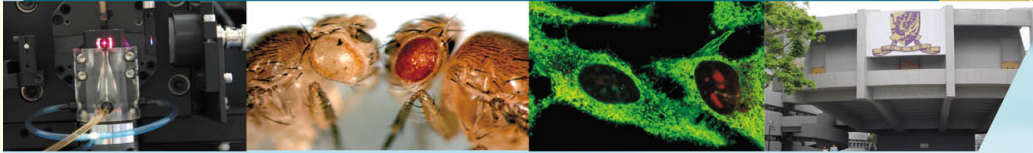




The Chinese University of Hong Kong
Faculty of Science
Department of Biochemistry



生物化學及生物醫學 理學碩士

兼讀/全日制課程

**Master of Science in
Biochemical and Biomedical Sciences**

Part-time/Full-time Programme

Professor SK Kong
MSc Program Director
Biochemistry Program

School of Life Sciences, The Chinese University of Hong Kong
Office: MMW609, Tel: 3943-6799, e-mail: skkong@cuhk.edu.hk

CUHK, founded in 1963, is a **comprehensive research university** with a **global vision** and a mission to combine tradition with modernity, and to bring together China and the West.

QS World University Rankings



Reuters Asia's Most Innovative Universities



Times Higher Education Rankings



ARWU Top Universities in Greater China



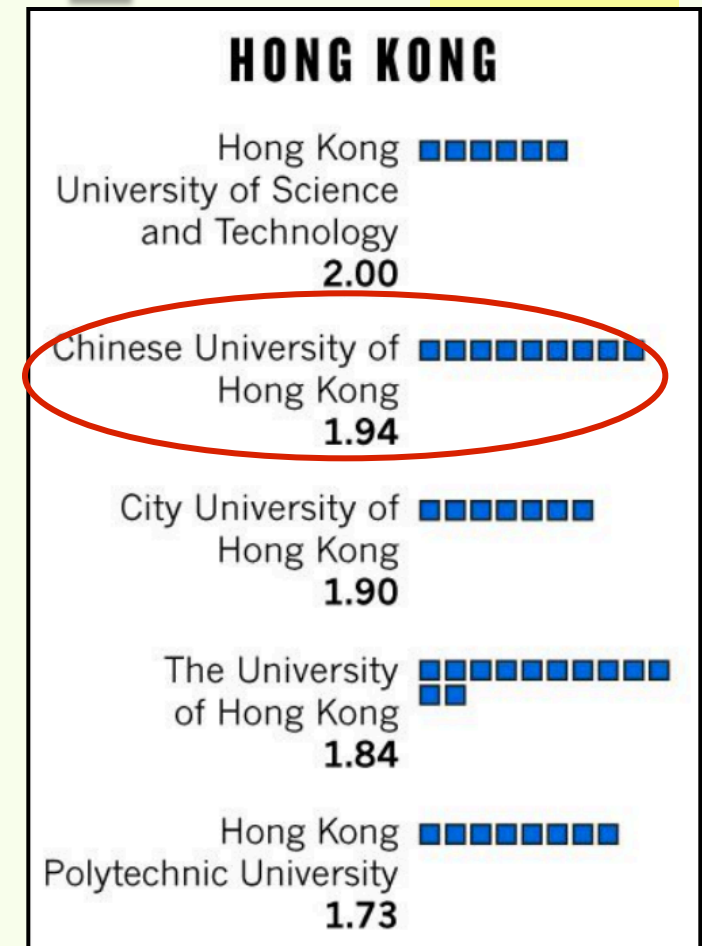
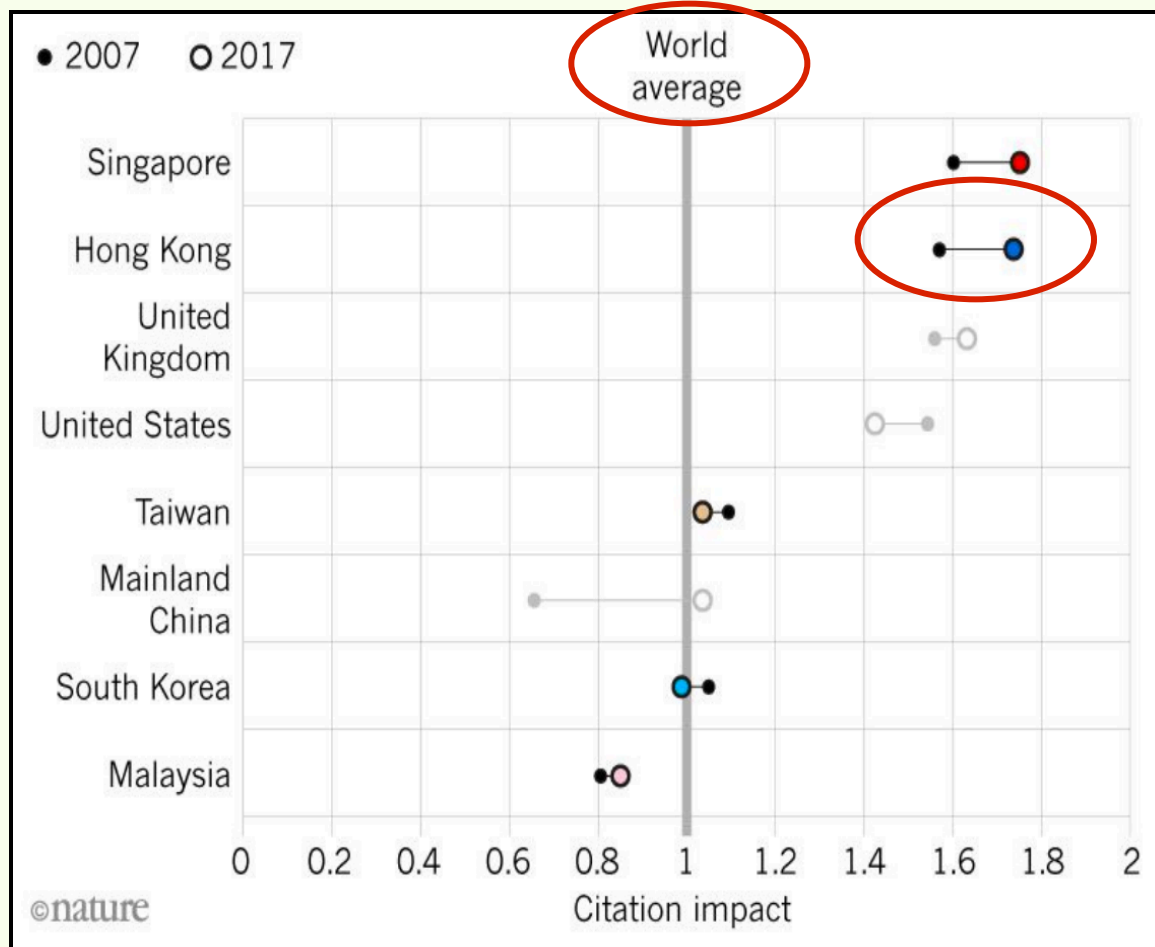
Citation Impact in HK & CUHK

Science in East Asia - by the numbers

Nature, 28 June 2018, Volume 558, Issue 7711.

World Average = 1

 = 1,000 publications





POSTGRADUATE STUDIES

Since 1963

CUHK

Faculty of Science

School of Life Sciences
formed in Aug 2010

Biochemistry Program

**Research PG
Program**

MPhil & PhD

Since 1971

**Taught PG
Program**

MSc

Since 2006

**Undergraduate
Program**

BSc





Degree Quality Assurance

- 1) Review from **External Visiting Committee**.
- 2) Audits from **CUHK Graduate School**.
- 3) Audits from **Programme Review Exercise in FoS**.
- 4) Audits from The **Quality Assurance Council of the UGC**
(University Grants Committee), HKSAR.
- 5) Course **Evaluation by Students**
(Questionnaires, Staff-student consultation meeting, etc.)

POSTGRADUATE STUDIES



Qualifications Framework

The Government of the Hong Kong Special Administrative Region

Launched in 2008, the **Hong Kong Qualification Framework (HKQF)** is an official body in HK promoting and supporting lifelong learning, enhancing the quality and professionalism, and recognizing degree/diploma/certificate qualifications.

QF Level
資歷級別

Choice of Award Titles for Different Levels
各級別可選用的資歷名銜



Higher Degree – MSc vs. MPhil/PhD

- **Course-based master's degrees (MSc)** are based on structured course modules taught through lectures, seminars and laboratory.
- **Research-based master's degrees (MPhil)** require the student to carry out their own research project in a specialized field.
- **MSc** provides you a **broader understanding & theoretical expertise in multiple topics** that you are interested in, instead of a more narrowed focus by research work.
- **MSc** is better if you are looking for **employment straight away after graduation** while **MPhil** is better for those interested in a **higher research PhD degree** and academic career.



Our BBMS Program Features

- CUHK is **one of the oldest research universities** in Hong Kong.
- Covers **a wide range of disciplines** from molecular biology, biochemistry, biotechnology to biomedical sciences (bio-engineering).
- Places a strong emphasis on cutting edge **research skills and methodologies**.
- Prepares students for **further studies, teaching, research & technical positions** in academia, government or industry.
- We **offer a lab course** to introduce **theories & practical skills**.
- Students can **conduct research** in their MSc projects.
- eLearning materials for T&L - **CUHK Blackboard System**.
- Taught by **well-qualified and experienced faculty members**.



Teachers and Demonstrators

Teachers

- Professors from **School of Life Sciences (SLS)**, CUHK
- Professors from **School of Biomedical Sciences (SBS)**, CUHK
- Professors from **Clinical Departments**, Prince of Wales Hospital
- **Specialists** from the biotechnology industry & forensic profession

Demonstrators

Well-experienced technical staff (MPhil/PhD holders) from SLS

Program of Study (Part-time, 2-Yr)*

Year One (4 courses)	Year Two (3 courses + 1 MSc Project)
BBMS5100 (1st term) Perspectives in Biochemical Sciences	BMS6120 (1st term) Clinical Biochemistry & Diseases
BBMS5120 (1st term) Biochemical Genetics & Forensic Sciences	BBMS6200 (1st term) Methods in Biochemistry
BBMS5200 (2nd term) Biochemical Technology I	BBMS6100 (2nd term) Biochemistry & Public Health
BBMS5220 (2nd term) Biochemical Technology II	BBMS6300 (2nd term) Management & Accreditation of Biochemical Laboratory
	MSc.Project 2nd term (20-30 contact hours)

*** University Policy: A PT student cannot read for 2 degrees from 2 Universities at the same time.**

Program of Study (Full-time*/Part-time, 1-Yr)*

One Year (7 courses + 1 MSc Project)

BBMS5100 (1st term) Perspectives in Biochemical Sciences	BMS6120 (1st term) Clinical Biochemistry & Diseases
BBMS5120 (1st term) Biochemical Genetics & Forensic Sciences	BBMS6200 (1st term) Methods in Biochemistry
BBMS5200 (2nd term) Biochemical Technology I	BBMS6100 (2nd term) Biochemistry & Public Health
BBMS5220 (2nd term) Biochemical Technology II	BBMS6300 (2nd term) Management & Accreditation of Biochemical Laboratory
	MSc Project 2nd term (20-30 contact hours)

*** University Policy: A FT student cannot be a FT employee.**

*** For non-local students, only the FT student can get a Student VISA from the HKSAR Government.**



MSc Project (Term Course)

To do a **literature survey** and/or a **mini research project** on a **current topic** in biochemistry or biomedical sciences under the supervision of a teaching staff of Department of Biochemistry.

Examples:

1) Experimental research:

Role of ion channels in maintaining the self-renewal characteristic of embryonic stem cells

2) Literature review:

Directing embryonic stem cell differentiation into cardiac lineage

Format: Please refer to your Handbook

Lab Safety

BBMS6200 Methods in Biochemistry

Lab safety videos (Part I-VI): available in Blackboard eLearning system.

BBMS6220 MSc Project

- If you are going to do **a mini research MSc project**, you have to register and pass the **lab safety training course under CLEAR** (Center for Learning Enhancement and Research)
<http://www.cuhk.edu.hk/clear/prodev/ipl.html#details>.
- Register the **lab safety training course** (e.g. **General safety, Chemical safety, Biological safety** etc.) asap!



Our Sister Program MSc in Biomedical Engineering

Students are allowed to take **ONE** course from our **Sister Program (MSc in Biomedical Engineering)** as an elective course.

BMEG5710	Introduction to Biomedical Engineering
BMEG5720	Basic Biomedical Science
BMEG5730	Medical Devices and Sensor Networks
BMEG5740	E-medicine Technologies
BMEG5750	Medical Robotics
BMEG5760	BioMEMS and Bio-Nanotechnology
BMEG5770	Smart Materials for Medical Applications
BMEG5780	Computational Modelling for Medical Applications
BMEG5790	Bioinformatics
BMEG5810	Prosthetics and Artificial Organs
BMEG5820	Virtual Medicine and Computer Aided Surgery
BMEG5830	Medical Imaging
BMEG5840*	Biomedical Engineering Laboratories
BMEG5850	Medical Device Regulatory Affairs and Intellectual Property

** Student has to complete the CS-1 form for course enrolment.*

Assessment and Graduation

By **coursework, term paper, written / open note examination & performance** according to the grading scheme used for postgraduate courses at CUHK.

24 units (7 courses + 1 MSc Project) are required for graduation.

Study Mode:

Part-time: 1-year, 2-year, Max. 4 years; or

Full-time: 1-year, Max. 3 years

(Tue, Wed, Fri: 7:00-9:30 pm; Sat: 2:30-5:30 pm)

Language of Instruction: English.

Tuition Fee:

HK\$120,000 for the whole study (including MSc project);
HK\$15,000 for each additional course (for re-take student).

POSTGRADUATE STUDIES

- 1) **Course Passing Grade: Grade D or above.**
- 2) Fail in the final examination in the 1st attempt → Re-take the exam for one time → Fail again → Re-take the course in the next academic period and pay course fee.
- 3) **A student shall be required to discontinue studies if:**
 - 1) **Failed in 2 courses or**
 - 2) **GPA (Grade Point Average) is 1.0 or below.**

$$\text{GPA} = \frac{\sum(\text{Grade Point} \times \text{Course Unit})}{\text{Total Course Units}}$$

(A:4.0; A-:3.7; B+:3.3; B:3.0; B-:2.7; C+:2.3; C:2.0; C-:1.7; D+:1.3; D:1.0)

Grade Descriptors

Grade	Overall course
A	Demonstrates the ability to synthesize and apply the principles or subject matter learnt in the course, to novel situations and/or in novel ways, in a manner that would surpass the normal expectation at this level, and typical of standards that may be common at higher levels of study or research. Has the ability to express the synthesis of ideas or application in a clear and cogent manner.
A-	Demonstrates the ability to state and apply the principles or subject matter learnt in the course to familiar and standard situations in a manner that is logical and comprehensive. Has the ability to express the knowledge or application with clarity.
B	Demonstrates the ability to state and partially apply the principles or subject matter learnt in the course to most (but not all) familiar and standard situations in a manner that is usually logically persuasive. Has the ability to express the knowledge or application in a satisfactory and unambiguous way.
C	Demonstrates the ability to state and apply the principles or subject matter learnt in the course to most (but not all) familiar and standard situations in a manner that is not incorrect but is somewhat fragmented. Has the ability to express the separate pieces of knowledge in an unambiguous way.
D	Demonstrates the ability to state and sometimes apply the principles or subject matter learnt in the course to some simple and familiar situations in a manner that is broadly correct in its essentials. Has the ability to state the knowledge or application in simple terms.
F	Unsatisfactory performance on a number of learning outcomes, OR failure to meet specified assessment requirements.

Academic Honesty

CUHK places very high importance on honesty in academic work submitted by students, and adopts a policy of *zero tolerance* on cheating and **plagiarism**. Any related offence will lead to **disciplinary action including termination of studies at the University**.



VeriGuide: A system to check similarities on documents from different sources to uphold academic honesty.

For more details, please refer to:

<http://www.cuhk.edu.hk/policy/academichonesty/>

Video:

http://www.cuhk.edu.hk/clear/tnl/Plagiarism_English.html

http://www.cuhk.edu.hk/clear/tnl/Plagiarism_Putonghua.html

http://www.cuhk.edu.hk/clear/tnl/Plagiarism_Cantonese.html

BBMS Homepage



The Chinese University of Hong Kong
Faculty of Science
School of Life Sciences

Welcome message

生物化學及生物醫學 理學碩士全日/兼讀課程

Master of Science in Biochemical and Biomedical Sciences

(Full-time and Part-time Programme)



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Biomedical Engineering](#)

[How to write a term
paper](#)

[Guidelines for writing
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[Honesty in Academic](#)

Programme Director's Message

Dear prospective students,

Thank you for visiting our website! To keep up with the rapid development of biological sciences in the 21st century, our University established a new School of Life Sciences in August 2010. Our M.Sc. Programme now belongs to this new big family. Life science has a very broad spectrum which embraces different biological disciplines, and biochemistry is one major branch of it. Our M.Sc. Programme is committed to provide the highest quality of postgraduate education in biochemical sciences which covers both textbook knowledge and contemporary practical laboratory techniques. We also aim at enhancing critical thinking and communication skills of our students.

This website contains useful information of our Programme including its objectives, curriculum design as well as other essential information. If you have specific questions in mind, you are most welcome to contact our Programme staff or myself for assistance. We shall try our best to help you out.

eLearning System: Blackboard

Welcome to
CUHK

CUHK LOGIN
For Office 365, @Link, LibrarySearch and more

Login with
Student: *Student-ID@link.cuhk.edu.hk*
Staff: *alias@cuhk.edu.hk*
Alumni: *alumni-ID@link.cuhk.edu.hk*
Password: OnePass Password

Login ID
OnePass Password

Sign in

? Login Help
! Contact ITSC

CADS
(CADS Reference Number: 233)

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Information Technology Services Centre The Chinese University of Hong Kong

香港中文大學·資訊科技服務處
Information Technology Services Centre, CUHK

[Google: CUHK Blackboard or
https://blackboard.cuhk.edu.hk](https://blackboard.cuhk.edu.hk)

Student Handbook

**Forward Your CUHK e-mails to Your
Personal Mailbox (page 17)**



The Chinese University of Hong Kong
Faculty of Science
School of Life Sciences

Master of Science Programme in
Biochemical and Biomedical Sciences
(Full-time/Part-time)

香港中文大學
理學院生命科學學院
生物化學及生物醫學理學碩士課程
(全日制/兼讀制)

STUDENT HANDBOOK 2018

Program Director:

Professor SK Kong

MMW609

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General Enquires for Graduate Studies:

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Ms. Jane Wu

Tel: 3943-3244

Email: janewu@cuhk.edu.hk

General Office: SC185

E-mail: msc-bbs@cuhk.edu.hk

Fax: 2603-7246

Orientation Programs

Orientation Programs organized by **Office of Student Affairs (OSA)** for **new taught programs' students**

Orientation Talks

Date: 24 August 2018 (Fri)

Guided Library Tours

Date: 27/28 August 2018 (Mon/Tue)

For further details & registration, please visit

<http://lces.osa.cuhk.edu.hk/pgso>

Registration deadline: **23 August 2018**





- End -

Objectives of MScBBS

- To provide a **training programme** to **enhance and update students' knowledge** in biochemistry and biomedical sciences;
- To give students a **comprehensive training** in the state-of-the-art **techniques and methodologies** used in biochemistry and biomedical sciences;
- To provide students the **skills on research, analytical and innovative thinking**, in addition to the **integration of theories and applications** in biochemistry and biomedical sciences.



Perspectives in Biochemical Sciences (生物化學展望)

Presents the **latest developments** and advancements in biochemical and biomedical sciences.

Examples (**One topic/week**):

- Pathogenesis and Treatment of HIV Infection and AIDS
- Stem Cells and Stem Cells Research
- Human Genome Projects
- Cancer and its Therapy
- Alcoholism
- Obesity

Topics include principles of **molecular genetics**, including the biochemical nature of DNA, genetic codes, regulatory mechanisms, mutation, DNA replication and recombination.

Techniques for proteins & nucleic acids analysis used in **forensic analysis** will be included.





Biochemical Technology I (生物化學技術 I)

Topics will include recombinant DNA technology, mammalian cell culture, **protein expression and purification, antibody engineering**, drug discovery and development processes.

Examples:

- Transgenic Animal Technology
- Advanced Forensic DNA Analysis
- Antibody Engineering
- Drug Discovery



Biochemical Technology II (生物化學技術 II)

It covers the structure of the **human genome**, the strategies that were used to **map and sequence the genome**, and details of how **genomic sequence** information is utilized for pharmacogenomics, drug discovery and diagnostics.

Examples:

- Medical Biotechnology
- Bioinformatics and Data Mining
- Gene Targeting & Gene Profiling



Methods in Biochemistry (生物化學方法)

Allow students to gain **theoretical and practical, hands-on** knowledge of various advanced research methodologies.

Examples:

- PAGE electrophoresis and Western blot analysis
- DNA electrophoresis and DNA fingerprinting
- Human cell culture & cytotoxicity assay
- PCR and real-time PCR analysis
- ELISA and flow cytometry



Clinical Biochemistry and Diseases (臨床生物化學與疾病)

Outline the **mechanisms** for controlling carbohydrate, lipid, nucleotide and amino acid pathways under different physiological and nutritional conditions.

Examples:

- Diabetes mellitus,
- Atherosclerosis
- Lipid disorders,
- Inborn errors of carbohydrates & amino acid metabolism

Biochemistry and Public Health (生物化學及公共衛生)

This course is concerned with the **biochemical impacts on environment and food** as they relate to **public health**.

Examples:

- Food additives and contaminants
- Water and sewage treatment
- Pest control
- Pollution

Management and Accreditation of Biochemistry Laboratory (生物化學實驗室管理與認證)

This aim of this course are to introduce **basic concepts** and adequate **skills of laboratory management safety** and **quality assurance** in biochemical laboratories.

Examples:

- Biochemical testing and manufacturing process
- Good laboratory practice
- Laboratory accreditation
- Method validation



CUHK Mission

To assist in the preservation, creation, application and dissemination of **knowledge** by teaching, research & public service in a comprehensive range of disciplines, thereby serving the needs and enhancing the well-being of the citizens of Hong Kong, China as a whole, and the wider world community.

CUHK Vision

To be acknowledged locally, nationally and internationally as a **first-class comprehensive research university** whose bilingual and multicultural dimensions of student education, scholarly output and contribution to the community consistently meet standards of excellence.