Bachelor of Science in Physics*

JUPAS Code: JS1208 / Non-JUPAS Code: 1208 / Advanced Standing Entries: 1638A

Our curriculum covers the following topics in physics

- **Fundamental Physics**
  - Classical Mechanics
  - Electromagnetism
  - Quantum Physics
  - Thermodynamics
  - Experimental and Mathematical Methods

- **Special Topics**
  - Financial Engineering
  - Biophysics
  - Medical Physics
  - Computational Physics
  - Optics

**Professional Career Prospects**

- Medical Physicists
- Biomedical Engineers
- Financial Analysts
- Technical Sales
- Education

- Product Certification and Quality Assurance
- Environmental Consultants
- Opportunities in the Public Sector
  (e.g. the Hong Kong Observatory, the Environmental Protection Department and the Hospital Authority)

For more information, please visit the website of our Physics Department:
http://www.cityu.edu.hk/phy

*Revised programme title, subject to approval.
Admission Route

Hkdse Students

Jupas

BSc - Physics*

Non-Jupas Code: 1208 BSc - Physics*

Non-Hkdse Students

Non-Jupas

Direct Application

Associate Degree/High Diploma Holders

13-Year School-Leaving Qualification Holders

BSc - Physics*

(Year 1)

BSc - Physics*

(Year 2 or 3)

Admission with Advanced Standing

Non-Jupas Code: 1638A BSc - Physics*

Courses#

Fundamental Physics
- Classical Mechanics
- Electromagnetism
- Quantum Physics
- Thermodynamics
- Experimental and Mathematical Methods

Special Topics
- Financial Engineering
- Biophysics
- Medical Physics
- Computational Physics
- Optics

Admission Requirements

\(\checkmark\) Satisfy the General Entrance Requirements of the University with a science or engineering background; OR

\(\checkmark\) Associate Degree or Higher Diploma Holder in a relevant discipline or other technical qualifications; OR

\(\checkmark\) Other 13-year school-leaving qualification holder (e.g. IB Diploma, GCEAL)

Scholarships

The Department provides various internal and external scholarships for outstanding students:

**PHY Entrance Scholarships for Jupas Entrants**
Up to $40,000 for students with an admission score of 23 or above (Best 5 HKDSE subjects).^ 

**PHY Education Fund Scholarships**
Awarded to students with outstanding academic performance and active participation in the departmental service.

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

^Revised programme title, subject to approval.

^Revised criteria for the entrance scholarships, subject to approval.

# Please visit our Department’s website for a full list of courses.
WE ENCLOSE
Discoveries and Innovations

Student Exchange

University of Illinois at Urbana-Champaign, USA
Umeå University, Sweden
University College London, UK
National Taiwan University, Taiwan

Involvement in Advanced Research

Early research exposures as young scientist
Final Year Student Project Exhibition

Internship Opportunities

Various internship opportunities, such as final year project in local hospitals

Study Tour

Japan
Singapore

Frontier Research in PHY

World’s first experimental observation of the Kondo cloud done by Dr. Ivan Valerievich
New chips invented by Dr. Sai Tak Chu accelerate data transmission
Prof. Xun-Li Wang and students at the Spallation Neutron Source in the US
**Student Support Network**

Each new student will be paired with one Academic Advisor and one Peer Consultant.

**Student Connect - Departmental Tea Gathering**

**Career Talk**

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**Seminars by Prestigious Scholars**

- Short Course in Laser by Prof Alain Aspect, the 2010 Wolf Prize Laureate in Physics
- Departmental Seminar by Prof Serge Haroche, the 2012 Nobel Laureate in Physics

**Other Activities**

- Visiting PCCW MCK10 Data Center
- Visiting HKT Network Operating Centre
- Mainland Enterprise Visit
- Industrial Exposures

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**PHY Annual Symposium**

- Celebration of students’ and faculties’ achievements
- Research Showcase by Students
- Overseas Speakers
Joint Bachelor's Degree Program between CityU and Columbia U

Students with outstanding academic performance may apply for the Joint Bachelor’s Degree Program between City University of Hong Kong and Columbia University in USA, and obtain degrees from both universities.

For more information, please visit http://gs.columbia.edu/cityu-hk/

Students in the Joint Program

Cheng, Yuanhao
2018 Graduate; currently a PhD student in Chinese Academy of Sciences, China

“Columbia University is a prestigious university. I have had the chance to interact with many brilliant professors and students. Courses at Columbia are very demanding, but also very enlightening. I have spent a great deal of time reading books, understanding materials, and doing homework. By my self-study and through my discussions with professors and students, I have been able to easily learn whatever I want.

A number of libraries are located on campus, and each of them is furnished in a distinctive style. I have greatly enjoyed the time I’ve spent in each one learning and meeting people.”

Song, Yuan
2018 Graduate; currently a PhD student in Columbia University, USA

“The Joint Bachelor’s Degree Program has allowed me to be engaged in two elite universities in two fascinating cities. Columbia University sees the entire city as its campus. Things that I can do in New York are far beyond my imagination. I’ve met every actor in the play Sleep No More inside the 5-storey McKitterick Hotel. I’ve spent weeks in the Metropolitan Museum of Art to admire history. I have shaken hands with the current World Chess Champion, Magnus Carlsen. New York is a place that is full of possibilities, no matter who you are.

All the assignments that I found challenging at Columbia were more inclined to theoretical fields, designed to enhance my understanding of physics, which created a balance comparing to those more experimentally-focused courses at CityU. Having resources at both universities available, I became much more confident in the field of physics.”

Wu, Peilin
2019 Graduate; currently an MSc in Theoretical Physics student in King’s College London, UK

“Studying in the Joint Bachelor’s Degree Program was an extremely rewarding journey… both academically and personally. The biggest lesson that I’ve learned was the personal paradigm shift after the expansion of my horizon. Every conversation with a great mind around the campus turned out to be inspiring.

Even though a two-year study at Columbia might be a bit short in time, it was well enough to peek through the cultural, social, political and religious differences, and those discrepancies really lifted me out of the normal plane of comprehension in a local perspective and granted me a glimpse of the whole picture.”