



北京大学工学院

Developing a New Mechanical Engineering Program at Peking University

-- With a Brief Introduction to College of Engineering

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Opportunity of Reestablished CoE

- ❑ 1898, Peking University founded
1952: some engng dept.'s & labs remained
2005: College of Engineering reestablished
- ❑ Driving Force: rapid science & technology development in China
- ❑ Support of PKU: strong research in sciences, medical science, social sciences and humanity
- ❑ Carefully selected faculty members and research directions: active and independent investigators & cutting-edge tech



Dr. Shiyi Chen

Vision of the College of Engineering

To become

- the national base of engineering research and education
- the center of future technology
- the driving force for national economic growth
- the hotbed for educating future engineering leaders and entrepreneurs

To focus on new directions of engineering science and future technology, such as

- Health, innovative energy, material, environment and natural resources
- Science and technology needed from national demands and for national sustainable economic growth

Schedule for the early phase

- ❑ Faculty: recruit 50 new faculty members by 2007 (global competition)
- ❑ Student: graduate enrollment from 2005; undergraduate from 2006
- ❑ Infra-structure: Dept of Mech & Engng Sci incorporated; form a faculty with about 150 members in 5 to 10 years
- ❑ New building of 40,000 sqm
- ❑ Active participation in national key projects; in-depth collaboration with industries and local communities; unified education-research-application

Education Plan

- ❑ Leading education center: serve the academics and industries with high-quality graduates
- ❑ Multiple levels for education: BSc/BEng, MPhil, PhD, MEng and part-time programs
- ❑ International collaborations: Univ. Washington at Seattle, Georgia Tech, Auckland, etc.
- ❑ Enrollment:
 - 2006: 75 graduate students, 100 undergraduate students
 - 2007: 120 graduate students, 150 undergraduate students
 - 2009: 200 graduate students, 200 undergraduate students

Mechanics & Aerospace Engineering

- ❑ Turbulence: fundamentals and applications
- ❑ Complex fluid flow: fundamentals and applications
- ❑ Structural dynamics for aerospace engineering and smart control of flexure structures
- ❑ Propulsion and Combustion
- ❑ System Design and Optimization



Dr. Xianyue Su

Mechanics Program at Peking Univ.

- 1952 First Mechanics Program in China (Peiyuan Chow, Dept of Math & Mech)
- 1978 Department of Mechanics
- Undergraduate programs:
Mechanics (BSc), Engineering Mechanics (BEng)
- Graduate programs:
general mechanics, solid mechanics, fluid mechanics, control theory and engineering, biomedical engineering, engineering mechanics

Statement for Education

Our graduates shall be:

- With solid background on mechanics, mathematics and computations
- Energetic, creative, and with broad open view
- Patriotic, devoted to career
- Leadership with combined strengths

Labs and Centers

Students trained in research labs

- State Key Laboratory for Turbulence and Complex Systems
- Center for Advanced Composite Materials
- Institute for Industrial Software Engineering (to be established)
- Center for Systems and Control
- Aeronautics and Astronautics Dynamics and Control Laboratory

Broad View of Cutting-edge Tech

Interdisciplinary studies

- Biomedical Engineering (Solid & Fluid Mech)
(Chair: Dr. Jing Fang)
- Advanced Materials and Nano-technology (solid Mech)
(Chair: Dr. Zhonglin Wang)
- Energy and Resources Engineering (Fluid Mech)
(Chair: Dr. Dongxiao Zhang)
- Industrial Engineering and Engineering Management
(General Mech)

Toward International Standard for Education

- Develop curricula and course syllabi comparable to leading universities, and in compliance with accreditation systems like ABET
- Teach an increasing number of courses in English: *oversea scholar lecture project*
- Send students abroad (one semester or longer)
- Accept international students at various levels

Your advice and support are greatly appreciated !

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