

SOUTHEAST UNIVERSITY

School of Mechanical Engineering

The college of Mechanical Engineering is one of the earliest established disciplines in Southeast University. The history of the department can be traced back to 1916, when it was founded as Nanjing Higher Normal College. Then, in more 90 years it evolved as the mechanical engineering department of National Southeast University and National Central University, the mechanical engineering department of Nanjing institute of technology and Southeast University. A group of famous scholars, members of the Chinese Academy of Sciences and Chinese Academy of Engineering, Prof. Mao Yisheng, Prof. Zhou Ren, Prof. Zhou Huijing, Prof. Wu Xuelin, Prof. Qian Zhonghan, Prof. Chen Xuehou, Prof. Zeng Dechao, Prof. Yang Liming, Prof. Yan Minggao, Prof. Zhao Renkai, Prof. Tong Bingang, Prof. Ding Hengao, the member of American Academy of Engineering, Prof. Wang Zhanjin, the member of the Academy in the Central Research Institute of Taiwan, Prof. Bo Shiyi have worked in the college or graduated from it.

By the hard working and innovation of several generations of staffs, the mechanical engineering college has been grown and developed steadily and firmly. It has reached many fruitful achievements in the construction of education subjects and disciplines, cultivation of talents as well as the scientific research work.

The college not only has trained tens of thousands of graduates for Chinese machinery manufacturing and other industries, but also supported the establishment and development for other research disciplines in Southeast and other universities in the fields of power engineering, automation engineering, instrumentation engineering, vehicle design and materials engineering. Until now it has made important contributions for the higher education, the development of national economy and the progress of science and technology of China.

Mechanical Engineering College is one of the best and earliest research institutes who have the right to award the master and doctorate degree in first class discipline of the state. It now has 6 research fields for doctor degree students, 6 research subjects for master degree students and one post-doctoral research station. Machinery Manufacturing and Automation is a national key discipline. Mechanical Engineering is the first class discipline of Jiangsu Province.

Integrated Electrical and Mechanical Engineering Training Center is the experimental teaching and fundamental course demonstration center for both Jiangsu province and the state colleges.

The speciality of mechanical engineering and automation passed the professional certification in charge by the National Engineering Education Professional Certification Committee in 2007 and 2010 respectively.

The college is much focused on the knowledge, abilities and the quality of the coordinated development in education, with particular emphasis on the student practical ability, innovation and the cultivation of the spirit of cooperation.

By the active research and exploration in education, the three-in-one training model (theory of teaching, practical training, independent research study) help the college get the national and provincial-level education achievement award more than 20 times.

The achievement played an exemplary role and had a great influence on the education model of other universities.

The college currently has six National Quality Course: mechanical design, mechanical engineering training, measuring and control of mechanical engineering, mechatronics Control

technology, computer systems and interfaces, introductory of experiment and practice course for fresh students. The syllabus covers the Institute's main teaching principle, "Innovative Design - Advanced Manufacturing - measurement and control - quality guarantee". The college now already has three national and provincial excellent level textbooks.

It currently has a total of 93 full-time teachers, including 24 professors, 32 associate professors. At least 30% staffs have working experience in industry. There are many scholars in the international and national academic society, expert committees and assessment group of the state. The college also hired well-known scholars both in the country and abroad as the part-time professors.

The students in the college generally cultivate the spirit of the self-study and take the initiative to practice, a sense of innovation at the same time. In recent 5 years, Students presided over more than 300 various types of innovative practice project and their original works and designs from the practical engineering applications won 50 different international, national and provincial awards from various competitions.

The overall performance of graduates shows the characteristics of high comprehensive quality, engineering adaptability, innovation, ability to practice and great potential of development, which benefits the student to be widely accepted by the industry.

Many of the Graduates from the college become the member of academicians. The scope of work for graduates includes: mechanical design, machinery manufacturing, machinery and electronics, vehicle engineering, industrial engineering, industrial design and research, production and teaching in other fields. The main employment sectors are: the design and manufacture of machinery, automotive design and manufacturing, engineering machinery, mechatronics, instrumentation, electronics, aerospace, marine, defense, energy, transportation and other high-tech enterprises, research institutes and university.

Southeast University 2011

mechanical engineering Undergraduate Program Requirements

Category: Engineering Major Code: 080305Y Degree: Bachelor of Engineerin
Time: 4 Year Date: 2011

1 Educational Objectives

The undergraduate education program of mechanical engineering and automation strives to cultivate the high-level, composite talents with a sound personality, noble character, firm and comprehensive knowledge, strong engineering practice orientated backgrounds, who are competent in the field of mechanical engineering in modern design, manufacturing, management, teaching, scientific research and other aspects of the work. The students have the ability to track the new theory and technologies in the fields of mechanical engineering, as well as the spirit of innovation and international view on the development of engineering applications and technologies

2 Basic Requirements of Graduates

The students have a firm background in natural science, humanities and fundamental scientific knowledge, good computer and foreign language capabilities.

They are able to grasp the comprehensive knowledge on modern mechanical engineering and specialized technology, preside over the design and manufacturing of electromechanical products, and be equipped with the knowledge structure and potential of enterprise management. Students also can adapt to the careers relate to scientific research, education, administrative and other departments, at the same time they have the potential and competency for further education.

3 Expected Attributes of Graduates

Firm knowledge abilities, talents of graduates are:

- (1) Better social science and humanity literacy, good sense of social responsibility and professional morality.
- (2) Knowledge of mechanical engineering on math, nature science, mechanical engineering and Economic Management.
- (3) Firm knowledge on general engineering and mechanical specility, understanding the status and tendency of mechanical engineering.
- (4) The abilities to apply the science and technology on designing mechanical system, components and processes comprehensively
- (5) The abilities to express the issues on mechanical engineering, establish the model, analyze, prove and solve the scientific problem,
- (6) The talents on retrieving science information, literature search by modern information technology
- (7) Understanding the laws and regulations on research design and development work in mechanical engineering, having the knowledge on the regulations and policies of environmental protection and sustainable development, understanding the influence on objective world and society from engineering.
- (8) Abilities to lead and organize team, having good sense of team spirit, communication skill and expression ability.
- (9) Adaptability to progress and the ability to understand and peruse on Lifelong learning

(10) Abilities on international version, transcultural communication, competence and collaboration in career.

4 Specialization and Related Majors

Mechanical engineering, mechanical design and automation in manufacturing, vehicle engineering, machinery and electronics engineering, industrial design.

5 Credits and Grade-Point Average Requirements

In adherence to the Regulations of The Southeast University for Credits Arrangement and Bachelor Degree Award, students qualify for graduation after obtaining a minimum of 150 credits and satisfying other relevant administrative conditions. They will be conferred the Degree of Bachelor in Engineering if they further satisfy all other University requirements.

6 Curriculum Structure:

Course Category	Credits	Credit hours	Credit Proportions	
			Required	Elective
Foundation Courses for General Education	57.5	1112	21.7%	16.7%
Foundation Courses for Discipline	25.0	400	16.7%	/
Core Courses for Major	16.0	248	10.7%	/
Major & Interdisciplinary Electives	11.0	176	/	7.3%
Series Research Beased Courses	15.0	192	/	10%
Practical Trainings	25.5	124	17%	/
Total	150	2252	66.0%	34.0%