Department of
Physics and Materials Science

Undergraduate Programmes
Bachelor of Engineering in Materials Engineering
Bachelor of Science in Applied Physics
Our Majors

Bachelor of Engineering in Materials Engineering

The role of materials in our society is much more influential than most of us have realized. Our lives would be endangered by storms in the absence of dependable concrete and steel structures. Our visual defects cannot be easily corrected without glass and high refractive index scratch resistance polymers. The launching of satellites and space shuttles would not be possible without heat-resistant materials and semiconductors. Our comfortable lives are intimately associated with the discovery, selection and processing of natural and synthetic materials. Materials Engineering deals with the advancement in our understanding and manipulation of materials, which is always the forerunner to the progression of technology.

Bachelor of Science in Applied Physics

Applied physics adopts and utilizes physics principles for a multitude of scientific and technological applications. In fact, much of modern technology and its advances owe its existence to applied physics. Therefore, its scope of study overlaps with many other scientific and engineering disciplines (e.g. materials science, environmental science, biomedical science and engineering, electronics, mechanical and manufacturing engineering). This major is the ONLY ONE in Hong Kong which trains students with medical physics and radiation protection knowledge.

Year 2 students (except those who are admitted with advanced standing) with outstanding academic performance may apply for the Joint Bachelor’s Degree Program between City University of Hong Kong and Columbia University.

Professional Recognition

The Materials Engineering major is the first and currently the only Materials Engineering degree in Hong Kong accredited by the Hong Kong Institution of Engineers.

Applied Physics graduates working in a field related to mechanical engineering are qualified for the Grade 1 Affiliate Membership of the Institution of Mechanical Engineers. With further professional development, a route exists for Affiliate Members to gain chartered engineer status.

Our Minors

- Materials Engineering
- Physics
- Photonics

For further details about our programme structure and other information, please visit our website: http://www.ap.cityu.edu.hk/
Our Graduates

Professional Careers

**Applied Physics Graduates**
- Environmental Consultants
- Biomedical Engineers
- Medical Physicists
- Materials Scientists
- Nuclear Technologists
- Opportunities in the Public Sector
  - e.g. the Hong Kong Observatory, the Environmental Protection Department and the Hospital Authority

**Materials Engineering Graduates**
- Materials Engineers
- Quality Control Engineers
- Production Engineers
- Laboratory Managers
- Research & Development Engineers
- Engineering Sales Managers for high-ended equipment and sophisticated materials
- Specialists in Electronics, Plastics, Metals, Ceramics and Construction Industries

Innovative Learning Experience

**Student Exchange**
- University of Illinois at Urbana-Champaign, USA
- Umeå University, Sweden
- University of Toronto, Canada

**Study Tour**
- Japan
- Singapore

**Discovery & Innovation**
- Final year student Project Exhibition
- Mr. Anton Law, our final year materials engineering student, under the supervision of Professor Lawrence Wu, developed a 10-minute rapid detection method for lead ions in drinking water. And he is currently applying for patent for the technology.

**Undergraduate Research Attachment Scheme**
- Through participation in the day-to-day laboratory work and/or engagement in an authentic research project setting, early research exposures enable students to identify areas of interest for career planning/further study.
Admission Route

HKDSE Students

JUPAS
- JUPAS Code: JS1208
  Department of Physics and Material Science (BEng/BSc)

Undeclared Major (Year 1)
- Gateway Education Courses
- College/Department Core Courses

Major Allocation

BSc – Applied Physics (Year 2-4)
- Biomedical Physics
- Nuclear & Environmental Physics
- Materials Technology
- Photonics

Non-JUPAS Code: 1638
BSc – Applied Physics

Non-HKDSE Students

Direct Application (Non-JUPAS)

Non-JUPAS Code: 1208
Department of Physics and Material Science (BEng/BSc)

13-year School-Leaving Qualification Holders (e.g. IB Diploma, GCEAL)

Associate Degree / Higher Diploma Holders

Admission with Advanced Standing
Depending on the qualifications, students will be admitted to Year 2 or 3 of the 4-year curriculum

Non-JUPAS Code: 1640
BEng – Materials Engineering

BEng – Materials Engineering (Year 2-4)
- Properties of Conventional & Advanced Engineering Materials
- Material Testing
- Examination Techniques and Failure Analysis
- Processing of Modern & Advanced Materials

Admission Requirements
- Satisfy the Minimum Entrance Requirements of the University with a science or engineering background; OR
- Associate Degree or Higher Diploma holder in a relevant discipline or other technical qualifications; OR
- 13-year school-leaving qualification holder (e.g. IB Diploma, GCEAL)

For further details of entrance requirements and application procedures, please visit the website of our Admissions Office:
http://www.admo.cityu.edu.hk/

Scholarships
In addition to the institutional and external scholarships, AP Education Fund (department-based scholarship) is awarded to undergraduate students with outstanding academic performance and extracurricular activities every year.

Contact Us
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