Bachelor of Science in

Biotechnology & Business

A joint school program offered by
The School of Science and The School of Business and Management
Our Team

Program Directorship

Prof. Kenny CHUNG
Division of Life Science
School of Science
bckchung@ust.hk

Prof. Ellick WONG
Department of Management
School of Business and Management (SBM)
mnewong@ust.hk

For program administration
Email: bibu@ust.hk | Tel: 3469 2274 | Office: Room 5466 (Lift 25/26)
BIOTECHNOLOGY

The application of techniques and processes that utilize biological systems to provide innovative solutions to complex issues in many aspects of our daily life.
Genetic Engineering

Often involves the isolation, manipulation and reintroduction of DNA into model organisms, usually to express a protein.
Examples of Biotechnology-related Industries

**Alcohol Industry - USD 1161 Billion**
The production of fermented alcoholic drinks from starch containing raw materials has been practiced for centuries.

**OPEC Revenue – USD 1027 Billion**
The petroleum industry’s interest is now in biotechnology as an alternative technology to resolve the challenges and needs of this worldwide important sector.

**Pharmaceuticals – USD 1072 Billion**
There will always be people who need medication of some sort and treatment for serious illnesses.
Biotechnology in Hong Kong

• In HKSAR Government Budget, biotechnology is one of the focused areas for development under the Innovation and Technology sector; over ten billion Hong Kong Dollars will be allocated for the development of the industry.

• HK has \textit{\textasciitilde}300 biotech-related companies
  - >70 are listed in HK Stock Exchange/GEM
  - \textasciitilde}45 biotech start-ups based in HK Science Park
  - Some companies have grown to establish manufacturing plants

• The world-renowned Karolinska Institute of Sweden has established its first overseas research facility at HKSTP
BIBU Program Highlights

• The **broad-based learning experience** helps equip students with a solid foundation of knowledge and skills to function effectively in the biotechnology industry

• **Internship opportunities and industrial visits** provide students with a global outlook on biotechnology development and applications in a business setting

• Enhance students’ creativity and critical thinking skills

• The **holistic curriculum** nurtures students to become effective managers and leaders in the biotechnology industry
BIBU Program Uniqueness

One of its kind in Hong Kong

Get essential knowledge of Biotechnology and Business in 4 years

Enjoy services / opportunities offered by BOTH School of Science and School of Business and Management
# BIBU Program Structure

A holistic 4-year curriculum covering domains in **Science** (Life Science and Biotechnology) and **Business** (Managerial Accounting, Micro/Macroeconomics, Operations Management) with a total of 124-134 credits:

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Science</td>
<td>22-25</td>
</tr>
<tr>
<td>Science Core</td>
<td>12-16</td>
</tr>
<tr>
<td>Business Core</td>
<td>29</td>
</tr>
<tr>
<td>Interdisciplinary (BIBU)</td>
<td>10-13</td>
</tr>
<tr>
<td>Biotechnology/Business Electives</td>
<td>9</td>
</tr>
<tr>
<td>English for Science/Business</td>
<td>6</td>
</tr>
<tr>
<td>University Common Core</td>
<td>36</td>
</tr>
</tbody>
</table>

**Exclusive for BIBU Students**

- BIBU1010 – Biotechnology and Business Seminar
- BIBU4820 - Biotechnology Entrepreneurship and Business Operations
- BIBU4830 – Biotechnology Management
- BIBU4840/4850 – BIBU Capstone Project

Students may reuse a maximum of 9 credits of these courses to count towards both major and University Common Core requirements.
<table>
<thead>
<tr>
<th>Country</th>
<th>University/MCI Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Monash University</td>
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<tr>
<td></td>
<td>France Ecole Polytechnique</td>
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<tr>
<td></td>
<td>Malaysia Universiti Putra Malaysia</td>
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<td></td>
<td>Russia National Research University</td>
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<td></td>
<td>Higher School of Economics</td>
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<td></td>
<td>Taiwan National Taiwan University</td>
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<tr>
<td>Austria</td>
<td>MCI Management Center Innsbruck</td>
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<td>Germany</td>
<td>University of Stuttgart</td>
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<td>Mexico Tecnologico de Monterrey</td>
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<td></td>
<td>Singapore National University of</td>
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<td></td>
<td>Singapore</td>
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<td></td>
<td>Netherlands University of Groningen</td>
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<tr>
<td>Canada</td>
<td>University of Toronto</td>
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<tr>
<td>Ireland</td>
<td>Trinity College Dublin</td>
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<td></td>
<td>Norway University of Bergen</td>
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<td></td>
<td>South Korea Seoul National University</td>
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<td>Turkey Koc University</td>
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<tr>
<td>China</td>
<td>Peking University</td>
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<td>Japan</td>
<td>Kyoto University</td>
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<td>Philippines</td>
<td>Ateneo de Manila University</td>
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<td>Sweden</td>
<td>Lund University</td>
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<td></td>
<td>United Kingdom University College</td>
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<td></td>
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<td>Denmark</td>
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<td></td>
<td>Poland Jagiellonian University</td>
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<tr>
<td>Switzerland</td>
<td>ETH Zurich</td>
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<tr>
<td>United States</td>
<td>Cornell University</td>
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</tbody>
</table>

**Exchange Program**

HKUST has approximately 230 exchange partners across 36 countries around the world. BIBU Students can join exchange programs offered by both School of Science & School of Business and Management.
Enrichment Activities

To help students develop a global perspective as well as sharpen their interpersonal skills, the School of Science (SSCI) and the School of Business and Management (SBM) of HKUST run a wide variety of enrichment activities such as international exchange, career training and internship program, and social service projects.

**BIBU students are eligible to:**
- sign up for professional seminars and co-curricular programs organized by both Schools;
- join either School’s international exchange program; and
- access the job banks and career services provided by both Schools.

**SSCI:** [http://advise.science.ust.hk/sfs](http://advise.science.ust.hk/sfs)

Career Prospects
A Comprehensive experience prepares BIBU students to excel in any career path they aspire to

Potential Employers
• Multinational pharmaceutical
• Bioproduct vendors
• Biotech service providers
• Medical device manufacturers
• Consulting firms focusing on the biotech/pharma industries

Postgraduate Studies
Canada
University of British Columbia
M. Sc. in Experimental Medicine

United Kingdom
London School of Economics and Political Science
M. Sc. International Health Policy

Hong Kong
The University of Hong Kong
Master of Public Health
JUPAS Direct Entry (JS5811)
HKGSE applicants with either Biology or Chemistry

International Qualifications
Applicants with Int’l Qualifications (IBDP, GCEAL, SAT, etc.) with at least one senior level subject from: Biology / Chemistry / Mathematics

Transfer from HKUST Science (Group B – JS5103) or any Business Programs
• SSCI-B/SBM students may choose to major in BIBU via major selection exercise after completing the 1st year of study
• An option for students without HKDSE Biology or Chemistry
Admission Requirements – JUPAS (JS5811)

Minimum Requirements

<table>
<thead>
<tr>
<th>Subject</th>
<th>Minimum Level Requirement</th>
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</thead>
<tbody>
<tr>
<td>English Language</td>
<td>4</td>
</tr>
<tr>
<td>Chinese Language</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics (Compulsory Module)</td>
<td>3</td>
</tr>
<tr>
<td>Liberal Studies</td>
<td>2</td>
</tr>
<tr>
<td>Elective 1</td>
<td>3</td>
</tr>
<tr>
<td>Must be Biology or Chemistry</td>
<td></td>
</tr>
<tr>
<td>Elective 2</td>
<td>3</td>
</tr>
<tr>
<td>Any Category A subjects or M1/M2</td>
<td></td>
</tr>
</tbody>
</table>

JUPAS score calculation

**Best 6 subjects with weighting**

- English & Math (Comp) x 2
- Best Elective: Biology / Chemistry x 1.5

<table>
<thead>
<tr>
<th>Subject 1</th>
<th>Weighted English Language</th>
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</thead>
<tbody>
<tr>
<td>Subject 2</td>
<td>Weighted Mathematics (Compulsory Module)</td>
</tr>
<tr>
<td>Subject 3</td>
<td>Weighted Best Elective: Biology OR Chemistry</td>
</tr>
<tr>
<td>Subject 4, 5 &amp; 6</td>
<td>Next best 3 subjects</td>
</tr>
<tr>
<td></td>
<td>Can be Core OR any Category A subjects</td>
</tr>
</tbody>
</table>
Further Information

Tel: (852) 2358 5065
Fax: (852) 2358 1464
Email: ugscience@ust.hk
Website: http://bibu.ust.hk & http://science.ust.hk