



**International Graduate Degree Program of
College of Mechanical and Electrical
Engineering
National Taipei University of Technology
(Academic Year 2008~2009)**

Program Overview

The International Graduate Degree Program of College of Mechanical and Electrical Engineering (CMEE) is designed specifically for foreign students. All the offered courses will be taught in English. Financial support, including tuition waiver, fellowship, and research assistantship will be granted. The program aims to provide vocational development for potential engineers and researchers. The study focuses on the promising high technologies of Mechatronic, Manufacturing, Energy, Automation, and Vehicular Engineering.

Why NTUT CMEE

The NTUT with long-standing history and experience in education was founded in 1911, located in downtown Taipei. NTUT is recognized as one of the most prestigious universities in Taiwan. It devotes to cultivation of technical professionals. Alumni of the NTUT have contributed greatly to the economic development of Taiwan and won wide praise from all industries. With the outstanding reputation in

professional education, NTUT is consistently rated in the top ten by the 1000 largest companies in Taiwan.

The graduate degree program of CMEE is home for the following five graduate institutes:

- Graduate Institute of Mechatronic Engineering (IME)
- Graduate Institute of Manufacturing Technology (IMT)
- Graduate Institute of Energy and Refrigeration Engineering (IERE)
- Graduate Institute of Automation Technology (IAT)
- Graduate Institute of Vehicle Engineering (IVE)

The International Graduate Program in Mechanical and Electric Engineering is conducted and fully supported by the CMEE College, with the faculty selected from the five graduate institutes under this college. The main research areas for this program include, but not limited to, the state-of-the-art mechatronics engineering, manufacturing technology, energy & refrigeration engineering, automation technology as well as vehicle engineering, which are among the most demanding professional expertise in the worldwide job market. The program offers not only soft skill training but a cultural program. Students are accompanied by so-called “mentors” to help them get comfortably settled in their new surroundings, social activities and help in all administrative matters. We cordially invite you to join us.

Financial Aid

The following financial aid is offered for students of this program.

1. Fellowship of \$10,000 NT (approximately \$320 USD) per month is granted for the first year.
2. Tuition is waived for the first year.
3. After the first year, the fellowship (including tuition waiver), research assistantship and teaching assistantship will be granted based on the academic and research performance. Normally, the fellowship duration is 2 years for MS program and 4 years for Ph.D. program.
4. Extra financial support may be provided by the candidate’s supervisor(s).

Qualifications and Applications

1. Applicants for the Ph.D. degree program must have a master’s degree or its equivalent in Mechanical or Electrical Engineering, or other related fields from an accredited institution by August 2008.
2. Applicants for the M.S. degree program must have a bachelor’s degree or its equivalent in Mechanical or Electrical Engineering, or other related fields from an accredited institution by August 2008.

3. Only application documents are required. No exam or interview is needed.
 4. **Application deadline: June 15, 2008**
 5. Application fee: None.
 6. When submitting an application, the following documents are required:
 - Application form
 - Study Plan
 - Official academic records (e.g., diplomas and transcripts) from each undergraduate or post graduate institution you have attended
 - Two letters of recommendation
 - Score of GRE (Graduate Record Examination) General Test (Alternative)
 - Score of TOFEL (Test of English as a Foreign Language) is required for applicants whose native language is not English.
- Other supporting documents such as the score of GRE Subject Test, research reports, and awards may be submitted as well.
7. For details, please refer to the website at http://www.ntut.edu.tw/~wwwoaa/english/International_Student_Office.htm.

DEGREE REQUIREMENTS

1. Ph.D. programs:

- Thirty four (34) credit hours of graduate level courses must be completed.
- 18 credit hours of graduate level courses must be earned, in which 1/3 of the credit hours are Elective Subjects of the College; 1/3 of the credit hours are Elective Subjects of the Graduate Institutes; 1/3 of the credit hours are Elective Subjects by student himself, adviser or director of the Graduate Institutes.
- Required courses (16 credit hours): Doctoral Dissertation (12 credit hours) and Graduate Seminars (4 credit hours).
- Successful completion of the Ph.D. qualifying examination.

2. Master's programs:

- Thirty two (32) credit hours of graduate level courses must be completed.
- Required courses (8 credit hours): Master's Thesis (6 credit hours) and Graduate Seminars (2 credit hours).
- Twenty four (24) credit hours in the CMEE-approved technical course list must be earned.
- Approved by the thesis advisor, a maximum of six (6) credit hours of courses taken from the other NTUT's graduate programs may be credited toward the MS degree.
- Successful completion of the Master's qualifying examination.

3. Under the thesis advisor's guidance, a maximum of nine (9) credit hours of courses taken from other NTUT's graduate programs may partially fulfill the CMEE technical coursework requirement.
4. All the courses assessment is continuous by academic staff with test, practical work, substantial report or research result. The researcher project, Ph.D 's thesis as well as master's thesis are supervised by adviser and assessed by a committee.

Curriculum

The modulated courses are selected by making appropriate selection from the available. The previous experience, current needs and future aspirations of participants are taken in to account in consultation with the respective course tutor and the adviser. The Courses' names of the program are listed as the following. For the details of each course, see our website:

[http://dbs.cc.ntut.edu.tw/cgi-bin/cgiwrap/wkc/db_curr?format=-0&codes="1"](http://dbs.cc.ntut.edu.tw/cgi-bin/cgiwrap/wkc/db_curr?format=-0&codes=)

Category I. Elective Subjects of the College of Mechanical and Electrical Engineering

IME Engineering Analysis

- Control System
- Experimental Design
- Engineering Optimization Methods and Applications
- Engineering Analysis and Applications
- Opto-electronic Methods in Precision Measurement
- Numerical Analysis
- Engineering Analysis
- Finite Element Analysis

IAT Engineering Optimization Methods and Applications

- Quality Control and Reliability Engineering
- Computer Algorithms
- Computer Aided Engineering Analysis
- Computer Aided Engineering Test
- Technical Paper Presentation
- Control Theory
- Advanced Numerical Analysis
- Engineering Analysis
- Finite Element Analysis

IERE Methods of Lab. & Measuring

- Engineering Mathematics
- Engineering and Computer Graphics

Category II. Elective Subjects of the Graduate Institutes

IME Automation System

- Adaptive Controls
- Optimal Controls
- Image Processing
- Man-Machine Interface
- Electro-Optical Precision Measurement
- Engineering of Films Coating
- Modern Control Theory
- Robotics
- Precision Machinery Dynamics and Control
- Experimental Mechanics
- Mechanical Behaviors of Material
- Mechanical Vibrations
- Advanced Combustion Theory
- Advanced Numerical Heat Transfer
- Mechanical System Design and Analysis
- Kinematic Geometry of Mechanisms
- Measurements in Manufacturing
- Advanced Application of Sensor and Transducer Mechatronic
- Micro machining Technology
- Special Topic on e-Manufacturing

IAT The Software of Mechanical Design Automation

- The Software of Electrical Design Automation
- Introduction to Automatic System
- Man-Machine System
- Artificial Intelligence and Expert System
- Design of Automatic Machinery
- Fuzzy Control
- Neural Network
- Pattern Recognition Technology
- Computer Aided Heat Flow Analysis
- Clean Room Design
- Computer-Aided Integrated Circuit Design
- 3D Reverse Engineering & Techniques
- Advanced Precision Metrology
- Digital Control System
- Technology Innovation Practice

Micro-and Nano-measurement System and Techniques

Digital Image Processing

IVE Digital Control Theory and Application

System Identification

Advanced Mechanical Vibration

Structural Dynamic Testing

Micro-Computer Control

Electromagnetic

Systematic Design of Mechanisms

Intelligent Control

Power System Planning

Stochastic Processes

Engineering Optimization Methods and Applications

Advanced numerical Heat Transfer

IERE Modern Vacuum Technology

Vacuum System Theory and Practice

Analysis and modeling of air distribution

Advanced Heat Transfer

Computing Fluid Dynamics

Advanced Fluid Mechanics

Energy Storage Technology

Heat exchanger analysis

Advanced Engineering Thermodynamics

Electronics

Computer Control

Category III. Elective Subjects o by student himself, adviser or director of the Graduate Institutes

Category IV. Thesis, be supervised by adviser

Research Activities

NTUT CMEE is distinguished for its research activities. The research grant comes from a variety of sources including National Science Council and other governmental institutes or enterprises. We provide many research and enterprise-collaboration opportunities for students. Students will be exposed to the state-of-the-art technologies and develop teamwork skills in these research activities.

Head of the Graduate Institute:

Prof. Chii-Ruey Lin

Tel: +886 2 2771 2171 ext. 4501

Fax: +886 2 27764017

E-mail: crlin@ntut.edu.tw

Contact Us

NTUT International Student Office:

- General Information
http://www.ntut.edu.tw/~wwwoaa/english/International_Student_Office.htm
- Tel: +886-2-27712171 ext. 1183
E-mail: intstudy@ntut.edu.tw
- Address
1, Sec. 3, Chung-Hsiao E. Rd. Taipei 10608, Taiwan, R.O.C
- Transportation
MRT Zhongxiao Xincheng Station, Exit 4