

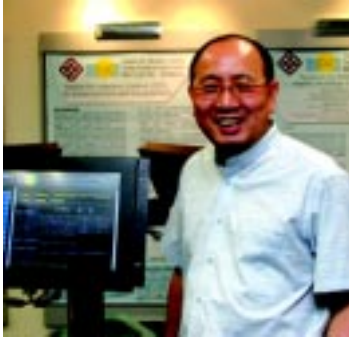


Rising to new challenges in health sciences



PolyU has a quarter-century's experience in delivering quality teaching and research in the area of healthcare. With increased public awareness of the importance of healthy living and major reforms to Hong Kong's public health system forthcoming, the University is taking many steps to prepare for a challenging future.





A prominent veteran in the local healthcare field, Dean of the Faculty of Health and Social Sciences (FHSS) Prof. Thomas Wong said the city's improving standards of living and awareness of the benefits of a healthier lifestyle have prompted the general public to place more emphasis on primary healthcare, making health sciences one of the fastest growing sectors in Hong Kong.

Pioneer of healthcare education

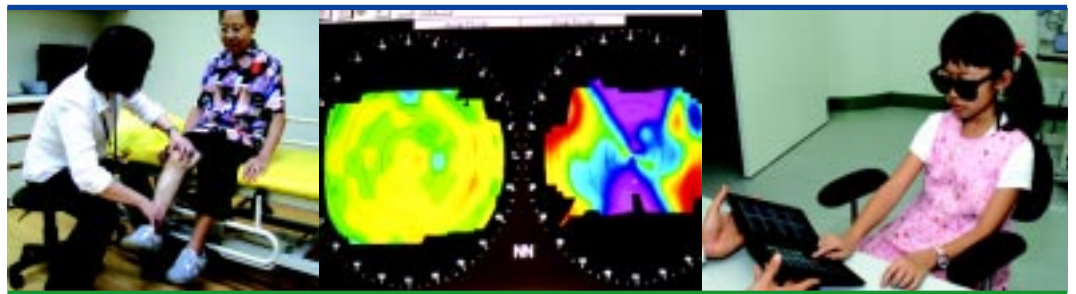
At PolyU, specialized programmes in health sciences are run by four units apart from the Department of Applied Social Sciences grouped under FHSS. They are: Department of Health Technology and Informatics, Department of Rehabilitation Sciences, School of Nursing and School of Optometry. PolyU is also the only tertiary education provider in Hong Kong to offer undergraduate programmes in Medical Laboratory Science, Occupational Therapy, Optometry, Physiotherapy and Radiography.

Prof. Wong said students of these departments enjoyed the most advanced and comprehensive teaching facilities at PolyU. By inter-twining theories and practical training in its pedagogy, supplemented with language, IT training, general education and student development activities, FHSS is determined to produce graduates with the highest professional standard.

Focused research for better community-based healthcare

Coming from a nursing background himself, Prof. Wong said the study of humanities is included in the Faculty's programmes because health sciences students are required to deal with people during their study as well as after they become professionals. "We believe that if we want our students to care for others, we have to first care for our students."

The University, seeing a rise in demand for better healthcare in Hong Kong, has already designated three Areas of Strategic Developments which are related to health sciences. These strength areas are:



- **The Centre for Myopia Research** conducts special research on why an overwhelming majority of Chinese people are myopic and what can be done to slow down or prevent the progression of myopia.
- **The Centre for East-meets-West in Rehabilitation Sciences** aims to enhance western rehabilitation practices by incorporating traditional Chinese therapeutics. This is achieved through high quality education, informed by interdisciplinary research.
- **The Centre for Telehealth and Telecare** promotes health locally by providing community-based primary rehabilitative and palliative healthcare services through its clinics, equipped with an award-winning telehealth system.

Many on-going research projects in these areas require the joint efforts of researchers across different departments and schools within the Faculty and the University. These include development of a non-invasive glucose meter for diabetics, a smart device for sleep apnoea, a deep vein thrombosis screening system, an eTCM pulse sensing system, a sexually-transmitted-disease screening system, a telemedication management system and a foot sensor array subsystem. All these are being designed for home usage, in line with the Faculty's goal of providing better healthcare at the community level.

Close co-operation with community

In addition to its research and development activities, FHSS prides itself as a close partner of the community, providing clinical and consultancy services to the general public as well as charities, professional bodies and Non-Government Organizations.

In 2002, the School of Nursing successfully developed a telehealth system in collaboration with Princess Margaret Hospital (PMH) and Kwai Tsing District Council. Designed for self use at FHSS's Telehealth Clinic on Tsing Yi Island, the computerized system was the first of its kind in Hong Kong and set an excellent example of a successful university-hospital-community partnership and efficient means of communication between patients and healthcare professionals.

The innovative project has won international recognition and prizes including the 2002 International Information Technology Award for Clinical Nursing Applications from the Honour Society of Nursing, Sigma Theta Tau International, and Gold Award in the Best of Health category (pictured above) of the 2002 Asia Pacific Information and Communication Technologies Award.



Rebirth of two academic units

To further consolidate the University's strengths in health sciences, the University restructured two former units of FHSS, which became the Department of Health Technology and Informatics (HTI) and the School of Optometry starting 1 September.



Department of Health Technology and Informatics

Applying inter-disciplinary co-operation on a broad-based range of medical science and informatics development, HTI aims to provide integrated medical training for students and related services to the community.

Currently HTI offers three undergraduate programmes namely BSc (Hons) in Biomedical Engineering, BSc (Hons) in Medical Laboratory Science and BSc (Hons) in Radiography. A double-degree option is also available for Biomedical Engineering graduates who can spend one more year on a self-financed basis to complete another BSc (Hons) degree in Applied Biology with Biotechnology.

School of Optometry

More than 500 students have already qualified as optometrists through studying at the Faculty's former Department of Optometry and Radiography, which was the only provider in Hong Kong to offer training in optometry at professional level. This September, the department was renamed the School of Optometry to reflect its strategic focus on optometric education.

While continuing to provide an undergraduate programme for future optometrists, the School will serve the community by offering more evidence-based professional eye-care services alongside its research activities. In 2004 alone, our Optometry Clinic on campus handled more than 21,000 client cases.

In addition, the flagship PolyVision Eyecare Centre, part of a major consortium founded by PolyU and qualified private practitioners, opened in Hopewell Centre in Wanchai on 24 August. The Centre offers a comprehensive range of primary eye-care services to the public. For more information, please call 2866 9660 or visit www.polyvision.com.hk. ❖





This May, FHSS opened the Centre for Infection Control on campus which serves as facility to create and refine evidence-based practice in infection control and a resource centre for the medical and healthcare professions and the community at large.

Supported by academic units such as nursing, optometry and rehabilitation engineering, the centre taps the expertise and knowledge from other PolyU departments such as building services engineering, electronic and information engineering, computing, textiles and clothing. The Centre also plays a multi-disciplinary, technological, educational and consultant's role.

FHSS also runs a number of health clinics (see Table on p.5), on and off campus, offering professional healthcare services to the public as well as hands-on training opportunities for students. The operation of the clinics also allows our academics and researchers to collect first-hand information for further studies.

Enhanced role in local healthcare system

Looking ahead, Prof. Wong said there was immense potential for further development of health sciences at PolyU.

"In view of the increasing importance of the inter-disciplinary nature of health sciences and healthcare, the Faculty will continue to expand its synergic approach," said Prof. Wong. "Students from different disciplines of FHSS are encouraged to read common foundation subjects before they specialize in a chosen discipline."



Prof. Thomas Wong: the invitation recognizes PolyU's exceptional strength in health sciences, particularly in the areas of sports health and rehabilitation.

PolyU named an official partner for 2008 Beijing Olympics

The University is honoured to be invited by the Gymnastics Management Center of the State Sports General Administration of China to become an official partner of China's gymnastics team for the 2008 Beijing Summer Olympics.

Under the proposed agreement, PolyU specialists — from such fields as nursing, rehabilitation, optometry, health technology, physiotherapy and sports therapy — will participate in the preparation, training and rehabilitation programmes of the national gymnastics team for all major competitions up till the close of the 2008 Olympic Games. Joint research projects and student training opportunities will also be made available under this collaboration.

Interdisciplinary team heals national player

In fact, FHSS has long provided its knowledge and services to the national sports teams and organizations. Just this January, famous Chinese basketball player Lucy Chen Luyun was sent to PolyU to undertake a three-week intensive post-op rehabilitation programme, after she was diagnosed with a complete rupture of anterior cruciate ligament of her left leg by playing in the Olympic basketball game between China and New Zealand in August 2004.

Taking advantage of PolyU's cross-disciplinary approach as well as its advanced equipment and facilities, a team of specialists — armed with expertise in nursing, traditional Chinese

Health clinics operated by FHSS

Operated by	Clinic	Enquiry
Faculty of Health and Social Sciences	Community Integrative Health Clinic (Lai King)	2370 0686
	Telehealth Clinic (Tsing Yi)	2431 5906
Department of Applied Social Sciences	Manulife Centre for Children with Special Learning Disabilities	2766 6313
School of Nursing	Integrative Health Clinic	2766 4638
School of Optometry	Optometry Clinic (PolyU, with a satellite clinic at Our Lady of Maryknoll Hospital)	2766 5225
	PolyVision Eyecare Centre (Wanchai)	2866 9660
Department of Health Technology and Informatics	Jockey Club Rehabilitation Engineering Clinic	2766 4454
	Radiography Clinic	2766 4552
Department of Rehabilitation Sciences	Rehabilitation Clinic & Dr & Mrs Lui Che Woo Tele-rehabilitation Centre	2766 6734

Building on PolyU's close network with the community, Prof. Wong said further links at different levels — such as corporate-based, school-based or district-based — could be forged between the University and the community. For instance, the Faculty has for a few years joined forces with PMH and Kwai Tsing District Council on a project named Kwai Tsing Safe Community and Healthy City, which included the setting up of a “Healthy Estate” and a “Healthy School” in Kwai Tsing.

“What's more, we will continue to strive for an enhanced role for the healthcare professionals in Hong Kong,” said Prof. Wong. “Right now, the provision of primary care to patients by healthcare professionals other than medical doctors is not supported under current policies, thus limiting the development of better health services in Hong Kong. Considering Hong Kong's healthcare system in comparison with that of the US and Australia, I believe more empowerment could be granted in the future to allow healthcare professionals to play a bigger role in the healthcare system in Hong Kong.”



medicine, health technology, pain-control therapy, nutrition and conditional training — was assembled to design a recovery programme for Lucy.

By integrating Western and Eastern concepts in rehabilitation sciences and technology, the tailored programme comprised a variety of activities, including sport conditioning, hydrotherapy, nutrition consultancy, aerobic training, Tai Chi, acupressure, aromatherapy and basketball specific training.

The team's efforts, together with Lucy's perseverance, bore fruit after three weeks of training. Lucy, who had been suffering from severe pain and edema, and could barely walk for five minutes with a limited knee joint range motion, recovered significantly from her injury. By the end of the programme, Lucy was able to return to the national basketball team's training camp.

“We are proud to have had the opportunity to serve the national team,” said Dr Bob Chen, Assistant Professor of FHSS, on behalf of the specialist team. “And we are particularly pleased to have our services called upon by an organization outside Hong Kong and to play a role in enhancing the professionalism of sports management in our motherland.”



An uneven-surfaced mat, incorporating electronic sensors, was specially made to allow Lucy to practice Tai Chi on it for knee proprioception.



A special body-blade was applied in Lucy's training for balance control building.



Members of the specialist team include (from left) Dr Eric Tam from rehabilitation engineering, Prof. Joanne Chung from nursing and Dr Bob Chen from sports therapy.



Improving lives through rehab engineering

Quadriplegic Tang Siu-pun (also known as Ah Pun) became a household name after he wrote a letter to legislators, pleading the right to end his own life after 14 years of confinement in a hospital.

The incident has inspired Dr Eric Tam, Assistant Professor, together with a number of colleagues of the Department of Health Technology and Informatics (HTI), to offer his expertise to a special team in the Queen Mary Hospital which works to better Ah Pun's living conditions.

With his background in rehabilitation engineering, Dr Tam took on the task of installing a call bell for Ah Pun. This task is more complicated than it sounds considering the fact that Ah Pun can hardly speak or move. After many trials, testings and modifications, a customized sensor was set up on Ah Pun's bed, enabling him to summon assistance by simply moving his head in a coded pattern.

Dr Tam said he was happy to see Ah Pun benefit from the work of his team. "Apart from Ah Pun, I hope that with more education and promotion on how rehabilitation engineering can help, more patients can gain from these services and technology." ❖

迎接醫療科學 新挑戰

理大在醫療科學方面擁有超過二十五年的教學、科研及社區服務經驗，隨著整體社會越來越重視健康的生活，加上建議中的醫療改革，大學正積極作出部署，以應付未來新挑戰。



投身醫護界多年，醫療及社會科學院院長汪國成教授深明本港醫療界的運作。他表示，由於生活水平上升，加上大眾意識到健康生活所帶來的好處，令醫療科學成為本港增長最快及最具影響力的公共服務之一。

醫療教育的先鋒

理大醫療及社會科學院成立至今已有二十五年歷史，轄下共有三個學系及兩個學院。除應用社會科學系外，其他四個教學單位均與醫療科學相關，包括：醫療科技及資訊學系、康復治療科學系、護理學院及眼科視光學院，為本港多個醫護行業提供專業人才的培育課程。此外，理大更是本港唯一開辦醫療化驗科學、職業治療學、眼科視光學、物理治療學及放射學學位課程的高等教育機構。

汪教授指出，該院的同學除可享用理大先進的教學設備外，更會接受真正的全人教育。學院的課程不單把理論及實踐結合，更輔以語文、資訊科技及通識等學科，務求為本港醫護界培育最優秀的畢業生。

該院課程的另一獨特之處是把人文學科融合其中，汪教授解釋：「由於修讀醫療科學的同學無論在學習或將來投身工作時，均須面對不同界別及背景的人士，因此學院特別加強人文學科的培訓。」

發展社區項目

理大在目前合共九項的策略性學術發展領域當中，便有三項跟醫療科學相關，簡介如下：

- **近視研究中心**集中探討中國人的近視問題，並研究其預防方法。
- **中西薈萃之康復科學中心**研究如何把傳統的中醫療法融入西方康復科學之中。研究主要透過跨學科形式進行。
- **遙距醫護中心**透過學院診所內的遙距醫護系統，研究以「社區為本」的護理、復康及舒緩護理服務，並重點開發綜合式醫療服務。

其他仍在進行的科研項目包括：非侵入性葡萄糖測試系統、睡眠窒息監察儀、深靜脈血栓感應系統、電子中醫脈搏感應系統、性病篩選系統、遙距藥物管理系統及腳板感應系統等。有關項目結集了大學內不同學院及學系人員的合作，實踐跨學科共同研究的目標。



與社區保持緊密合作

科研活動以外，醫療及社會科學院亦積極參與社區服務工作，其合作夥伴包括慈善團體、專業組織及非政府組織等。

二零零二年，理大護理學院夥同瑪嘉烈醫院及葵青區議會成功開發了一套遙距醫護系統。這套全港首創的系統設於學院位於青衣的遙距醫護診所，供市民以自助形式進行健康檢查及保健等服務，開創了大學、醫院及社區夥伴間的全新合作模式。該系統更先後在多個國際比賽中奪魁。

今年五月，學院率先成立傳染病控制中心，集多個學系的專長，包括屋宇設備工程、電子及資訊工程、電子計算及紡織等進行「以實證為本」的研究工作。中心設於理大校園內，擔當推動公眾教育及專業顧問的角色。

為醫護界爭取更高地位

展望將來，汪教授相信學院的發展潛力龐大。

「由於醫療科學將持續向跨學科方向發展，學院會繼續以協同方式，鼓勵不同醫療科學課程的同學先修讀共同的基本學科，再專注鑽研其專業領域上的知識。」

汪教授表示，學院未來可在不同層次與社區加強聯繫，把合作模式伸延至「企業為本」、「學校為本」及「區域為本」等範疇。其中一個成功例子是數年前，學院聯同瑪嘉烈醫院及葵青區議會，發起一個名為「葵青安全社區及健康城市」的項目，於葵青區內設立「健康邨」及「健康學校」等。

最後，汪教授總結說：「目前由於本港的醫療政策並不容許醫生以外的醫護人員提供基層護理，因而窒礙本港醫療服務的發展。我希望政府可參考外國，例如美國及澳洲等醫療制度及經驗，讓更多的醫護人員可在本港醫療系統中擔任更重要的角色。」