



THE UNIVERSITY OF HONG KONG  
**Department of  
Mechanical Engineering**  
香港大學機械工程系

**UNDERGRADUATE  
PROSPECTUS  
2010**



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# FOREWORD

Mechanical Engineering has been taught at the University since 1910's. The Department of Mechanical Engineering was established in 1960. Throughout the last decades, there has been a steady growth in staff and student numbers, together with continuous development and diversification in academic courses, departmental facilities and research.

I have taken up the Headship since July 2002. While it is a tall order for me to emulate all the excellent work that my predecessors have carried out, I do have a belief. I believe in the people that make up this department. I am very proud of our students and staff members. This department continues to attract the quality students to join our undergraduate programmes. We have provided a balanced curriculum – a balance between theoretical foundation and practical applications,

technical knowledge and complementary studies, with the aim of producing well-rounded graduates. The students are taught by excellent experienced staff members who graduated from world renowned universities, and who are very conscientious in carrying out their teaching duties. Besides teaching, our staff members are also very active in their respective research fields – an aspect of paramount importance for teaching the undergraduates with the most up-to-date knowledge.

What we aim to do is to nurture our students and transform them into engineers capable of a high level of professional performance, with high employability prospects in the new economy, while holding an internationally recognized degree. Obviously, our alumnus are our most valued output and I consider it

important to seek their advice on how best to achieve our aim. Potential students need to know that engineering is the activity by which we transform our world to meet our needs and make everyday life better for everyone.

We invite you to visit our web site (<http://www.hku.hk/mech>) or e-mail us ([mec@hku.hk](mailto:mec@hku.hk)) for any further information you may need.



Professor S.T. Tan  
Head of Department



Professor S.T. Tan  
Head of Department

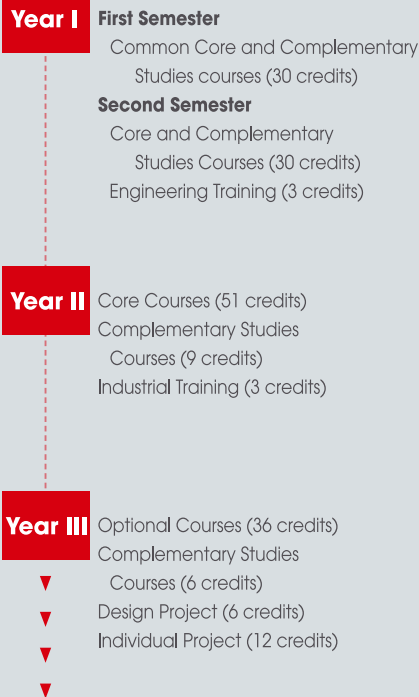
# UNDERGRADUATE STUDY PROGRAMMES

In the common admissions scheme of the HKU Engineering Faculty, applicants can use one single code 6963 to apply for its twelve **BEng** programmes. During the first semester, students will study some common Engineering core courses. They will then select their respective degree programme after the first semester of study. For details and possible changes, see <http://engg.hku.hk/CommonAdmission/ca.htm>. Our department offers two **BEng** programmes: **BEng in Mechanical Engineering** and **BEng in Mechanical Engineering (Building Services Engineering)** for the selection of engineering students.

With the help of External Examiners, our BEng Programmes are maintained at international level and accredited by the **Hong Kong Institution of Engineers (HKIE)**. In other words, our students graduated with honours fully meet the educational requirements for the corporate membership of not only HKIE but also other engineering institutions in Australia, Canada, Chinese Taipei, Japan, Korea, Malaysia, Singapore, UK, USA, etc.

Courses offered in our programmes can be broadly categorized into core, optional and complementary studies courses. Core

courses are technically or scientifically indispensable for an engineer in the respective discipline. Optional courses are often the advanced counterparts of the core courses. Further information on our courses are provided in the section on Teaching Areas. Complementary studies courses include subjects in humanities, business, management and communication skills.



All students are also required to undertake *Engineering Training* in the Year 1 summer vacation. In *Engineering Training*, students learn practical engineering skills such as how to operate conventional industrial equipment and tools. A series of talks given by successful engineers and industrialists on real life challenges in engineering is also a part of the *Engineering Training*. In the summer after Year 2 study, students may opt to undertake *Industrial Training* to gain practical working experience by attaching to a local or overseas company or an institution as engineering trainees. Besides having to take individual projects on areas of their interest, Year 3 students also have to do group design projects, that are mostly sponsored by local companies, through which they will learn how to participate in team work to solve practical engineering problems.

Students may elect to spend an additional year in industry to follow an **integrated study-work programme** at the end of Year 2. The programme will enable them to gain valuable engineering experience before proceeding to Year 3. They may also join the Exchange Student Programme to study overseas.

Students may apply to overload by no more than 6 credit units in a semester to pursue a **minor study programme** in business, economics or finance, so as to enhance their business knowledge. On the other hand, they may also apply to pursue the **double-degree BEng/BBA**, subject to some prescribed admission requirements. By fulfilling the requirements of the BEng curriculum and passing the relevant courses required by the Faculty of

Business and Economics during their study for BEng, these students will be awarded the degree of BEng, and also be eligible for proceeding to the BBA programme in the 4th year. After acquiring the required credits in the 4th year, students will be awarded the degree of BBA in addition to the degree of BEng.

### Entrance Requirements

In addition to the University entrance requirements, applicants with HKAL qualification shall satisfy one of the following requirements:

- 2 Advanced Level subjects\*; or
- 1 Advanced Level subject + 2 Advanced Supplementary Level subjects.

\* at least one subject is Pure Mathematics, Physics, Chemistry, Biology, Computer Studies or Applied Mathematics.



JUPAS Open Day and our jet engine.

Applications with other qualifications, such as GCE, IB, SAT, Associate Degree and Higher Diploma, students under the Early Admissions Scheme and Mainland students are considered on individual merit basis. Please contact our admission tutors for further details:

### Dr. K.C. Cheung (ME Programme)

Tel: (852) 2859-7907

Email: kccheung@hku.hk

### Dr. L.X. Huang (Mainland Applicants)

Tel: (852) 2859-2627

Email: lixi@hku.hk

### Dr. S.C.M. Hui (BSE Programme)

Tel: (852) 2859-2123

Email: cmhui@hku.hk



Summer programme for secondary schools students.

# ROUTE TO PROFESSIONAL ENGINEERS

The "Hong Kong Institution of Engineers" (HKIE) sets standards for the training and admission of professional engineers in our society. Corporate members of the HKIE are eligible to use the title "Ir.". The Government and most companies in Hong Kong recognize the membership as the key qualification for professional engineers. The typical route to Ir. includes:

**Education Requirement :** Obtain a HKIE-accredited undergraduate honours

engineering degree.

**On-the-job-Training Requirement :** Be employed by a company which offers a HKIE-approved training scheme that is conducted under the guidance of a qualified engineering supervisor. The minimum duration is 2 years.

**Responsible Experience Requirement :** Work in a position of responsibility which requires professional knowledge,

supervision of engineering staff and practice of the relevant engineering discipline. The minimum duration is 2 years.

**Professional Assessment :** Includes essay writing and interview on knowledge of engineering processes and management, appreciation of investigation, planning, design, construction, manufacturing, maintenance, safety and environmental issues, etc.

## ADVISORY COMMITTEE

The Advisory Committee members are prominent leaders of the Hong Kong Industry and many of them are our own alumni. Their advice and support is invaluable to ensure that we provide the best possible courses for students, and that graduates are well-equipped to tackle problems encountered in the local industry. Most of them have delivered seminars as a part of Engineering Training to our students with a view to giving a broader perspective of the engineering profession and the challenges it offers.

### **Ir. Dr. Alex S.K. Chan**

Director, Applied Technology Integration Ltd.  
Past President of HKIE

### **Ir. Stephen H.C. Chan**

Director  
EMSD, HKSAR Government

### **Ir. John Collier**

Director, ATAL Engineering Ltd.

### **Ir. C.Y. Fong**

Director, ATAL Engineering Ltd.

### **Ir. K.K. Iu**

Managing Director  
NAP Acoustics (Far East) Ltd.

### **Ir. James Kwan**

Executive Director & Chief Operating Officer  
The Hong Kong and China Gas Co. Ltd.  
Past President of HKIE

### **Ir. Edmund K.H. Leung**

Managing Director  
Hsin Chong Construction Group Ltd.  
Past President of HKIE

### **Dr. Francis Lung**

Chairman & CEO  
LX1 Technology Ltd.

### **Ir. Dr. W.K. Lo**

Managing Director  
Surface Mount Technology (Holdings) Ltd.  
Past President of HKIE

### **Ir. Patrick Y.P. Ng**

Director – Special Projects  
CLP Holdings Ltd.

### **Ir. Alexander Wong**

Executive Director  
New Fortune Asian Ltd.

# TEACHING AREAS

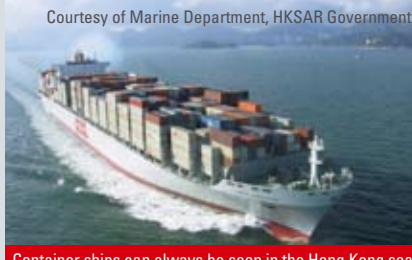
Courtesy of Hong Kong Electric



The wind turbine in Lamma Island.

Since early times, mechanical engineers have been responsible for the design, analysis, manufacture and maintenance of mechanical systems such as automobiles, ships, airplanes, heating and cooling systems, industrial equipments and machineries, etc. Over the past few decades, the accelerated growth in scientific knowledge and technology has brought about a significant change in mechanical engineering, both in its education and practice as a profession. For instance, with the rapid advances in computer technology, mechanical engineers are now extensively using computer-aided engineering (CAE) tools to undertake design and analysis. To keep pace with such conditions, our mechanical engineering degree curricula are structured to bring students quickly to the frontier of knowledge in a wide range of fascinating fields. Our graduates are also imparted with an awareness of the impact of engineering developments on

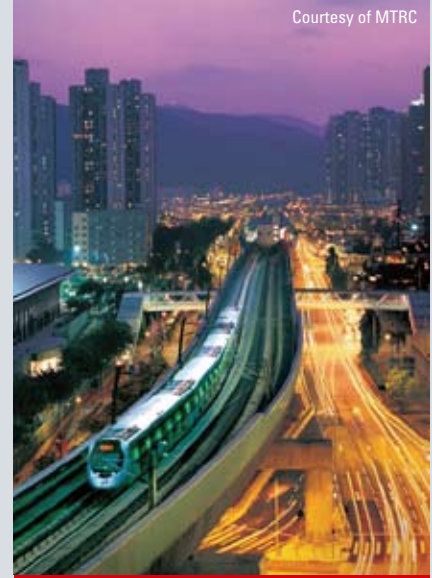
Courtesy of Marine Department, HKSAR Government



Container ships can always be seen in the Hong Kong sea district which is one of the busiest ports in the world.

society, professional ethics and the ability to communicate and cooperate with personnel in other disciplines. As a matter of fact, many of our graduates are now assuming very senior technical and managerial positions in a great variety of industries including utility services, building services, manufacturing and environmental consultancy services.

Courtesy of MTRC



Ma On Shan Railway.



Hong Kong's built environment comprises congested tall buildings.

# Aeronautical Engineering

(Coordinating staff: Ir. Dr. L.X. Huang, Dr. F.D. Liu)

Aeronautical engineering is the branch of engineering that concerns aircrafts, or the flight of any vehicle heavier than air. Apparently, it originates from ancient human fascination about birds' flight, but serious engineering development took place from 1920s and through war efforts. Further developments in the middle of the last century extends its activity to space flight (aerospace engineering). Modern flight vehicles have to put up with severe conditions such as rapid temperature and pressure changes in the atmosphere during flight, being hit by lightning, impact of birds or



A380 is the largest airliner in history, with an overall dimension of 73(L) × 80(B) × 24(H) m. (Courtesy of Airbus)

even engine failures. They also have to endure heavy structural loads applied upon vehicle components; numerous issues must be taken into account. Consequently, they are products of complex synthesis of various technologies

and sciences, including but not limited to aerodynamics and propulsion technology, material sciences, stress analysis, control engineering, avionics and human comfort studies.



A typical jet engine mounted on an airliner.



Courtesy of HAECO

Winglet modification of a Boeing 737 aircraft.

# Building Services Engineering

(Coordinating staff: Ir. Dr. S.C.M. Hui, Ir. H.N. Lam, Prof.Y.G. Li)

Building Services Engineering (BSE) involves the specification, design, installation and management of all the engineering services in the built environment. It is a challenging, interdisciplinary profession which helps to create a comfortable and safe living or working environment for people and processes, by providing air-conditioning, ventilation, illumination, water, power, sanitation, indoor transport, communication, security and fire protection.

Our BSE curriculum enables our students to acquire transferable skills

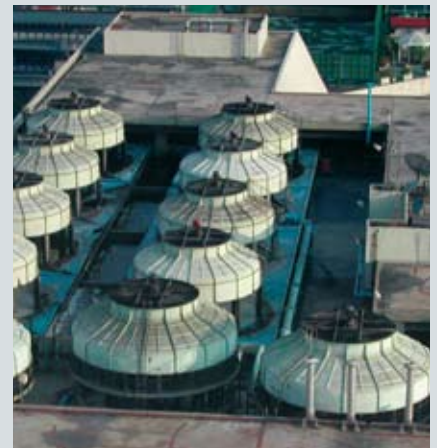
and knowledge for a professional career. Our courses cover the basic concepts, technical elements, systems design, practical applications and project management. To develop skills in communication, team working and creative design, an interdisciplinary design project with students from other building professionals is implemented. Students can develop a sound knowledge of engineering principles and the ability to apply this knowledge effectively to the complex situations in real world.



A hospital ward with breathing manikins for studying the dispersion of respiratory droplets.



Modern commercial buildings are monitored by computerized building management system.



Cooling tower clusters have been indispensable in large commercial buildings.

# Control, Automation & Instrumentation

(Coordinating staff: Dr. K.C. Cheung, Prof. J. Lam)

As technologies advance, control, automation and instrumentation are becoming increasingly important. Control systems are now essential in power stations, transportation vehicles, air-conditioning, lifts and more increasingly consumer products. These systems use electricity for their operation, because not only it is the most convenient form of energy, but also many electronic devices, from simple encoders to complex microprocessor-based controllers are built-in.

In this teaching area, students learn about electrical and electronic engineering in Levels 1 and 2, which include topics such as circuit theory, d.c. and a.c. motors, three-phase power supply and power electronics. The foundation of control is introduced in Level 2, allowing students to gain essential knowledge in control system design. More advanced control and instrumentation topics, such as computer control and hydraulic control systems, will be covered in Level 3 as an optional course to enhance students' knowledge of the subject.



Courtesy of Avantis HK

Wind turbine is a complicated electromechanical system. Its plant room typically houses servo control systems (to align the rotor axis with the wind and to give the blades the optimal angle of attack), gearbox, electric generator and power converter (to interface with the transmission network).



Our entry in the Solar Car Competition.



Control room.

# Design & Manufacturing

(Coordinating staff: Ir. Dr. K.W. Chan, Dr.Y.H. Chen, Ir. Prof. S.T. Tan)

Design and manufacturing is a major element of our mechanical engineering degree curriculum. Related courses are structured to provide students with relevant knowledge and experience in



To extend the service life of underground pipelines, a unique robotic device was developed by a student project group to travel inside a gas pipe for spraying protective coating on its inner surface.



Design of the moulds for a spiderman model.

accordance with their level of study. In Level 1, students are equipped with the ability to communicate design and manufacturing information and an understanding of basic manufacturing processes through lectures, assignments and engineering training. Systematic methods and practice for designing engineering components and assemblies are introduced in Level 2. On reaching Level 3, students learn design methodologies and



In waterjet cutting, a mixture of water and abrasive substance under high pressure are employed. It is the preferred method when the material being cut is sensitive to the high temperature generated by other machining method.

project management skill in lectures. At the same time, they are grouped into project teams to handle real-life engineering design problems which are sponsored by industrial companies. Optional courses are also available for students to strengthen their knowledge in computer-aided design and manufacturing technologies.

# Dynamics, Vibration & Acoustics

(Coordinating staff: Ir. Dr. L.X. Huang, Ir. Prof. K.Y. Sze, Mr. W.S. Sze)

Dynamics concerns the motion of objects under the action of forces. These "objects" range from particles, rigid bodies, interconnected rigid parts found in gears, force and motion transmission systems, to complete vehicles, such as double-decker bus travelling on hilly roads or spacecraft under the influence of manoeuvring astronauts. Excessive forces can cause vibration and severe structural damage, especially when resonance occurs. The study of dynamics and vibration is also closely related to that of automatic control.



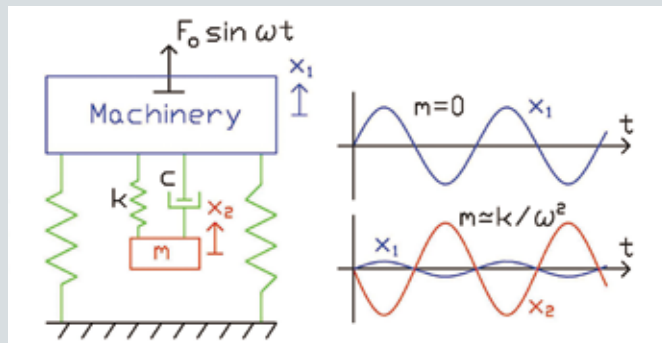
© Kristy Pargeter | Dreamstime.com

Springs and hydraulic dampers are commonly used in the suspension system of road vehicles.

In our courses, knowledge for understanding, analyzing and measuring dynamic and vibrating systems will be introduced. A particularly important

application area is condition monitoring and fault diagnosis which involve the use of electronic instrumentation and digital signal processing techniques. Reduction of noise

caused by vibration, or otherwise, is also one of the advanced topics offered at the later stage of the curriculum.



When the natural frequency  $\approx k/m$  of the smaller mass "m" is approximately equal to the excitation frequency  $\omega$  of the machinery, the vibration amplitude of the machinery can be significantly reduced. The mass is known as the moving mass damper which is widely used in attenuating vibration of precision equipment.

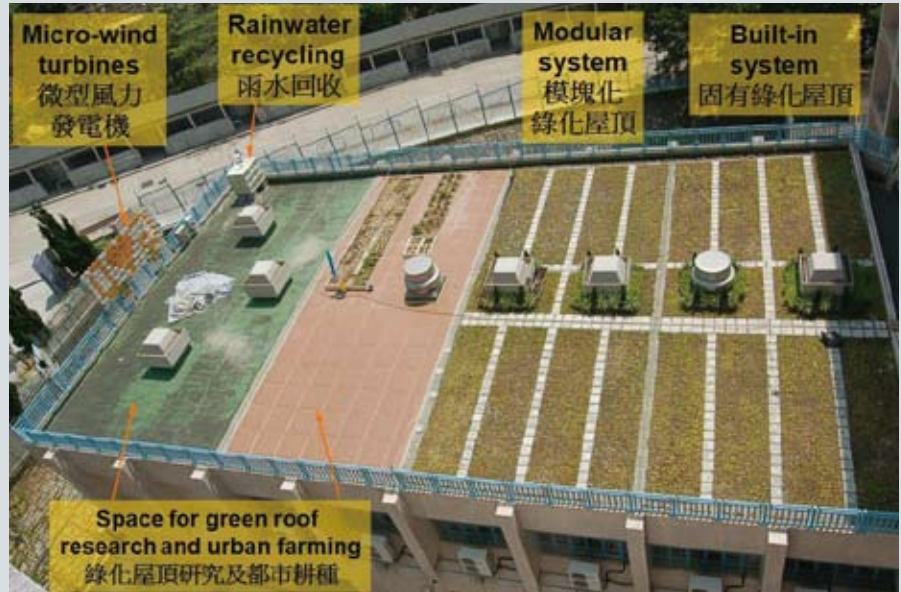


Semi-enclosure to protect residents from train noise.

# Energy & Environment

(Coordinating staff: Ir. Prof. D.Y.C. Leung, Ir. Dr. M.K.H. Leung, Prof. Y.G. Li)

The prosperity of Hong Kong gives us a high standard of living but, at the same time, brings us many environmental problems. Most pollution is caused by the production of power and consumption of energy such as in electric power plants and motor vehicles. The construction of infrastructure may also cause many problems which require solutions by environmental engineers. The Environmental Impact Assessment Ordinance requires all major engineering projects be assessed in all environmental aspects before their commencement. Consequently, our society demands a large number of mechanical engineers who possess the knowledge in various modern energy production and conversion systems, as well as environmental awareness. Environmental engineering is a broad area and this feature is well-reflected in the offered courses. They cover concepts and measurements of water and air quality, air pollution control, municipal and industrial wastewater treatment, solid and hazardous wastes, noise management, energy efficiency, renewable energy etc.



A pilot green roof set up with the help of our staff in St. Bonaventure Catholic Primary School, Wong Tai Sin.



The landfill gas plant in the The North-East New Territories Landfill at Ta Kwu Ling. The plant is expected to supply over 10,000 m<sup>3</sup>/hr of methane in 2015.



Vibratory membrane recycling system for used oil. The small photo shows the oil at different filtering stages.

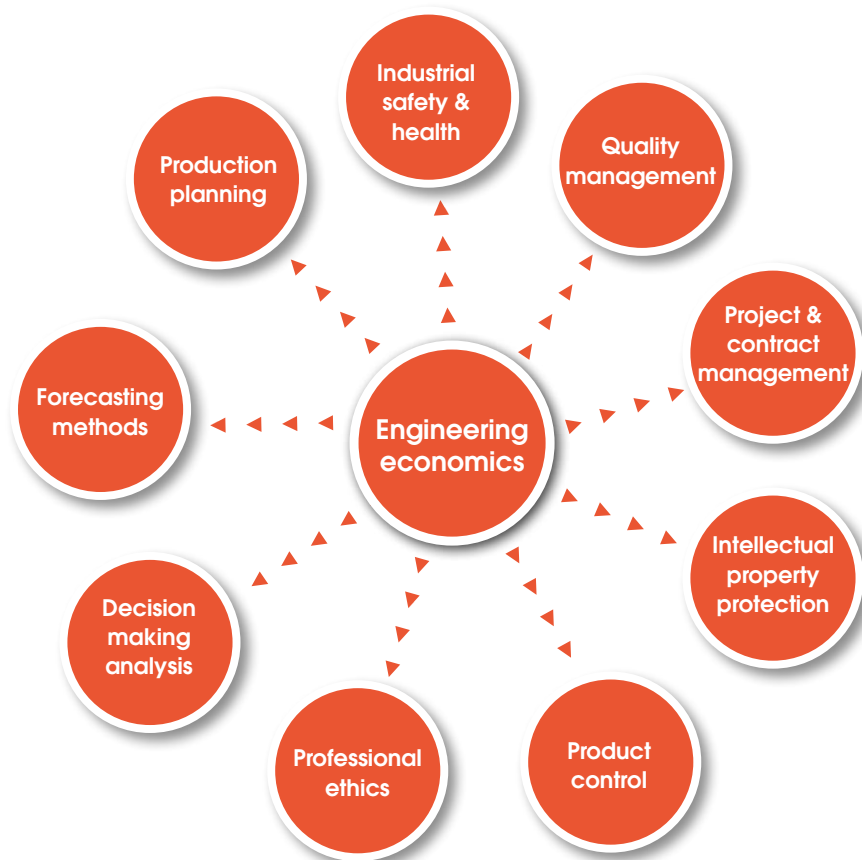
# Engineering Management, Economics & Ethics

(Coordinating staff: Ir. Dr. M.K.H. Leung)

Engineers should possess necessary management skills and ethical quality to bridge the gap between technology and business. These skills become progressively important as they take on senior managerial positions in their professional careers. The success of

a technological development from concept to commercial product highly relies on effective research strategy, technology & product life cycle analysis, production planning, project management, quality management and so on. Proper protection of intellectual

property should be ensured by means of patent, copyright or trademark. Engineering economic analysis should be performed in decision making among feasible alternative engineering solutions in order to maximise the economic benefit.



# Engineering Mathematics & Computing

(Coordinating staff: Dr. C.K. Chan, Prof. K.W. Chow, Prof. J. Lam)

Advanced mathematics is an essential tool for describing physical processes. It provides the foundation for scientific analysis and engineering computation. The main topics in the Level 1 course are linear algebra,

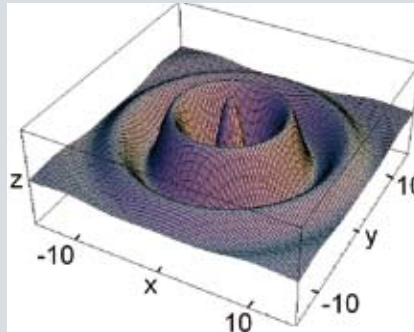
advanced calculus, and ordinary differential equations, followed in Level 2 by complex variables, partial differential equations and probability and statistics. An optional Level 3 course is offered for introducing more

advanced mathematical and computational techniques for solving engineering problems.

Although mathematics provides the basic analysis tools, there are many engineering problems which cannot be solved analytically. However, computers have become so powerful that it is possible to solve most numerical problems to a high degree of accuracy. As many engineers are expected to be capable of writing their own software for numerical calculations and the graphical display of results, there are a Level 1 course in C++ programming and a Level 2 course in Windows programming using Visual C++ in our curriculum.



The output page of a computer project on simulation of liquid level controller.



Concentric water wave generated by a point source. It takes the form  $z = \exp(-\alpha r^2) \cos(kr)$  where  $\alpha$  is the attenuation constant,  $2\pi/k$  gives the wavelength and  $r^2 = x^2 + y^2$ .



Dialogue boxes generated by a C++ program written by students for their computing project on smoke dispersion.

# Fluid Mechanics

(Coordinating staff: Prof. K.W. Chow, Dr. C.H. Liu, Dr. C.O. Ng)

Fluid mechanics plays a fundamental role in many core applications of mechanical engineering, e.g., aircrafts and marine vessels, transport of fuel, breakwater and design of harbours. Undergraduates will learn the basic fluid mechanics from a macroscopic perspective in Year 1. Basic concepts like momentum theorems will be explained, and forces on structures impinged upon by liquid jets will be computed. In Year 2, analytical techniques will be applied to elucidate the flow configurations arising from sources, sinks and vortices. Open channel flows and the dynamics of rivers and estuaries will be examined.

Year 3 students may pursue electives specializing in the physics of a viscous liquid. The concept of a boundary layer is introduced. Applications to very specialized phenomena, e.g. dynamics of airplane wings, flows undergoing

transition from laminar to turbulent regimes, are addressed. Students mastering all these principles are extremely well prepared for further studies or professional development.

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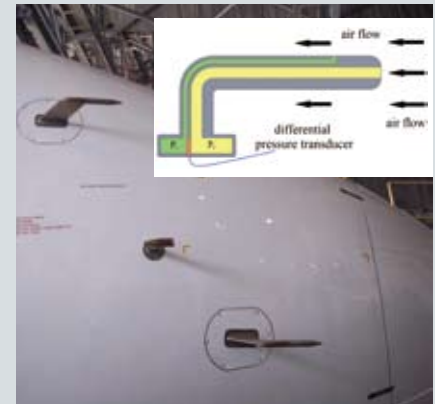


Wave motion is related to the transmission of signal and energy, and thus very important in nature as well as engineering processes.



© Peter Szucs | Dreamstime.com

Aqueduct, a typical example of open channel flow, constitutes the ancient water supply system and is still used in many European countries.



Pitot-static tubes equipped in a jetliner for flight speed measurement.

# Materials & Nano-technologies

(Coordinating staff: Ir. Prof. A.H.W. Ngan, Ir. Prof. M. Wang)

Every piece of engineering design involves materials, and to a large extent, many of the most recent developments in mechanical and other branches of engineering hinge on breakthroughs in materials research. A successful engineer must have a sound knowledge of the behaviour of various types of engineering materials. How materials behave under

their service conditions depend not just on the intrinsic properties of the materials but also on the processing treatments they received. Material engineering is therefore a challenging discipline. In the first two years, our students will study the structures of metals and polymers, as well as the factors that influence their performance in use. In the final year, other materials such

as composites, ceramics and high strength alloys will be introduced, and materials behaviour under hostile conditions will be dealt with. Students are also provided with the opportunity to enrol in master-level courses on plastic technology and nanotechnology.



Courtesy of Safety Accident and Failure Experts Ltd.

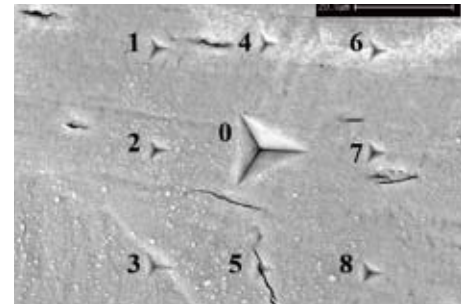
Tempered glass is manufactured through tempering in which the glass is rapidly cooled down from its annealing temperature ( $> 600^{\circ}\text{C}$ ). The process induces tensile and compressive residual stress in and away from the core, respectively. Tempered glass is typically 4 ~ 6 times stronger than the standard annealed glass. When it breaks, the residual stress loses balance and dices the glass into small pieces.



Heat treatment of materials.



Polymeric foam-type materials are extensively used in protective sports equipment.

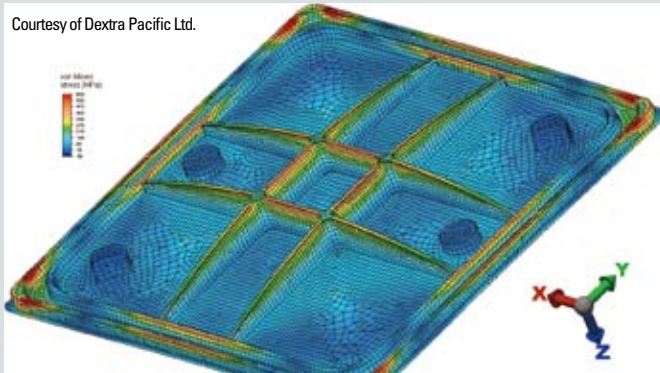


Compression testing of micron-sized specimens to understand their performance in micro-machines.

# Mechanics of Solids

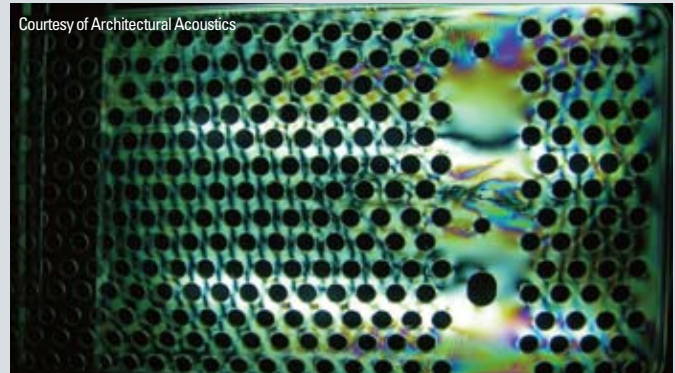
(Coordinating staff: Ir. Prof. A.H.W. Ngan, Ir. Prof. A.K. Soh, Ir. Prof. K.Y. Sze)

Courtesy of Dextra Pacific Ltd.



Stress analysis for a Class B-125kN manhole cover.

Courtesy of Architectural Acoustics



Polariscope is used to assess the residual stress, which can be visualized in form of colourful fringes, in a polycarbonate panel.

Mechanics of solids is the branch of mechanics that deals with the behaviour of solid bodies under static and dynamic loading. It is different from statics and dynamics which

mostly concern with the external forces and motions associated with particles and rigid bodies. Mechanics of solids deals with deformable bodies by taking their material

properties into account. It focuses on the internal force and deformation which are known more technically as stress and strain. In all engineering products such as aircrafts, automobiles, mobile phones, electrical appliances and electronic components, mechanical strength is always a critical consideration which cannot be assessed without the knowledge of stress and strain distributions. Through the courses offered in this area, students learn analytical, experimental and computational techniques for analyzing and predicting stress, strain and mechanical strength in load bearing components with and without the presence of stress concentrations such as holes, fasteners and cracks.

Petr Kastovsky | Dreamstime.com



Cracks emerging from a rivet hole which can be found in many metallic structures.

# Thermal Engineering

(Coordinating staff: Ir. Dr. L.X. Huang, Dr. C.H. Liu, Prof. L.Q. Wang)



Heat sinks used in PC dissipate heat efficiently by using a large surface area to volume ratio.



In large hotels, heat pumps are installed to extract the heat dissipated by air-conditioning systems to warm up tap water for sanitary use. The photo shows a small heat pump designed by our department under the sponsorship of Environment & Conservation Fund and Woo Wheelock Green Fund. The heat pump can be adopted in residential flats in which split-unit air-conditioners are used.

Engineering thermodynamics deals with energy and its conversion during a process. For example, the temperature increase due to rapid strokes of air pumped into a soccer ball can be explained by thermodynamic principles. Practical engineering applications of thermodynamics include steam power plants, internal combustion engines, jet engines, air-conditioning systems, refrigeration systems, etc. Understanding thermodynamics principles enables us to analyze a thermodynamic process, to design effective systems and to optimize their energy efficiency.

Heat transfer seeks to predict and control the energy transfer that takes place in/ between material bodies as a result of a temperature difference. It studies how heat is transferred and how the transfer rate can be predicted. Common modes of heat transfer include conduction in solids by molecular vibrations, the convection in fluids by the fluid motion and radiation from surface to surface by electromagnetic waves.



Courtesy of Hongkong Electric

A power plant generates electricity based on a number of sophisticated thermodynamic processes, including fuel combustion, boiler steam generation, steam turbine expansion etc.

# SNAPSHOTS OF LABORATORIES



Mitutoyo Leepert Meterlogy Laboratory. It houses equipment for accurate and precise dimension measurement.



Equipment for studying flows in micro-channels which are, typically, few tens of  $\mu\text{m}$  in width.



One corner of Nano-mechanics Laboratory, showing a nanoindenter / atomic force microscope setup.



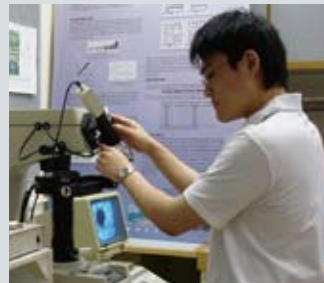
Water channel for studying wave propagation and reflection in Fluids Laboratory.



A jet engine in Engine Laboratory.



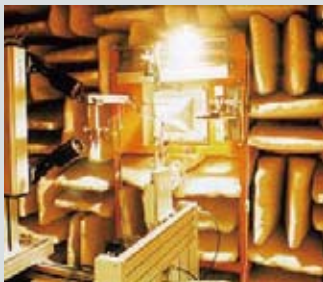
A circular polariscope in Experimental Stress Analysis Laboratory.



Hardness testing of materials.



An industrial robot in Advanced Innovation and Technology Laboratory.



Anechoic chamber provides an ultra quiet environment for acoustic measurement.



Micromanipulators for loading minute biotissues such as a living cell.



A mini-cooling tower in Building Services Engineering Laboratory.



An industrial boiler in Thermal Laboratory.

# STAFF-STUDENT INTERACTION

Students acquire knowledge, experimental techniques and hands-on experience in lectures, tutorials and laboratory and other practical sessions. Student's views and

suggestions on these learning processes are channelled back to the Department through the non-academic tutorial system and the staff-student consultative committee.

## Staff-Student Consultative Committee

When collective issues concerning the whole class need to be raised, the Staff-Student Consultative Committee provides a channel of communication between students and the Department. There are student representatives in each class to collect the views of their fellow classmates. The Staff-Student Consultative Committee is chaired by one of the student representatives, with secretarial assistance provided by a teaching staff. Numerous issues have been resolved through the mechanism.

## Non-Academic Tutorial System

The non-academic tutorial system is set up to assist students during their stay at the University. Each member of the teaching staff is allocated several students to form a non-academic tutorial group. Through regular meetings of the group, students get to know each other better. Also, tutees can contact the tutor if they have problems coping with university life.



A technical visit to IFC – taken on the refuge floor.



Thailand study tour 2009.



Mechanical Engineering Society.

# INTERNATIONAL STUDENT EXCHANGE

The University of Hong Kong is committed to developing a global perspective and cross-cultural understanding among its students. We have developed a network of reciprocal student exchanges with numerous universities around the world. The Office of International Student Exchange maintains close links with over 180 partner institutions in 25 different countries and manages the University's international student exchange programmes through the HKU Worldwide Scheme (see <http://www.hku.hk/liaison/oise/>).

Every year, students from different parts of the World, e.g. USA, UK, France, Canada, China, Korea, are admitted to our programmes. Meanwhile, our undergraduates are encouraged to study overseas and they can apply for credit exemptions after they resume their studies.



Lo Ting Cheong  
The University of Virginia, USA.

## Recent Cases



Henry Chu  
The University of Aberdeen, UK



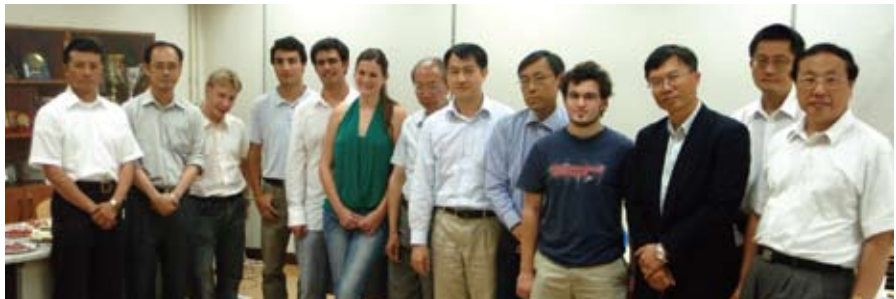
Ronald Victor Man Fu Lam  
University of Adelaide, Australia.



Wong Man Chi Joao  
Boeing Internship, USA.



Yeung Chun Yip  
University of Birmingham, UK.



A gathering of French Exchange Students with the teaching staff.

# EMPLOYMENT OF GRADUATES

Graduates of the BEng degree in Mechanical Engineering (ME) / Building Services Engineering ME(BSE) are well prepared for diverse career opportunities. Recognized professional training is offered by the Hong Kong Special Administrative Region Government, public utility companies, consultancy firms and manufacturing companies. Most graduates seek and

obtain professional qualifications from both local and United Kingdom engineering institutions at a later stage in their career.

*We thank the Centre of Development and Resources for Students, HKU for providing the following statistical information from "Destinations and Remuneration of 2008 Bachelor's Degree Graduates."*




## Where did the 2008 ME / ME (BSE) Graduates go ? Some examples:

Advanced Semiconductor Materials Co. Ltd. [Mechanical Engineer]  
ASM Assembly Automation Ltd. [Reliability Engineer and Mechanical Engineer]  
ATAL Engineering Ltd. [Graduate Trainee]  
Automated Systems Holdings Ltd. [Mechanical Engineer]  
Bumatech Ltd. [Sales Engineer]  
Cheung Yue Knitting Garment Ltd. [Assistant Merchandiser]  
China State Construction Engineering (Hong Kong) Ltd. [Graduate Trainee]  
CLP Holdings Ltd. [Graduate Trainee]  
Dah Chong Hong Holdings Ltd. [Engineering Trainee]  
Drillcut Ltd. [Mechanical Trainee]  
Gammon Construction Ltd. [Assistant Engineer]  
Hang Foong Mechanical & Electrical Ltd. [Assistant Engineer]  
Hang Seng Bank Ltd. [Marketing Officer]  
Hong Kong Aero Engine Services Ltd. [Engineering Graduate Trainee]  
Hongkong Electric Holdings Ltd. [Assistant Commercial Engineer]  
Hsin Chong Construction Group Ltd. [Graduate Building Services Engineer]  
J. Roger Preston Ltd. [Engineer Trainee]  
Jardine Engineering Corporation [Management Trainee]  
Jardine Matheson Ltd. [Management Trainee]  
Johnson Controls Hong Kong Ltd. [Assistant Engineer]  
Kai Shing Management Services [Engineering Graduate Trainee]  
Krueger Holdings Ltd. [Assistant Engineer]

KTB Ltd. [Sales Engineer]  
Manunsell Consultants Asia Ltd. [Graduate Trainee]  
Meinhardt Hong Kong [Engineer, Graduate Engineer, Graduate Trainee]  
Modern International Engineering Co. Ltd. [Assistant Sales Engineer]  
MTR Corporation [Graduate Engineer]  
New World First Bus Services Ltd. [Graduate Engineer Trainee, Mechanical Engineer Trainee]  
OveArup & Partners Hong Kong Ltd. [Graduate Engineer]  
Parsons Brinckerhoff (Asia) Ltd. [Assistant Engineer]  
Perpetual Advanced Microelectronic Ltd. [Field Engineer]  
Process Automation International Ltd. [Engineer]  
Ryoden Engineering Co. Ltd. [Assistant Engineer]  
SGS Hong Kong Ltd. [Energy Engineer]  
Shui On Building Contractors Ltd. [Graduate Engineer]  
Sinopec [Project Engineer]  
SRD Computing & Engineering Co. Ltd. [Assistant Engineer]  
Sun Hong Kai Properties Ltd. [Management Trainee]  
Swire Properties Ltd. [Mechanical Engineer]  
The Hong Kong and China Gas Company Ltd. [Engineer, Graduate Trainee]  
TQM Consultants Co. Ltd. [Assistant Consultant]  
Wings Tradings (HK) Co. Ltd. [Assistant Project Engineer]  
Wong & Ouyang (Building Services) Ltd. [Assistant Engineer]  
Zodiac Lighting Ltd. [Product Engineer]

About 10% of the graduates choose to pursue further studies by enrolling in master and doctoral degree programmes.



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