

# Bachelor of Medicine & Bachelor of Surgery (MBBS)

# MBBS

## Introduction

The Macau University of Science and Technology (MUST) has always been striving for promotion of high-quality tertiary education since its establishment in 2000. Following rapid aging of the Macao population, escalating birth rate and growing volume of tourism, the local medical and health system has sustained increasing pressure. In positive response to these challenges and opportunity, the university has decided to establish the first medical school in Macao. As a pioneer of medical education of Macao, the university will continue to adhere to its 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 Macao.

We have two pre-existing clinical training centers: (1) The Center for Continuing Medical and Health Education (CCMHE), and (2) The Center of Excellence for Professional Medical Development (CEPMD), both endowed with the most modern simulation-based medical teaching facilities. Such state-of-the-art training centers and facilities play a key role in quality assured clinical skill training, ensuring that medical students will master essential clinical skills from basic to advanced levels.

We aim to nurture "tomorrow's doctors" who care for lives with both intellectual virtues and professional competence, making them empathetic, caring and skillful to provide effective and efficient medical services in Macao.

## Curriculum

### Bachelor of Medicine & Bachelor of Surgery (MBBS)

The curriculum is competency-based comprising a five-year formal course and a one-year internship. The full-time program lasts for 6 years. Courses will begin with fundamental science in human anatomy and function progressing through internal medicine, surgery, community and family medicine, other medical specialties and clinical clerkship and internship. Curriculum design will be integrated as well as unit based with emphasis on classroom and bed-side interactions. Problem-oriented learning will be implemented for promoting students' independent thinking, problem solving skills, and active life-long learning attitude.



## Curriculum Structure

The structure and design of the MBBS program is based on the curriculums of medical schools in Hong Kong and other renowned international universities. The philosophy of our medical curriculum is to promote a balanced advancement of knowledge, technology and personality among students. Our ultimate goal is that students will not only master medical knowledge, but are also well developed in analytical and problem-solving skills with a personalized caring attitude of a medical doctor.

The integral curriculum will last for 12 semesters spreading over six years and is divided into three phases:

- 1) Foundation Block, Basic and Applied Biomedical Sciences
- 2) Clinical Foundation Clerkship
- 3) Clinical Advanced Clerkship, Clinical Specialty Clerkship and Assistant Internship, Electives, Internship

### Phase I : Basic & Applied Biomedical Sciences

Phase I will continue with nine blocks of five weeks each consisting of respiratory, cardio-vascular, gastrointestinal, urogenital, musculoskeletal, central nervous, head & neck, haematology and immunology, and endocrine systems. Teaching in these blocks will be organized with integration of anatomy, physiology, biochemistry, pharmacology, pathology, microbiology based on clinical scenarios. There will be written and practical summative assessment at the end of the first and second year followed by six weeks of elective period before students' progress to third year, or Phase II, of the program.

### Phase II : Clinical Foundation Clerkship

The third year of clinical foundation course with three rotations will be held at hospital, family medicine and community health clinics to learn basic clinical examination skills with real patients across various specialties. Students will have an opportunity to acquire competency and skills in making diagnosis based on comprehensive history taking and physical examinations before any routine and supportive investigation are undertaken. Course will end with third summative written and clinical examination followed by six weeks of elective.

### Phase III : Clinical Advanced Clerkship

The senior clerkship of six months duration will be, in practice, an extension of clinical foundation course to consolidate clinical diagnostic skills with interpretation of investigation and management of patients from paediatrics to geriatrics and mental health. Senior clerkship will be done at hospitals and clinics. There will be no formal summative examination. However, formative assessment of students' logbooks and clinical competence will be taken into account as a part of continuous assessment.

## Assessment

Formative assessment will be conducted prior to summative assessment to offer students feedback and counseling in a timely manner. Tools of formative assessment will include record of attendance, documentation of learning activities in logbook and online written tests. Summative assessment will be held at the end of year one, two, three and five. Format of assessment will be combination of written and clinical tests consisting of Multiple Choice Questions (MCQs), Short Answer Questions (SAQs), Extended Matching Questions (EMQs), Case reports, Objective Structured Clinical Examination (OSCE) and Long and Short case presentations.

## Career Prospects / Professional Recognition

After attaining the Bachelor Degree of Medicine and Bachelor Degree of Surgery (MBBS), our medical graduates can be recognized by the Health Bureau of Macau as registered doctors with primary qualifications. Graduates can apply to practise legally as licensed doctors in Macao.



### Phase III : Clinical Specialty Clerkship & Assistant Internship

Specialty clerkship is a year-long program consisting of six rotations of eight weeks each comprising specialties of surgery, medicine, Obstetrics & Gynaecology, Paediatrics, Family Medicine, Community Medicine and other subspecialties. Emphasis in this clerkship will be on management issues. After progressing through Phase I, II and part of III modules, it is expected that students have acquired sufficient skills to participate in active management of patients as an Assistant interns as a part of inter-professional team. After completion of specialty clerkships and a period of revision, students will need to write the final examination.

### Phase III : Electives

Students will be offered electives at the end of first, second and third year to broaden their learning and participating experience in health care projects, volunteerism, international health. The electives will last for six weeks. Students will work with nominated supervisors, who will guide and certify their active involvement.

### Phase III : Internship

After successful accomplishment at the final examination, medical students will undertake 12 month of compulsory and supervised internship of 4 rotations with 3 months each at recognized training units in Macao. The University will monitor the internship program to make sure interns have obtained good clinical experience; and supervisors have signed their logbooks to document satisfactory completion of internship before they can fulfill the degree requirements.





Admission Channels

【Written Exam Admission】

Applicants can apply through written exam if they meet the following requirements:

- Form 6 or equivalent graduates (science stream); or candidates who are currently studying in Form 6 or equivalent (science stream);
- A minimum achievement level in Chemistry or Combined Science with Chemistry component should be 70% or above (grade C or above) ;
- Good proficiency of English and Chinese;
- Applicants who are color-blind or have color weakness cannot be admitted to the program of MBBS.

Remarks: Applicants are required to sit for the Joint Admission Examinations (JAE) – Chinese, English and Mathematics subjects. Multiple Mini Interview (MMI) arrangements will be announced by the faculty individually.

【Direct Admission】

Applicants may apply for direct admission by submitting the results of any of the following examinations:

Remarks: Candidates are required to have completed Form 6 (science stream) and fulfilled the requirements for graduation; or those who are currently attending Form 6 (science stream) or equivalent. Chemistry or Combined Science with Chemistry component with good proficiency of English and Chinese. Multiple Mini Interview (MMI) arrangements will be announced by the faculty individually.

Public Exam	MBBS Minimum Requirements
Hong Kong Diploma of Secondary Education Examination (HKDSE)	<ul style="list-style-type: none"><li>• Level 4 or above in English Language</li><li>• Level 4 or above in Mathematics</li><li>• Level 4 in Chemistry or Combined Science with Chemistry</li><li>• Level 3 or above in Chinese Language</li><li>• Level 3 or above in Liberal Studies</li></ul>
Hong Kong Advanced Level Examination (HKALE)	<ul style="list-style-type: none"><li>• 1 advanced level (A level) subject</li><li>• Grade B in English Language</li><li>• Grade B in Chemistry</li><li>• Grade C in Chinese Language</li></ul>
General Scholastic Ability Test (GSAT)	<ul style="list-style-type: none"><li>• "Above Average" in English Language</li><li>• "Above Average" in Mathematics</li><li>• "Above Average" in Social Studies and Sciences</li><li>• "Average" in Chinese Language</li></ul>
General Certificate of Education Examination (GCE)	<ul style="list-style-type: none"><li>• Grade A in 2 advanced level (A level) subjects, or, Grade B in 3 advanced level (A level) and 2 advanced supplementary subjects (AS level)</li><li>• Grade B in Chemistry</li></ul>
Unified Examination Certificate (UEC), Malaysia	<ul style="list-style-type: none"><li>• Grade A in English Language</li><li>• Grade B in Mathematics</li><li>• Grade B in Chemistry</li><li>• Grade C or above in other 3 subjects</li></ul>
Malaysian Higher School Certificate (STPM)	<ul style="list-style-type: none"><li>• Grade A in English Language</li><li>• Grade B in Mathematics</li><li>• Grade B in Chemistry</li></ul>
International Baccalaureate (IB)	<ul style="list-style-type: none"><li>• Completed the International Baccalaureate Diploma Program Curriculum and awarded the International Baccalaureate Diploma</li><li>• Obtained a total score of 40</li><li>• Chemistry in Higher Level</li></ul>
Redesigned SAT	<ul style="list-style-type: none"><li>• Obtained a total score of 1300</li></ul>
SAT Subject Test	<ul style="list-style-type: none"><li>• Obtained a score of 650 in Mathematics</li><li>• Obtained a total score of 650 in Reading Comprehension and English Grammar</li></ul>
Advanced Placement (AP)	<ul style="list-style-type: none"><li>• Level 4 in English Language</li><li>• Level 4 in Chemistry</li><li>• Level 3 in Mathematics</li></ul>
Associate Degree or higher	<ul style="list-style-type: none"><li>• Graduates of an Associate Degree or higher degree programs</li></ul>
Other	<ul style="list-style-type: none"><li>• Have been offered admission to bachelor's program of other recognized higher education institutions</li><li>• Are currently or were once enrolled in bachelor's program of other recognized higher education institutions.</li></ul>

Program	
Bachelor of Medicine & Bachelor of Surgery (MBBS)	
Duration of Study (Year)	Medium of Instruction
5 years + 1 year internship	English

【Exemption from Examination】

Applicants with the following qualifications may apply for exemption from taking Chinese, English and Mathematics examinations:


Subject for Exemption	Requirement
Chinese	Applicants without basic education in Chinese Language during the last three years of study in secondary education.
English	<b>IB :</b> (a) Grade 4 in HL English Language (B Syllabus) (b) Grade 5 in SL English Language (B Syllabus) (c) Grade 4 in HL / SL English Language (A1 or A2 Syllabus) (d) Grade 4 in HL / SL English Language A: Language and Literature (e) Grade 4 in HL / SL English Language A: Literature (f) Grade 4 in SL English – Text and Performance; or (g) Grade 4 in SL English – Literature and Performance (A1 syllabus)
	<b>GCSE / GCEO :</b> (a) Grade C in English Language at GCSE/GCEO (b) Grade C in English First Language at IGCSE; or (c) Grade B in English as a Second Language at IGCSE.
	<b>CPE/ CAE :</b> (a) Level C1 or an overall score of 180 in Cambridge Certificate of Proficiency in English; or (b) Grade C or an overall score of 180 in Cambridge Certificate in Advanced English.
Mathematics	<b>SAT Reasoning Test :</b> (a) Sub-scores of 550 in both Critical Reading and Writing in the same attempt of the SAT Reasoning Test (prior to March 2016); or (b) Test scores of 31 in Writing and Language and 30 in Reading in the same attempt of the Redesigned SAT Reasoning Test (from March 2016).
	<b>IELTS :</b> An overall band of 6.5 in IELTS Academic Module (within 2 years after the test date).
Mathematics	<b>TOEFL :</b> A score of 93 in the TOEFL internet-based test, or 583 in the paper-based test (prior to July 2017) or an overall score of 70 in the revised TOEFL Paper-delivered Test (October 2017 onwards) (within 2 years after the test date).
	Awarded the second prize or above in the high school group in the Mathematical Olympiad competition.

Required Documents for Application:

Please refer to the Admission Regulations on MUST website at <https://www.must.edu.mo/en/admission/undergraduate/general/guidelines/notes>.

Enquiries

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Bachelor of Medicine & Bachelor of Surgery (MBBS) Prospectus

