1 วงศ์สว่าง บางซื่อ กรุงเทพมหานคร 10800

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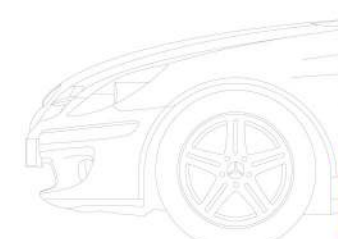


Mechanical and Automotive Engineering

วิศวกรรมเครื่องกลและยานยนต์

Master of Engineering Program in
Mechanical and Automotive Engineering

- Language of Instruction: English
- Duration of the Program: Two years



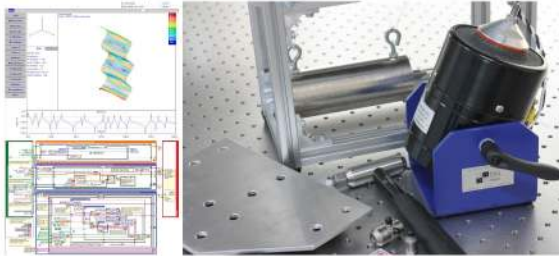
The Sirindhorn International Thai-German Graduate School of Engineering (TGGS)

The Sirindhorn International Thai-German Graduate School of Engineering (TGGS) provides industry-oriented graduate engineering education and research in Thailand based on the RWTH Aachen Engineering educational model. It is a public private partnership venture for engineering education, technology development and research collaboration.



Course Description

Mechanical and Automotive Engineering consists of Mechanical Engineering Simulation and Design (MESD) and Automotive Engineering (AE). MESD is based on the corresponding Master program of RWTH Aachen University and takes into account the growing use of simulation tools in Mechanical Engineering. The course combines technical theory and application, giving a sound basis for model validation for the purposes of problem solving and design solutions. AE focuses on fundamentals of vehicle modules and systems, structure design and manufacturing process. Global vehicle testing standards for vehicle safety, performances and emission are introduced together with regulations for vehicle and component evaluation.



Curriculum

Year	Courses	Credits		
1	1st Semester			
	▪ Computer Aided Engineering Tools I	MESD	3	
	▪ Machine Design Process		3	
	▪ Continuum and Structural Mechanics		3	
	▪ Finite Element Methods I		3	3
	▪ Advanced Fluid Mechanics		3	3
	▪ Automotive Engineering Fundamentals		3	
	▪ Structural Design and Manufacturing Process of Motor Vehicle		3	
	▪ Introduction to Vehicle Safety		3	
	2nd Semester			
	▪ Finite Element Methods II		3	
▪ Computer Aided Engineering Tools II		3		
▪ Multibody Dynamics and Vibration		3		
▪ Computational Fluid Dynamics		3	3	
▪ Standards and Regulations for Automotive Engineering		3		
▪ Fundamentals of Vehicle and Component Evaluations		3		
▪ Vehicle Crash and Human Body Simulation Techniques		3		
▪ Elective Course		3	3	
2	3rd Semester			
	▪ Industrial Internship		4	4
4th Semester				
▪ Master Thesis		12	12	
Total Credits		46		

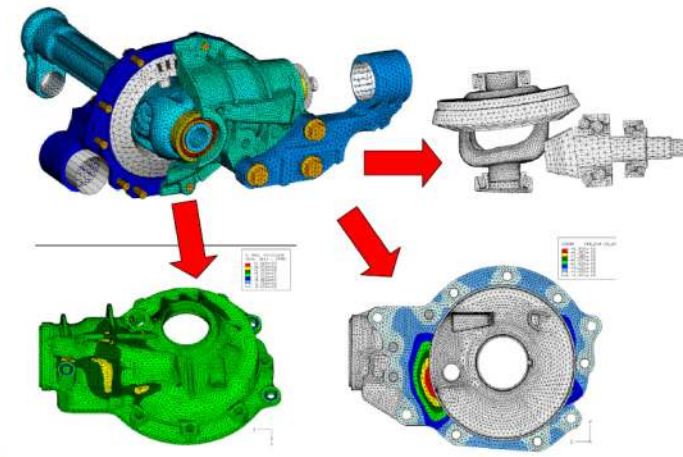
Example software: Solidworks, Algor, MSC-Patran/Nastran, MSC-Adams, MSC-Easy5, MATLAB/Simulink, ANSYS, LS-DYNA, LMS Test Lab Modal Analysis, STAR-CCM+, Labview, MODENT Suite, etc.

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.



Prospects

During their study at TGGS, outstanding students may have the opportunity to do their internships and theses abroad.

Graduates will be able to work in a variety of areas in Mechanical and Automotive Engineering and related industry. This includes work as a researcher in both governmental and private organizations. For those who want to continue their study abroad, it is very likely to be accepted by leading international universities, particularly those in Germany.