

PAIR Advanced 
Education Programme


Healthy Life and Smart Living 2025/26 (PAIR 6001)


<https://www.polyu.edu.hk/pair/education/>

Enrolment Deadline: 15 August 2025

 ENROL NOW



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 education.pair@polyu.edu.hk

Message from the Director:

Offered by the PolyU Academy for Interdisciplinary Research (PAIR), this new Advanced Education Programme (the Programme) is a non-credit bearing short course that aims to provide students with up-to-date and broad knowledge of the some of the biggest societal challenges facing the world today, and the latest developments and advances in various disciplines that can help provide solutions to these real-world problems.



With a strong interdisciplinary focus in research and innovation, PAIR seeks to foster an innovation ecosystem that promotes interdisciplinary and cross - sectoral collaboration aimed at tackling global grand challenges. Advanced technologies and manufacturing, good health and well-being, and smart and sustainable cities are three priority themes which PAIR has identified as significant for conducting research. Under these themes, PAIR constituent research units engage in a wide spectrum of research projects, spanning from deep space exploration to artificial intelligence and robotics, advanced manufacturing, smart cities, carbon neutrality, healthcare and food security.

Emerging technologies, health challenges and urban sustainability are major areas of societal development that affect everyone and where all members of society can participate and make contributions. This Programme is therefore designed to be suitable for learners from diverse backgrounds and sectors and does not prerequisite specialised knowledge. Whether you are a professional from the research, higher education, government or industry sectors, or a member of the public who is passionate about societal change and development, this Programme offers a stimulating environment for your knowledge growth and professional development.

This Programme brings together dedicated scholars and practitioners from PAIR constituent research units, each contributing unique expertise that is relevant and critical for tackling complex global challenges. The course dives deep into the landscape of a select number of pressing issues, the existing technological efforts and challenges in addressing them, and the way forward. It is offered in dual mode, enabling students to tailor their studies according to personal learning needs and preferences. The physical classes connect like-minded students to engage in thought-provoking discussions, presenting an invaluable opportunity to build network, enrich career development and foster collaboration.

Interdisciplinary science is inclusive to all. If you wish to gain exposures to diverse knowledge, perspectives and groups of people, please enrol in this Programme and join us for a journey of exploration.

A handwritten signature in black ink, appearing to read 'CHEN Qingyan'.

Prof. CHEN Qingyan
Director of PolyU Academy for Interdisciplinary Research
Global STEM Scholar
Chair Professor of Building Thermal Science

Programme Objectives:

- To disseminate foundational and advanced knowledge in science and technology
- To facilitate students' career development
- To foster scientific advancement and technological innovation
- To nurture broader and interdisciplinary collaboration

Programme Description:

Launching in the first semester of the 2025/26 academic year, the Programme spans the full semester of 13 weeks and is offered in both online and in-person. Each week features a three-hour teaching session. The course is taught by an international team of experts and academics from different disciplines and sectors. They include PolyU faculty members, PAIR Fellows who are distinguished and top prize-winning academicians coming from prestigious universities, as well as industry leaders. The teaching activities consist of lectures, demonstrations, discussions and question-and-answer sessions. Students may enrol under two options: in-person or online, both with full access to course materials and the eligibility of apply for a ***Certificate of Completion****. This flexible arrangement accommodates diverse needs while maintaining rigorous academic standards.

**Please see the Certificate / CPD session on P5*



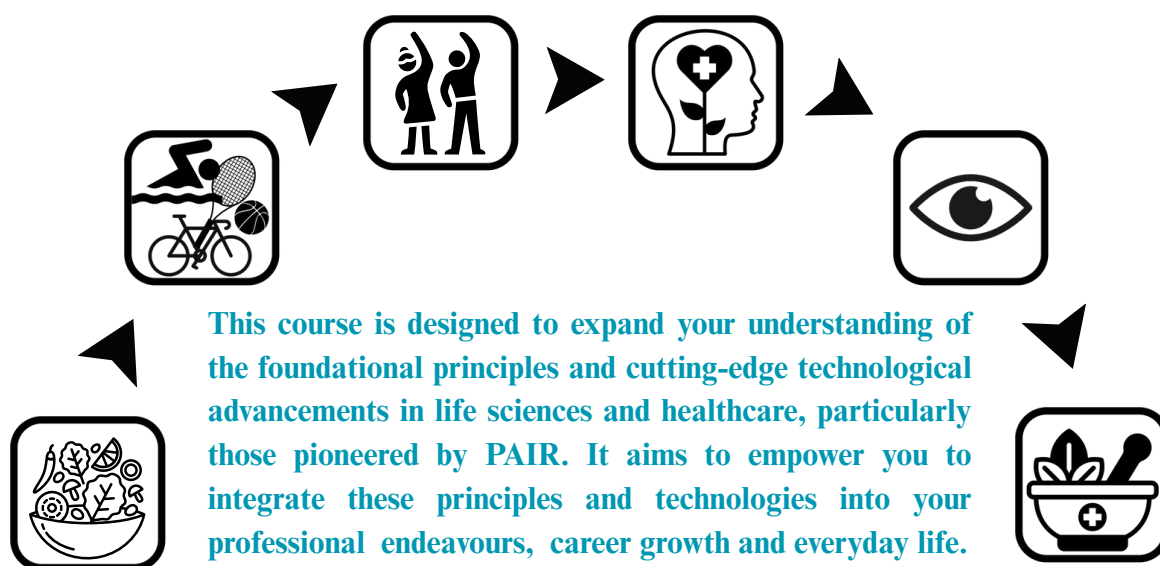
PAIR Advanced
Education Programme

Healthy Life and Smart Living
2025/26 (PAIR 6001)

Course Structure:

The course of Healthy Life and Smart Living 2025/26 (PAIR 6001) spans six disciplines, each of which will be covered by modular teaching activities in two weeks. The subjects include:

1. Food and Nutrition
2. Sports
3. Smart Ageing
4. Mental Health
5. Sharp Vision
6. Chinese Medicine



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Who should enrol?

- Individuals with a high degree who are interested in advancing their careers or exploring the latest scientific advancements and technological innovations.
- Medical and healthcare professionals seeking to deepen and broaden their understanding of interdisciplinary sciences within the broad medical and healthcare fields.

By completing this course, you will gain the ability to:

- Articulate the principles underlying recent technological innovations across various domains of life sciences and healthcare.
- Apply knowledge about advanced technologies effectively in professional, research, clinical environments or daily life.
- Critically analyse and evaluate scientific literature and media coverage related to life sciences and healthcare.

Tuition Fee

- All courses of the PAIR Advanced Education Programme are free of charge.

Certificate / CPD

- Students fulfilling the minimum attendance requirement of 70% (9 out of 13 weeks) can apply for a ***Certificate of Completion*** for the entire course.
- An administrative fee of HK\$1,000 will be charged for issuing each certificate.
- The course is pending CME / CNE / CPD accreditation.

Venue

- All lectures will be held at The Hong Kong Polytechnic University campus and online simultaneously.

Time and Duration

- The course will take place every Friday evening from 6:30p.m. to 9:30p.m. (3 hours) for 13 consecutive weeks, starting from 5 September to 28 November 2025, with a reading week in the middle of the course.
- Make-up classes may be arranged (tentatively scheduled for 5 and 12 December), if necessary. Please refer to detailed course schedule on our website.

Enrolment Process

- Please enrol at <https://www.polyu.edu.hk/pair/education/>.
- Limited on-site attendance is available on a first-come, first-served basis.
- A confirmation email will be sent shortly after successful course admission.
- The enrolment deadline of the first course “Healthy Life and Smart Living” (PAIR 6001) is **15 August 2025**.



Syllabus:



Discipline: Food and Nutrition
Course Provider: Research Institute for Future Food (RiFood)

RiFood

Week 1 (5 September 2025)

Modernised, Efficient Production Methods for Healthy Foods

- Issues related to current food production methods and food products, and practicable innovative solutions
- New food production trends and new technologies for improvement
- Discussion on the latest research and emerging technologies, emphasising their transformative impact

Week 2 (12 September 2025)

Harvesting Beneficial Health Effects of Natural Foods

- Food ingredients that can benefit health of general public
- Cases at different stages of commercialisation
- Discussion on the latest research and emerging applications

About RiFood:

Food Science and Human Health is one of the top research foci of PolyU. In response to pressing societal needs, PolyU established the first university-based Food Safety and Technology Research Centre in 2011. For a decade, research in this area has attained impressive breakthrough in various areas.

Based on 10+ years of outstanding track record, PolyU has upgraded and established the first university-based “Research Institute for Future Food” (RiFood) in 2021 to facilitate interdisciplinary collaboration for impactful research within PolyU, for the benefit of Hong Kong, the nation and the world.

For more details, please visit: <https://www.polyu.edu.hk/rifood/>

Course Lecturers:



Prof. WONG Ka-hing
RiFood Director
Professor of Department of Food Science and Nutrition (FSN)

Prof. Amber CHIOU Jiachi
RiFood Associate Director
Associate Head and Associate Professor of FSN



Prof. Kevin KWOK Wing-hin
RiFood Associate Director
Associate Head and Associate Professor of FSN



Discipline: Sports

Course Provider: Research Institute for Sports Science and Technology (RISports)



Week 3 (19 September 2025)

Latest Advancements in Sports Science and Technologies

- Latest advancements in sports science and technologies, such as biomechanics, motion capture, artificial intelligence (AI), wearable technology, virtual reality (VR) and augmented reality (AR), robotics, immersing technology, etc.
- Discussion on the latest research and emerging technologies, emphasising their role on performance enhancement and health benefits

About RISports:

The Research Institute for Sports Science and Technology (RISports) established in 2022, aims to address these emerging societal needs in sports research and technology. RISports integrates multi-disciplinary experts from PolyU and around the world to deliver advanced scientific and engineering solutions for sports. The translational research of RISports in sports adopts a consumer-centric or athlete-centric approach to ensure its research directions and deliverables are relevant and impactful to both sports students and practitioners by fostering its research applications and services through close collaborations with Hong Kong and National sports institutes, sports related industries, government bodies and non-government organisations.

For more details, please visit: <https://www.polyu.edu.hk/risports/>

Course Lecturers:



Ir Prof. ZHANG Ming

RISports Director

Head and Chair Professor of Department of Biomedical Engineering (BME)



Dr Jason CHEUNG Tak-man

RISports Management Committee Member and Senior Research Fellow

Dr Kenneth CHENG Chik-chi

RISports Member

Research Assistant Professor of BME



Dr Matthew TAN Qitao

RISports Member

Research Assistant Professor of BME





Discipline: Smart Ageing

Course Provider: Research Institute for Smart Ageing (RISA)



Week 5 (3 October 2025)

Technology Advancements for Smart Ageing

- Overview of recent innovations and applications of cutting-edge technologies for smart ageing
- Novel approaches to disease and health condition screening, monitoring, assessment, invention, rehabilitation among older adults with the enhancement of AI, robots, imaging and sensing techniques etc.
- Discussion on how to further benefit elderlies and their carers from the latest advancement of technologies

Week 6 (10 October 2025)

Innovations for Smart and Healthy Ageing

- Recent innovations in the areas of brain-related diseases, mobility and speech/ swallowing disorder, supported with AI, novel imaging and robotic techniques
- Discussion on how and what technology innovations will further support healthy ageing and the increasing ageing population

About RISA:

Established in May 2021, the Research Institute for Smart Ageing (RISA) is dedicated to facilitate impactful ageing-related research and innovations among PolyU experts. RISA actively fosters interdisciplinary research in smart ageing. Currently, RISA comprises over 60 members from 18 academic units with working across 5 key research areas including “Smart health”, “Smart intelligence”, “Smart environment”, “Smart society” and “Gerontechnology”. Serving as a hub for multidisciplinary and action-oriented collaboration, RISA unites diverse insights and expertise to address the complex challenges of ageing. RISA strives to strengthen partnerships with stakeholders, contribute to ageing policy and practice, promote health and well-being of older adults in the local and global community. RISA also closely works with Jockey Club Smart Ageing Hub, which provides services to local elderly homes and individually through promotion, application and development of different smart ageing technologies.

For more details, please visit: <https://www.polyu.edu.hk/risa/>

Course Lecturers:



Ir Prof. ZHENG Yongping
RISA Director
Chair Professor of BME

Prof. Elaine KWONG Yee-lan
RISA Associate Director
Associate Professor of Department of Chinese and Bilingual Studies



Prof. Angela LEUNG Yee-man
RISA Associate Director
Associate Head (Research) and Professor of School of Nursing (SN)

Prof. Arnold WONG Yu-lok
RISA Associate Director
Associate Professor of Department of Rehabilitation Sciences (RS)





Discipline: Mental Health

Course Provider: Mental Health Research Centre (MHRC)



Week 7 (17 October 2025)

Translational Neuroscience of Mental Health: Neuroimaging and Neuroendocrinology

- Principles of neuroscience, application of neuroscience techniques, and their translations in the context mental health
- Cutting-edge neuroscience techniques, such as advancements in brain imaging and endocrinology approaches, and their potential applications on mental health issues
- Discussion on the latest research and emerging technologies

Week 8 (24 October 2025)

Reading Week

About MHRC:

The Mental Health Research Centre (MHRC) is established with a dedication to conduct translational research for informing new approaches in clinical practice, service provision and policy change, aiming for enhancing mental well-being of the public and it may go beyond medical care. MHRC, promotes concerted effort in addressing key mental health issues and challenges, such as:

- Basic and translational neuroscience of mental health
- Neuroimaging studies and innovative cognitive rehabilitation of mental disorders
- Behavioral and psychiatric rehabilitation
- Psychosocial and cultural aspects of mental health
- Service use and social policy of mental health

For more details, please visit: <https://www.polyu.edu.hk/mhrc/>

Course Lecturers:



Prof. Bolton CHAU Ka-hung
MHRC Associate Director
Associate Professor of RS



Prof. MAK Yim-wah
MHRC Member
Associate Professor of SN

Prof. Benjamin YEE Kay-yan
MHRC Associate Director
Professor of RS



Prof. WU Yin
MHRC Member
Associate Professor of Department of Applied Social Sciences





Discipline: Sharp Vision

Course Provider: Research Centre for SHARP Vision (RCSV)



Week 10 (7 November 2025)

Development and Adoption of Innovative Treatment for Myopia Control

- In-depth exploration of cutting-edge innovations in the treatment and management of eye diseases
- Novel therapeutic approaches, including advancements in optical and light-based therapies
- Discussion on the latest research and emerging technologies, emphasising their transformative impact on modern eye care

Week 11 (14 November 2025)

AI Development and Adoption for Eye Diseases

- AI advancements in ophthalmology and optometry, with a focus on AI-driven innovations for the diagnosis, treatment and prevention of eye diseases
- Discussion on the latest research and emerging AI applications, emphasising their transformative impact on modern eye care

About RCSV:

The Research Centre for SHARP Vision (RCSV) aims to lead in promoting lifelong vision health through innovative research and interdisciplinary collaboration. Its mission focuses on three goals: fostering healthy vision development, addressing visual impairment causes, and creating effective strategies for vision restoration. RCSV integrates expertise from biological sciences, engineering and data analysis, with key initiatives targeting myopia management, enhancing children's vision and exploring therapies for vision loss due to neurodegeneration. Collaborations with optometrists, psychologists and other professionals are vital for success. Governed by a leadership team, RCSV seeks to develop transformative solutions in ophthalmology and optometry while attracting competitive grants and investments to advance vision health from childhood through ageing.

For more details, please visit: <https://www.polyu.edu.hk/rcsv/>

Course Lecturers:



Prof. HE Mingguang

RCSV Director

Chair Professor of Experimental Ophthalmology of School of Optometry (SO)



Dr. CHEN Yanxian

RCSV Member

Research Assistant Professor of SO

Prof. DO Chi-wai
RCSV Member
Associate Professor of SO



Dr. SHI Danli
RCSV Member
Research Assistant Professor of SO





Discipline: Chinese Medicine

Course Provider: Research Center for Chinese Medicine Innovation (RCMI)



Week 12 (21 November 2025)

Challenges and Opportunities for Chinese Medicine

Research and Development

- Overview of the challenges and opportunities in the research and development of Chinese medicine-based health products
- Case studies based on two ongoing Chinese herbal medicine-based research
- Discussion on the use of latest technologies, including some AI and in-silico techniques, for developing modernised Chinese medicine for health improvement

About RCMI:

The Research Center for Chinese Medicine Innovation (RCMI) was established in October 2021 as a university-level platform to facilitate impactful interdisciplinary research at PolyU. At present, RCMI has three main research directions: namely musculoskeletal health, metabolic health and neurological and mental health. With 55 faculty members from eight departments, RCMI aims to provide scientific evidence to clarify traditional Chinese Medicine (TCM) theory for researchers, medical professionals, and the public. The center fosters interdisciplinary research to develop new drugs and treatment protocols based on TCM for clinical and community use. RCMI also offers consultancy in TCM quality control, drug discovery, and treatment protocols to enhance community wellness. Overall, RCMI supports the integration of Chinese medicine innovations into clinical practice and policy to ensure safe and effective use.

For more details, please visit: <https://www.polyu.edu.hk/rcmi/>

Course Lecturers:



Prof. WONG Man-sau
RCMI Director
Professor of FSN



Prof. Shamay NG Sheung-mei
RCMI Associate Director
Associate Dean of Faculty of Health and Social Science
Professor of RS



Prof. Simon LEE Ming-yuen
RCMI Management Committee Member
Chair Professor of Biomedical Sciences of FSN

Week 13 (28 November 2025)

Traditional Chinese Medicine Technology

Advancement

- Use of advanced technology in practicing traditional Chinese medicine (TCM), with a focus on the traditional diagnostic methods, interventions as well as TCM research and AI and other in-silico tool for TCM herbal formula optimisation
- Discussion on the potentials involved in using technology to practice TCM for health improvement

Prof. Daniel MOK Kam-wah
RCMI Associate Director
Associate Professor of FSN



Prof. Jerry YEUNG Wing-fai
RCMI Associate Director
Associate Professor of SN



Prof. CHE Chun-Tao
PAIR Fellow



Harry H.S. Fong Professor of Pharmacognosy, University of Illinois Chicago



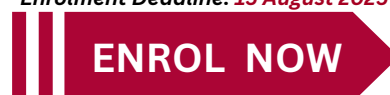
Class Schedule:


Week	Date	Discipline	Topic
1	5 Sept 2025	Food and Nutrition	Modernised, Efficient Production Methods for Healthy Foods
2	12 Sept 2025		Harvesting Beneficial Health Effects of Natural Foods
3	19 Sept 2025	Sports	Latest Advancements in Sports Science and Technologies
4	26 Sept 2025		Health Benefits of Running for Chronic Disease Prevention
5	3 Oct 2025	Smart Ageing	Technology Advancements for Smart Ageing
6	10 Oct 2025		Innovations for Smart and Healthy Ageing
7	17 Oct 2025	Mental Health	Translational Neuroscience of Mental Health: Neuroimaging and Neuroendocrinology
8	24 Oct 2025	Reading Week	
9	31 Oct 2025	Mental Health	Fostering Healthy Living and Minds Through Tech: Opportunities in Research & Application
10	7 Nov 2025	Sharp Vision	Development and Adoption of Innovative Treatment for Myopia Control
11	14 Nov 2025		AI Development and Adoption for Eye Diseases
12	21 Nov 2025	Chinese Medicine	Challenges and Opportunities for Chinese Medicine Research and Development
13	28 Nov 2025		Traditional Chinese Medicine Technology Advancement


*The information in this booklet is accurate at the time of printing.
PAIR reserves the right to change or revise the course syllabus as needed.
Please refer to the course website for latest information.*

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