

醫學院

# 醫學院 Faculty of

Medicine



2000年成立以來,澳門科技大學一直致力推動優質高等教育。為適度配合澳門衛生、保健培訓和大學學科發展的需要,澳門科技大學於2019年成立醫學院(前身是2008年始創的健康科學學院),自2008年開辦了公共衛生學和護理學的碩士及博士學位課程,至今已培育近200名公共衛生及護理方面的人才。

醫學院是澳門唯一提供「內外全科醫學學士學位」課程的機構。 在 2019 年 9 月,我們通過宣誓儀式錄取了首批醫學生。作為澳門醫學教育的先驅,醫學院秉持澳門科技大學"意誠格物"之校訓,肩負著重大使命,致力培養優秀醫學人才,積極推動澳門醫療發展。

本院師資雄厚,教學團隊由不同範疇的學者及專業人士組成,涵蓋臨床醫學、食品營養與科學、公共衛生學、分子流行病學、癌症流行病學、遺傳流行病學、社區醫學、預防醫學、檢驗醫學、健康科學、衛生統計、衛生行政、學校衛生、醫療政策、國際衛生、社會工作、健康社會學、臨床老年病學及老年病學等專長領域。

### 課程介紹

醫學院就醫學、公共衛生學、護理學及營養學四 大範疇,共設有五個學位課程,分別為內外全科 醫學學士學位課程、食品與營養科學學士學位課程、公共衛生學碩士學位課程、護理學碩士學位 課程及公共衛生學博士學位課程。

### 內外全科醫學學士學位課程

澳科大開辦澳門首個內外全科醫學學士學位課程,旨在為澳門培養富有同情心,人文關懷並能提供高效和優質的護理的"明日醫生"。課程採用能力導向的醫學教育,根據香港、英、美等地的現代教育模式框架設計,實施"問題導向學習"及"臨床推論"教學模式,課程合共六年,包括五年的常規課程及一年的臨床實習。課程分成四個學習和培訓階段,從基礎模組開始,通過各種基礎科學和臨床見習來施教。

### 食品與營養科學學士學位課程

該課程旨在培養具有紮實的食品與營養科學基本



▲ 首屆內外全科醫學學士學位課程開學典禮 Inauguration ceremony of our MBBS programme

理論和實踐技能,掌握食品生產、質量控制、科學研究、食品貿易與管理、公共營養與臨床營養和新食品研發的專業知識、技術和技能的食品與營養科學專門人才。

### 公共衛生學碩士學位課程

旨在培養公共衛生專業人材。該課程的修讀年期為二至三年,當中第一年是課程學習及隨後的研究項目。課程的重要主題包括:研究方法、健康促進、公共衛生、衛生政策、流行病學、生物統計學、社會健康以及以證據為基礎的公共衛生實踐。

### 護理學碩士學位課程

旨在為學生提供護理學領域中先進的理論知識、技能評估、領導力發展、高級臨床實踐, 及以護理學理論和研究為科學基礎的實際應用 或批判的機會。該課程的修讀年期為二至三年 含第一年的課程學習及研究項目。

### 公共衛生學博士學位課程

旨在培養優秀的高級公共衛生專業人材。我們 為學生提供公共衛生學領域的實踐以及理論教育, 培育他們成為公共衛生領導人才。該課程的修讀年期為三至六年,課程結合授課、研究,以及個人專業的發展。

# 培訓中心

醫學院建立了醫療及衛生持續培訓中心和醫學模擬培訓中心,致力開展高質量的本科醫學培訓和持續醫學教育,旨在改善澳門醫療保健服務。 自 2011 年起,中心一直開展臨床實踐技能培訓,接受培訓的醫護人員超過 3,500人次,當中曾參與課程的專科醫生約 800 人次、前線醫生約 1,200 人次及護理人員約 1,500人次。

中心配置多台虛擬實境醫學訓練系統和創新的 學習工具。 包括:3D 互動虛擬解剖儀、機械 人外科技能和手術模擬訓練器、心血管介入系 術模擬訓練器、高保真超聲波模擬教學系統 (結合心臟,肺部,腹部和婦產科功能的學習 平台)、便攜式超聲波檢測系統、3D 脊椎手術 模擬訓練系統、關節內視鏡手術模擬訓練系統等。學習 模擬訓練系統、關節內視鏡手術模擬訓練學習 腹腔鏡及內視鏡手術模擬訓練系統等。學習術 經外科、婦產科、兒科、影像科、門腸科 經外科、婦子科、影像科、胃腸科 經外科、強力與對等領域。我們成 功建立了臨床實踐技能的學習平台,通過一系 列醫療學術課程,在澳門提供高質量的醫療模 擬培訓課程。使本地醫務人員能夠在受控和安 ▼一年級醫科生參與虛擬手術訓練。

Our Year 1 MBBS students attending a virtual surgery session.





▲ 在大體解剖實驗室進行同伴教學。
Peer teaching in the gross anatomy laboratory.

全的環境中熟習最新的操作技能,從而促進高 水平的卓越和專業精神,讓患者能夠獲得更好 的醫療服務。

作為內外全科醫學學士學位課程中一個核心的 角色,醫學模擬培訓中心所提供的各種醫學臨 床技能培訓已納入課程的學習。 這種模擬培訓 模式能夠補充傳統教學方法,讓醫科生可以通 過實驗學習來提昇技能、團隊合作精神、溝通 和安全性。

# 科大醫院

科大醫院為醫學院、中醫藥學院及藥學院的臨床帶教基地,也是全澳唯一一所具備大學支持的醫院。醫院住院部設有雙人病房、私家病房及豪華病房,適合不同病患的需要。

科大醫院座落於澳門路氹中心地帶上的澳門科 技大學校園內。醫院宗旨是希望能在舒適和愉 快的環境中,以先進的醫療設備,為患者提供 優質的西、中醫醫療服務。

在醫科臨床和實習期間,科大醫院將為醫科生提供臨床學習的場地,通過參與病人治理服務,讓學生獲得裨益。 科大醫院的基礎設施讓教學團隊能夠進行客觀結構化臨床考試(OSCE),並協助學生未來的專業發展。

## 國際認證

本學院透過訂購美國哈佛大學醫學院HMX Fundamentals的線上教學和評估工具,同時結合本 校授課部分,讓本院醫科生能夠達到國際標準(與國 際接軌)。HMX基礎知識模組涵蓋了生理學,遺傳 學,生物化學,藥理學和免疫學等基礎主題。至今本 院一年級和二年級內外全科醫學學士學位課程學生已 成功註冊,並參與各部分的預定考試。本院第一批醫 科生在藥理學和免疫學中八成人考獲及取得由美國哈 佛大學醫學院發出 HMX Fundamentals 修業證書、 第二批醫科生取得更優秀的成績,接近九成人在生理 學,遺傳學,生物化學和藥理學中考獲及取得由美國 哈佛大學醫學院發出 HMX Fundamentals 修業證書。



自 2011 年起,醫學模擬培訓中心成為中國醫師協會唯一授權的臨床技能和模擬培訓中心。同時獲愛丁堡皇家外科學院頒授全面技能發展認可培訓中心資格,這是愛丁堡皇家外科學院首次 於大中華地區頒授認可資格。

醫療及衛生持續培訓中心是美國心臟協會在澳門區其中一所國際認可訓練中心,致力為醫生、 護士、護理員、救護技術員及前線急救員等提供專業培訓。 ▲ 澳門科技大學醫學院副院長 Prof. Niv Patil (前排左五) 代表本院成為世界葡語系國家醫學院大聯盟的創會成員 並接受紀念品。

Prof. Niv Patil, Vice Dean of the Faculty of Medicine (Fifth from left, front row) was presented a souvenir given by the CODEM-LP. Our faculty became the founding member of World Federation of Portuguese speaking Medical School.





▲ 同學們正進行微生物實驗課。 Our MBBS students in a microbiology practical.

醫學院是全球網絡的一部分,本院成功被列入《世界醫學院校名錄》,它是由世界醫學院校聯合會和聯合國際醫學教育研究促進基金會共同編制。本院也是世界葡語系國家醫學院大聯盟的 13 個創始成員之一,其他創始成員包括葡萄牙,巴西和莫桑比克等 12 所頂尖醫學院。此外,本院與中華人民共和國國家衛生健康委員會(NHC)簽訂了醫學教育合作協議,促進雙方在醫學和保健領域上的合作,以加強中國大陸與澳門特別行政區之間在對醫療保健專業人員的持續醫學教育和技能培訓的交流。

本院與中國北京大學人民醫院,葡萄牙里斯本大學醫學院和葡萄牙波爾圖大學醫學院建立合作,共同努力,提供更多的學術和臨床交流。

每年醫學院會以學術主持的身份舉辦「中葡國際醫學論壇」,通過專題研討會,充分發揮澳門與葡語國家的聯繫優勢,促進澳門作為中國與世界匯聚地的作用。 論壇邀請了來自美國、英國、澳洲、法國、瑞典、義大利、葡萄牙、中國內地及港澳台等世界各地的優秀學者及醫學專家出席,在過去的八年裏,參與論壇活動的澳門的醫生和護士超過 7000 名。



▲ 醫科生使用人體模型來練習臨床技能。
Our MBBS students practicing clinical skills using a manikin.

課 程 Degree Program	專業 / 範疇 Major / Area	修讀年期 Duration of Study (Year)	授課語言 Medium of Instruction
公共衛生學博士 Doctor of Public Health	職業醫學 / 災難醫學 / 醫療系統 / 老年健康學 / 男士健康學 / 婦女健康學 / 社區及家庭醫學 / 衛生防護學 / 環境衛生與安全 / 國際衛生及旅遊醫學 / 人口健康及健康促進 / 心理醫學及社會健康學 / 流行病學及生物統計學 Occupational Medicine / Disaster Medicine / Medical Information System / Geriatric Medicine / Men's Health / Women's Health / Community-based Family Medicine / Preventive Medicine and Hygiene / Environmental Hygiene and Safety / International health and Travel Medicine / Population Health and Health Promotion / Psychological Medicine and Social Health / Epidemiology and Biostatistics	3	中 / 英 Chinese/English
公共衛生學碩士 Master of Public Health	公共衛生學 Public Health	2	中 / 英 Chinese/English
護理學碩士 Master of Nursing	護理學 Nursing	2	中 / 英 Chinese/English
內外全科醫學學士 Bachelor of Medicine a	and Bachelor of Surgery (MBBS)	5+1 (實習 internship)	英 English
食品與營養科學學士 Bachelor of Food and N	Nutritional Science	4	中 / 英 Chinese/English



▲「團隊導向學習法」在醫科課程中佔有關鍵性的地位。 Team-based learning is a major part of the MBBS curriculum.

The Macau University of Science and Technology (MUST) has been striving for promotion of high-quality tertiary education since its establishment in 2000. The Faculty of Medicine was established in 2019, from its predecessor the Faculty of Health. It is at the forefront of the development of Macau's modern health-care education. The postgraduate programs in Public Health and Nursing have since 2008 nurtured over 200 outstanding professionals.

The Faculty of Medicine is the only institution in Macau to offer the undergraduate "Bachelor of Medicine and Bachelor of Surgery (MBBS)" program. In September 2019, we admitted our first cohort of medical students through an oath-taking ceremony. As a pioneer of medical education of Macau, our faculty will continue to adhere to our university motto in developing and optimizing its medical education, namely: "Dedication to practical studies, enhancement of knowledge, ability and quality humanity and excellence". We are dedicated to our mission of cultivating medical professionals with excellent quality and promoting the development of healthcare in Macau.

Our strong faculty comprises distinguished scholars and professionals with expertises in clinical medicine, food nutrition and science, public health, molecular epidemiology, cancer epidemiology, genetic epidemiology, community medicine, preventive medicine, laboratory medicine, health sciences, bio-statistics, health administration, school health, health policy, international health, social work, and sociology of health, clinical gerontology, and geriatrics.

### Curriculum

The Faculty of Medicine offers five programs in four areas of study including: Bachelor of Medicine and Bachelor of Surgery (MBBS), Bachelor of Food and Nutritional Science (BFNS), Master of Public Health (MPH), Master of Nursing (MN), and Doctoral of Public Health (DPH).

# Bachelor of Medicine and Bachelor of Surgery (MBBS) Degree

The MBBS program, the first of its kind in Macau, will train "Tomorrow's Doctors" who are compassionate, caring and competent in the delivery of effective and efficient patient care. This program adopts a competency-based curriculum, which implements the teaching of "problemoriented learning" and "clinical inference". It has been designed according to the framework of modern education models in Hong Kong, Britain and the United States. The course consists of six years, including five years' regular courses and one-year clinical internship. Our program begins with a foundation module and progresses through various basic sciences and clinical clerkships, divided into four phases of learning and training.

# Bachelor of Food and Nutritional Sciences (BFNS) Degree

This program is aimed at providing education to students so that they can become specialists in the field of food and nutritional sciences, including food production, quality control, scientific research, food trade and management, public nutrition and clinical nutrition.

#### Master of Public Health (MPH) Degree

This program is aimed at producing public health professionals. The MPH program spans from 2 to 3 years comprising 1-year course work followed by a research project. The former covers a number of important areas including research methods, health promotion, public health, health policy, epidemiology, biostatistics, sociology of health, and evidence based practice.

### Master of Nursing (MN) Degree

This program aims at providing students with advanced theoretical knowledge, assessment skills, leadership development, and advanced clinical practice in nursing, as well as opportunities to critique and apply nursing theories and research as a scientific basis for nursing practice. The MN program spans from 2 to 3 years comprising 1-year course work followed by a research project.



▲ 社交距離下進行面授課堂交流。
Socially distanced face-to-face delivery of our curriculum.

#### **Doctoral of Public Health (DPH) Degree**

This program aims to produce public health professionals at doctorate level. We provide students with the opportunity of receiving a practical as well as theoretical education in public health, and prepare them for leadership in public health. The DPH program spans from 3 to 6 years comprising course work, focused research, and personal and professional developments.

### **Training Centers**

The Faculty has established the Center for Continuing Medical and Health Education and the Center for Medical Education in Medical Simulation, to take the lead in top quality undergraduate medical training and continued medical education, with the aim of improving healthcare provision in Macau. These Centers have been conducting clinical practice skills training since 2011. Over 3,500 healthcare providers have been trained, including 800 medical specialists, 1,200 frontline doctors and 1,500 nursing staff.

These Centers house state-of-the-art virtual reality manikin-based systems and innovative software tools. They include: 3D anatomy system, robotic surgery simulator, endovascular simulator, neurosurgical simulator, high-fidelity ultrasound simulator (one common platform with cardiac, lung, abdominal and obstetrics & gynaecology functions), portable ultrasound machine, 3D spinal surgery simulator, joint arthroscopy simulator, laparoscopic and endoscopic surgical simulator, etc. The scope of study covers Critical Care Medicine, Cardiology, Cardiothoracic Surgery, Neurosurgery, Obstetrics and Gynecology,



▲ 醫學院培訓中心下設專業醫療發展中心和醫療及衛生持續培訓中心

The Faculty of Medicine Training Center, housing the Centers of Excellence for Professional Medical Development, for Continuing Medical Education and for Education in Medical Simulation.

▲ 醫學模擬教育中心配置先進的多學科培訓器材,致力為醫護 人員提供認可的持續醫學教育課程。

Our Center for Education in Medical Simulation is a stateof-the-art multidisciplinary training facility, for medical professionals and healthcare leaders in alignment with recognized Continuing Medical Education curricula. ▲ 線上 / 線下混合式互動交流工作坊。 Hybrid (online/ face-to-face) interactive

communications workshop.

Pediatrics, Radiology, Gastroenterology, Orthopedics, Urology, General surgery and Anatomy. As a result, we have successfully established a learning platform for clinical practice skills, and through a series of medical academic courses, we provide high quality healthcare simulation training in Macau. These facilitate local medical staff to practice modern skills under a controlled and safe environment, and will therefore promote the highest standards of excellence and professionalism and enable patients to receive better medical services.

Together with our MBBS program, the Center for Medical Education in Medical Simulation will take on the central role of delivering many of the clinical skills aspects of medical training, which is incorporated into our curriculum. Such simulation training will complement traditional teaching methods to allow experimental learning for our medical students to improve skills, teamwork, communication and safety.

# **University Hospital (UH)**

UH is a teaching arm of the Faculty of Medicine, the Faculty of Chinese Medicine and the School of Pharmacy. This makes it the only hospital in Macau fully supported by advanced academic faculties. Our in-patient department provides various types of room: semi-private room, private room and VIP room, to suit patients' needs.

The University Hospital (UH) is located on the campus of Macau University of Science and Technology, in the heart of Macau's Cotai Area. UH aims to provide high quality healthcare for both Western Medicine & Traditional Chinese Medicine services, with the advanced medical facilities, to all of our patients in a pleasant and comfortable environment.

Services provided at various departments shall benefit students to learn and participate in patient care during their clinical years and internship. Physical infrastructures at UH will allow faculty to conduct Objective Structured Clinical Examinations (OSCE) and assist students with their future career developments.

# **International Accreditation**

We benchmark our MBBS students to international standards by partnering with Harvard Medical School and subscribe to its online teaching and assessment tool, HMX, to run alongside our MBBS curriculum. The HMX Fundamentals modules cover foundational topics in physiology, genetics, biochemistry, pharmacology and immunology. Our Years 1 and 2 MBBS students are enrolled onto these modules, and take part in a scheduled exam on each component. The majority of our first cohort of students obtained the Achievement award, scoring over 80% in the module. They are

awarded a Certificate of Achievement from Harvard Medical School The second batch of medical students achieved brilliant results. 90% of them obtained the Achievement award in the modules of physiology, genetics, biochemistry and pharmacology. They were awarded a Certificate of Achievement from Harvard Medical School.

Our Center for Medical

Education in Medical Simulation is the only Authorized Clinical Skills and Simulation Training Centre of Chinese Medical Doctor Association since 2011. It is also awarded the Comprehensive Skill Development Certified Qualification by the Royal College of Surgeons of Edinburgh (RCSEd). This is the first of its kind in Greater China. We receive fellows and senior officers from the Royal College of Surgeons of Edinburgh regularly.

The Center for Continuing Medical and Health Education is an American Heart Association Authorized International Training Center in the Macau Special Administrative Region. We offer professional training courses for the doctors, nurses, safety personnel, caregivers, emergency medical technicians and front-line first responders.

### Global Collaborations

The Faculty of Medicine and its medical school is part of a global network. We are listed in the World Directory of Medical Schools (published by the World Federation for Medical Education and the Foundation for Advancement of International Medical Education and Research). We are also a founding member of the World Portuguese Speaking Countries Medical School Alliance. This alliance has 12 other founding members from Portugal, Brazil and Mozambique. Furthermore, our Medical School also has a medical education collaboration agreement with the National Health Commission of the People's Republic of China



▲ 採用模擬技術作專業進修訓練 Postgraduate training using simulation technology

(NHC) in order to enhance co-operation between mainland China and Macau S.A.R. in the fields of medicine and health, particularly in continued medical education and skills training for healthcare professionals.

Our Faculty also collaborates with Peking University People's Hospital (Beijing, China), Faculty of Medicine of University of Lisbon (Portugal) and Faculty of Medicine of University of Porto (Portugal) to join forces and provide more academic and clinical exchanges.

Our Faculty organizes and chairs the annual "Sino-Luso International Medical Forum". Through these symposia, we have been promoting Macau's role as a meeting point for China and the world as enhanced by our heritage connections with Portuguese-speaking countries. We have brought over eminent professors and other medical experts from the United States, England, Australia, France, Sweden, Italy, Portugal, China, Taiwan, Hong Kong and Macau. These forums are now very highly regarded for international healthcare education and skills training in Macao. Over 7,000 Macau doctors and nurses have joined us since 2011.

▼ 一年級學生在進行組織學實驗課。 Our Year 1 students in a histology practical session.



### 查詢 Enquiries

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