

香港中文大學工程學院 The Chinese University of Hong Kong Faculty of Engineering



Materials Science and Engineering Undergraduate Programme#

材料科學與工程本科生課程

CUHK MATERIALS SCI & ENG | 聯招編號: JS4470

The main features of our programme include:

- (1) responding to the strategic areas of tech development in Hong Kong / Greater Bay Area: microelectronics, advanced manufacturing, new energy and green technology, biomedicine and biotechnology;
- (2) teaching advanced concepts and methods for materials, e.g. computer simulation of materials, AI for new materials design;
- (3) industrial internship opportunity in Hong Kong / Greater Bay Area.

CUHK MATERIALS SCI & ENG Undergraduate Programme admits students directly through

- ❖ JUPAS / SNDAS
- Other admission channels (for applicants with other academic qualifications such as Associate Degree/ Higher Diploma, IB, GCE AL, etc.)





Our programme (MASE) is intended to be forward-looking and outward-looking. It aims to provide comprehensive education on scientific knowledge and engineering skills across multiple disciplines related to advanced materials and their innovative applications. Observing the high demand for scientists and engineers in the areas of advanced materials, the MASE major curriculum emphasizes on emerging materials with new functions, including nanomaterials, energy materials, electronic materials, smart materials, biomaterials, etc.

Curriculum Structure 課程結構

Year 4 or 5 Year 3 Year 2 Year 1

Graduation Project + Specialized Courses + Free Electives/General Education & Languages

Advanced Electives: New Energy & Green Technology | Advanced Manufacturing | Biotechnology |

Photonics | Microfabrication | Al Assisted Design | Electrochemical | Simulation | Nanoscience | Quality Control Industrial Internship / Work-Study / Exchange Programme

Advanced Major Courses:

Technical Elective Courses:

Materials Mechanics / Characterization / Manufacturing Microelectronics | Sensors | Additive | Quantum

Fundamental Major Courses:

Semiconductor Devices | Polymer | Metal & Ceramics | Electric Circuits | Engineering Statistics

Foundation Courses:

Fundamental Major Courses:

Mathematics | Computer Programming

Materials | Physics | Chemistry | Biological Sciences

Programme Entrance Requirements 課程入學要求

Admission is based on the Best 5 HKDSE subject results with subject weighting. For details of subject weighting, please refer to the table below:

Four Core Subject(s)	Minimum Level	Subject Weighting
English Language	3	1
Chinese Language	3	1
Mathematics (Compulsory Part)	3	1.25
Citizenship and Social Development	A (Attained)	1
Two Elective Subject(s)	Minimum Level	Remarks [Please indicate specific / preferred subject(s)]
Any one Science subject from the following: Mathematics Extended Module 1 or Module 2/ Biology/ Chemistry/ Physics/ Information and Communication Technology All other Elective Subjects	3	1 (1.25 for Physics/ Chemistry/ M1/M2)

^{*} In addition to the requirements above, bonus points will be awarded to the 6th and 7th subjects, if any.

Materials Science and Engineering Programme 材料科學與工程課程

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