

# Join UST

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## The world needs science and technology...

Here at the Hong Kong University of Science and Technology, we strive to promote and create scientific research and technological innovation for the benefit of mankind.

Today we are protected against previously deadly diseases, our quality of life is generally improved, our life expectancy is much extended, we could now travel to most parts of the world within a day or two and we have a universe of knowledge at our fingertips... all thanks to the wonderful scientific discoveries and technological breakthroughs we have had. Science & technology (S&T) also holds the key to meeting the challenges of the new century – increase energy efficiency, create sustainable environment, advance health care and improve agricultural productivity to end poverty, among many others.

We believe S&T is also the key to the future success of Hong Kong. The city has thrived on finance, services and real estates, but it now needs to diversify its economic base to survive in an ever increasingly competitive regional and global environment. Armed with human capital, infrastructure and resources, Hong Kong has great potential to become an innovation and technology hub.

Since its establishment in 1991, the University has made groundbreaking advances in Science, Engineering, Business, Humanities and Social Science, pushing forward the frontiers of knowledge. Today, HKUST is globally recognized for its academic excellence.



### Ranking

HKUST	<b>No. 1 in Asia &amp; No. 40 in the World</b> <i>(QS Asian &amp; World University Rankings 2011)</i>
Science School	<b>No. 1 in Hong Kong</b> <i>(QS World University Rankings 2010)</i>
Engineering School	<b>No. 1 in Greater China</b> <i>(Academic Ranking of World Universities by Shanghai Jiao Tong University, 2011)</i>
Business School	<b>No. 1 in Asia</b> <i>(Academic Ranking of World Universities by Shanghai Jiao Tong University, 2011)</i>
School of Humanities and Social Science	<b>No.1 in Greater China</b> <i>(Academic Ranking of World Universities by Shanghai Jiao Tong University, 2011)</i>
EMBA program	<b>No. 1 Global EMBA Ranking (2009-2011)</b> <i>(Financial Times)</i>

HKUST is the only university of science and technology in Hong Kong and we do see ourselves playing a special role in nurturing the next generation of talents. Riding on Hong Kong's 334 reform, HKUST will launch a revamped curriculum to nurture well-rounded individuals equipped with professional competence, strong entrepreneurial spirit, creative thinking and relevant skills who will thrive in and contribute to a knowledge-based economy.

Imagine: The founders of HKUST started work with a clean white canvas. In twenty years, the founders, together with faculties, students and staff have collaboratively created a magnificent masterpiece that is called "the HKUST Miracle". We are eager to have more young talents come paint with us and create even greater miracles as we march into the next decade and beyond.

## Getting WISE-er

The world needs science and technology; and science and technology needs women. In view of this, HKUST is launching a series of "Women in Science and Engineering" (WISE) initiatives.

There is no doubt that women can contribute greatly to society through research and achievements in science and engineering. Since ancient times, great women scientists and engineers include the 17th century mathematician Ada Lovelace, Marie Curie who was famous for her pioneering research on radioactivity, and Grace Murray Hopper who devised the first computer compiler in the early 1950s.

Closer to home, HKUST's Dean of Science Prof Nancy Ip is well known for her discoveries in biology of neurotropic factors. Her research has contributed significantly to the field of neurophysiology. Prof Kei May Lau, Chair Professor of Electronic and Computer Engineering, is a leading researcher in the field of LED, the little bright light that is soon to be the ubiquitous and energy saving lighting in our world.

We do look forward to having a WISE-er community here at HKUST. Our WISE program aims to inspire young women to pursue the unlimited opportunities within the world of science

and engineering. The program will comprise a series of diverse initiatives, including academic lectures and workshops, shadowing and mentoring programs, a scholarship scheme and a summer camp.

### Do you know?



**The Dean of Science at HKUST is a woman scientist.** Prof Nancy Ip,

who is the first Chinese scientist to receive the L'Oreal-UNESCO Award for Women in Science in 2004, has become Dean of Science at HKUST since February 2011. Her research team has made breakthrough discoveries in unraveling new signaling mechanisms in the brain that could help generate new medicine for the prevention and treatment of diseases such as Alzheimer's and Parkinson's diseases.



## WISE Camp (16-18 July)

Target participants: 56 female students with an interest in science and engineering

Young women with an interest in science and engineering generally lack role models. The WISE Summer Camp will offer them an opportunity to connect with our WISE community. They will get a sense of what female scientists and engineers are like.

On the academic side, the WISE Camp will focus on four research areas: Neuroscience, Environment, Multi-Media and Skin Care. What else other than academic talks, experiments, numbers and data? Participants will have ample opportunities to interact with our Science and Engineering professors. They will also have the chance to hear about experiences of our WISE community — how they got into the field, challenges and rewards, what their work is like ... (Details will be available in April at <http://wissummer.ust.hk>)

### "What's Math Got to Do With It?" - Keynote Speech

Prof Tony F Chan, our President, is an applied mathematician. As a true believer in basic science, he sees the sciences beautiful and exciting. He will enlighten WISE Camp participants on "What's Math Got to Do With It?".



Highlights of the speech:

- Math behind Pixar animation—to produce a reasonable level of realism in these movies, one needs to use sophisticated mathematics. How does it work?
- JPEG—a popular image compression standard nowadays—brought major impact in signal and image processing. How does it relate to Math?