



Department of
Biomedical Engineering
The Chinese University of Hong Kong

TOWN HALL MEETING

(Term 1, 2024-25)

Prof. Aaron Ho

BME Department Chairperson

29 November 2024 (Fri)

11:30 AM – 12:30 PM

(BME Website => Students => Undergraduate Students => Town Hall Meeting)



<http://www.bme.cuhk.edu.hk>



CUHK Biomedical Engineering



BMEDEPT



CUHK Biomedical Engineering



Regular Town Hall Meeting

Town Hall meetings will be held every semester to ensure good communication with students in BME.



UG Student Representatives in 2024-25

Year	Name	Sex	Email
1	LAM Pak Ho	M	1155234142@link.cuhk.edu.hk
1	NG Tsz Fung	M	1155235863@link.cuhk.edu.hk
2	CHEUNG Lok Chi	F	1155205809@link.cuhk.edu.hk
2	HO Si Nuo	F	1155206888@link.cuhk.edu.hk
3	LAM Weng Kei	F	1155182089@link.cuhk.edu.hk
3	ZHAI Xueer	F	1155174880@link.cuhk.edu.hk
4	CHOI Hok Yee	F	1155174282@link.cuhk.edu.hk
4	TANG Wing Si	F	1155175542@link.cuhk.edu.hk

Agenda

- Programme Outcomes
- Lab Safety Guidelines
- Summer Internship Opportunities
- Stream Preference and Declaration



Programme Outcomes

Programme Outcome	
PO 1	an ability to master the required knowledge of mathematics, science, and engineering and apply them appropriately to the BME discipline in general and/or to a specialized BME area
PO 2	an ability to design and conduct experiments, collect data on humans and other biological specimens, and to analyze and interpret data to address health-related issues
PO 3	an ability to design a system, component or process to meet desired needs within realistic constraints, and to develop innovative technologies to serve the healthcare needs of society
PO 4	an ability to identify, formulate and solve engineering problems critically
PO 5	an ability to use the techniques, skills, and modern engineering tools necessary for BME practice
PO 6	an ability to use the computer/IT tools relevant to the BME discipline along with an understanding of their processes and limitations
PO 7	an ability to communicate effectively
PO 8	an ability to demonstrate leadership, to manage projects, and to function on multi-disciplinary teams
PO 9	an ability to understand professional and ethical responsibility, and the impact of engineering solutions in a global and social context, especially the importance of health, safety and environmental considerations to both workers and the general public
PO 10	a readiness to engage in lifelong learning to stay abreast of contemporary issues, and a capacity to acquire new knowledge and skills across disciplinary boundaries

Programme Outcomes

Matching between the Programme Outcomes and the HKIE Graduate Attributes

HKIE Graduate Attributes	BME Programme Outcomes
a) an ability to apply knowledge of mathematics, science, and engineering appropriate to the degree discipline	PO1
b) an ability to design and conduct experiments as well as to analyze and interpret data	PO2
c) an ability to design a system, component or process to meet desired needs within realistic constraints, such as economic, environmental, social, political, ethical, health & safety, manufacturability & sustainability	PO3
d) an ability to function on multi-disciplinary teams	PO8
e) an ability to identify, formulate and solve engineering problems	PO4
f) an ability to understand professional and ethical responsibility	PO9
g) an ability to communicate effectively	PO7
h) an ability to understand the impact of engineering solutions in a global and social context, especially the importance of health, safety and environmental considerations to both workers and the general public	PO9
i) an ability to stay abreast of contemporary issues	PO10
j) an ability to recognize the need for, and to engage in lifelong learning	PO10
k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice appropriate to the degree discipline	PO5
l) an ability to use the computer/IT tools relevant to the discipline along with an understanding of their processes and limitations	PO6

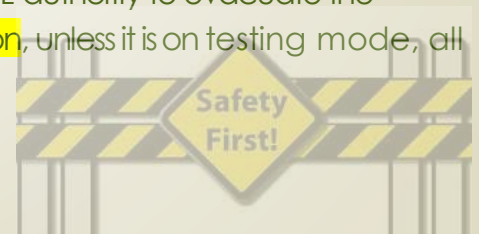
Lab Safety Guidelines

1. General safety

- a) Users shall read and follow the general safety guidance issued by the University Safety Office, and must be trained properly by the respective home department before they are granted access right to the lab.
- b) Experimental processes must be granted with safety approvals by the University Safety Office. Processes without safety approval clearance are banned in the lab.
- c) Upon entering the laboratory, place coats, books, and other paraphernalia in specified locations – never on bench tops.
- d) Wear appropriate clothing while working in laboratory:
 - Goggle (if needed)
 - A full length, fastened lab coat (replace with a new one when in bad condition)
 - Gloves
 - Full length slacks, trousers or jeans. No shorts
 - Shoes with closed toes and heels to protect your feet
 - Tie hair back when too long

Remove protective clothing before leaving for non-laboratory areas, e.g. desk area, washroom, cafeteria, etc.

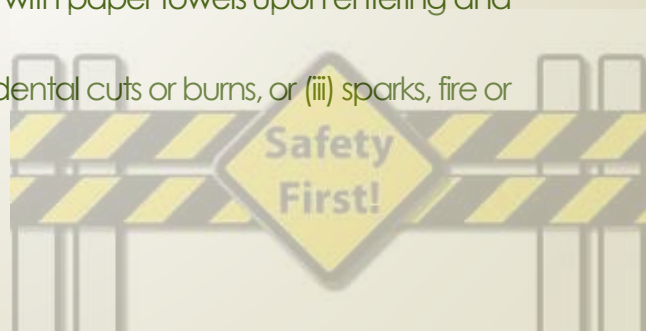
- e) Never apply cosmetics or handle contact lenses in laboratory.
- f) Do not smoke, eat or drink in the laboratory. These activities are absolutely prohibited. No food is stored in laboratory.
- g) In an emergency, the technician and the fire warden have TOTAL authority to evacuate the laboratory. Evacuation orders MUST be followed. If the fire alarm is on, unless it is on testing mode, all personnel in the laboratory must evacuate immediately.
- h) Be sensible and be alert at all times. The life you save may be yours.



Lab Safety Guidelines

2. Work environment

- a) Keep laboratory door closed to prevent contamination from air currents.
- b) If the equipment is equipped with logbook or booking sheet, fill in before you use the equipment.
- c) Do not use any unfamiliar equipment without the approval of technician.
- d) If you have to leave your experiment unattended, stick a label with name and expected end time to alert others.
- e) Transportation of materials between laboratories should not be done across the desk area. No glove hands on all door handles or switches. (i.e. Avoid taking laboratory materials into office areas. Take off your gloves before you touch these items.)
- f) Reagents should be clearly labeled with (i) Name of chemical / reagent, (ii) Concentration, (iii) Name of user, (iv) Date.
- g) At the end of each session:
 - (i) Clean your working area (bench, balance, etc.)
 - (ii) Dispose all trashes to the correct trash bin
 - (iii) Store all personal glassware in your cabinet / designated tray
 - (iv) Return communal materials (equipment, chemical reagents, etc.) to their original position (should be returned clean)
- h) Wash your hands with liquid detergent and dry them with paper towels upon entering and prior to leaving the laboratory.
- i) Report to technician immediately for: (i) spills, (ii) accidental cuts or burns, or (iii) sparks, fire or explosion.



Lab Safety Guidelines

3. General chemical safety

- a) Before conducting any experiment with potential hazard, permission should be sought from his / her supervisor. They should double check before ordering any dangerous / toxic chemicals or bio-chemical materials, and ensure that sufficient hazard preventive measures are in place to deal with any emergence. Processes that may lead to safety hazards can only be conducted during the official opening hours.
- b) Processes that may lead to safety hazards can only be conducted during the official opening hours. Processes that will not lead to safety hazards may be conducted outside the official opening hours. However, permission shall be granted by the corresponding supervisor. No work alone is allowed outside the official opening hours. Users with permission shall have an experimental buddy throughout the whole process.
- c) Users must read the MSDS of all chemicals, solvents, and gases carefully before use.
- d) Chemicals must be stored and used as suggested by the MSDS. Users must be trained on how to handle chemical exposure and inhalation.
- e) Any work involving combustibles, volatile organic compounds, toxic gases, airborne particulates and unpleasant odours must be conducted in ventilating hoods.
- f) Chemical and solvent waste must be collected by using the waste bottles provided, and must not go down the drain. Gloves and tissues contaminated with chemicals and solvents shall be disposed into chemical bins with covers. Keep a record to technician if you add in chemical waste to the following container:
 - (i) Sulphuric acid / Hydrogen Peroxide waste,
 - (ii) Nitric Acid / Nitrate waste,
 - (iii) Alkaline waste, or
 - (iv) Organic waste. Disposal of these wastes to drain is strictly prohibited.



Lab Safety Guidelines

4. General biological safety

- a) Always use the appropriate pipetting devices.
- b) Bench and Biosafety Cabinet should be tidied and cleaned before and after use.
- c) Materials handling cell culture (e.g. pipette tips, culture plates) should be disposed to the biological waste bin for further treatment. Liquid cultures should be disinfected by 1% sodium hypochlorite for at least 30 minutes before disposing to the sewer.

5. General biological safety (Lasers)

For Classes 1, 1M, 2, 2M, 3R, 3B & 4 laser products

- a) Never view directly into a laser beam.
- b) Never aim a laser beam at a person's eyes.

Additional precautions for Classes 3R, 3B & 4 laser products

- a) Follow the guidelines listed in the operation manuals of laser products.
- b) Wear suitable protective goggles and clothing when operating or servicing medium or high power laser products.
- c) Switch on laser warning signages
- d) Seal laser curtain along the optical table



Lab Safety Guidelines

BME Computer Lab ERB1122



- For BME students ONLY
- **Opening Hours - 8:45 AM – 5:30 PM from Monday to Friday**
- Use your CU Link Card to access the computer lab (use the main door ONLY)
- Use O365 account to login the computer
- **DO NOT attempt to repair any computer or change the settings.** Report all problems related to the system/software/computer to our technician Nelson (email: ptso@cuhk.edu.hk; Tel: 3943 8291)
- **Follow all the “Rules and Regulations” posted on the whiteboard of the computer lab**

Lab Safety Guidelines

BME Computer Lab ERB1122

Please set the printer driver, check balance of printing service
<http://www.bme.cuhk.edu.hk/computerlabnotice.pdf>

Check the availability of the computer lab
<http://www.bme.cuhk.edu.hk/computerlab>

(*If time sessions are booked, you are not allowed to stay at the lab)

Printing service is provided for BME students:

1. HK\$0.2 per sheet with white/black printing (A4)
2. HK\$2 per sheet with color printing (A4)
3. \$40 free quota per year per student, maximum accumulation to \$80 for each student.

For year 1(new) student, \$40 printing quota will be automatically allocated in your account. For other students, they need to take HKD40 coupon at ERB1102A from 1st semester starting to end of Sept every year.



Summer Internship Opportunities

1. **BME Overseas Research Internship**
2. **Local Internship**
 - **BME Undergraduate Research Internship (year-long)**
 - **Faculty Undergraduate Summer Research Internship**
 - **Government, Hospitals & Companies**



Summer Internship Opportunities

1. BME Overseas Summer Research Internship (Summer 2025, 8-10 weeks)

Oversea Institutions:

- Monash University, Melbourne
- National Tsing Hua University, Taiwan
- New Jersey Institute of Technology, America
- New Zealand College of Chiropractic, New Zealand
- University of Washington, America
- All information has been uploaded to our Department's website
http://www.bme.cuhk.edu.hk/new/overseas_internship.php

Summer Internship Opportunities

1. BME Overseas Summer Research Internship (Summer 2025, 8-10 weeks)

Interested students should complete the attached application form and submit it with all required documents to the department at bmeinfo@cuhk.edu.hk by **20 December 2024 (Fri)**.

***** Late applications will not be considered *****

Important Date

Application Deadline	20 December 2024
Interview by the BME Panel	9 - 10 January 2025
Matching and Nomination to the Hosts	11 - 24 January 2025
Interview and Decision by the Hosts	25 January – 7 February 2025
Official Notification of Acceptance	By the end of February 2025

Summer Internship Opportunities

1. BME Overseas Summer Research Internship (Summer 2025, 8-10 weeks)

Information Q&A Session has been scheduled on
13 December 2024 (Fri). Details are as below:

<u>Information Q&A Session</u>	
Date	13 December 2024 (Fri)
Time	11:30 AM - 12:30 PM(Hong Kong Time)
Venue	ERB Room 1122 (Computer Lab) or Join on <u>ZOOM</u> if you are not able to join in person The details will be provided in the announcement email soon.

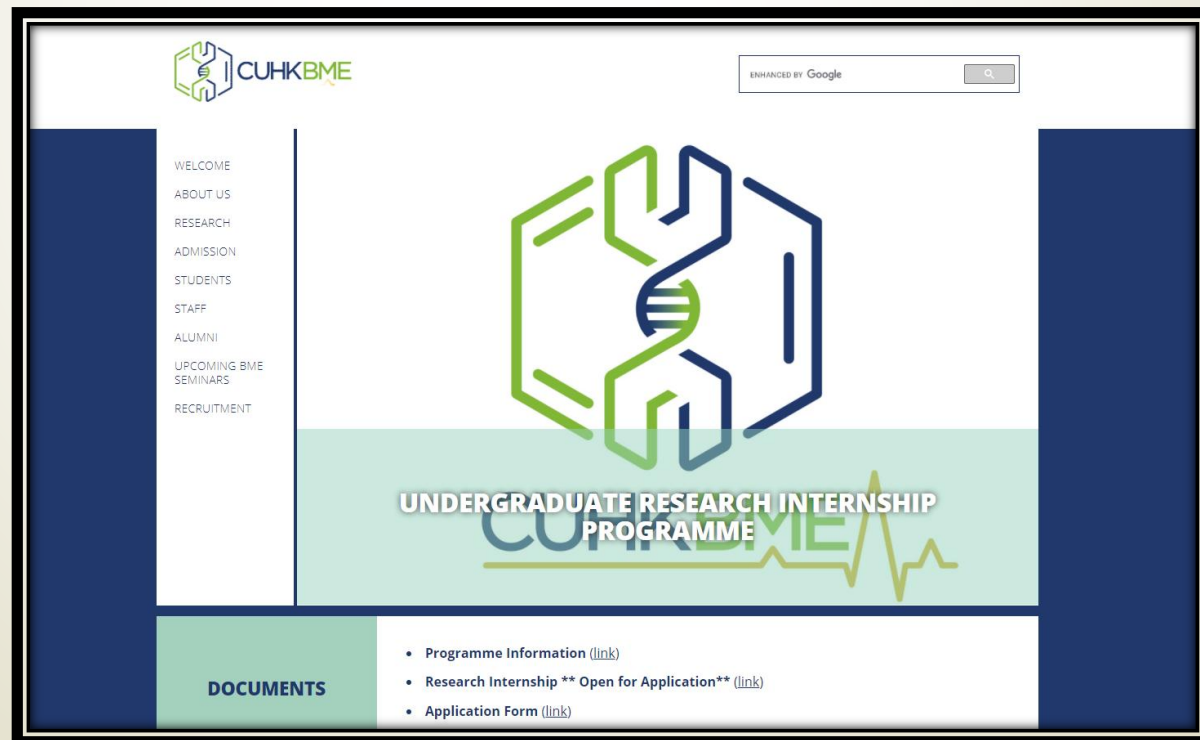
Summer Internship Opportunities

2. Local Internship

BME Undergraduate Research Internship (year-long)

http://www.bme.cuhk.edu.hk/new/ug_internship.php

BME Undergraduate students with a cumulative GPA of 2.8 or above are eligible to apply (Final Year students are **NOT allowed** to join the programme during the summer)



Summer Internship Opportunities

2. Local Internship

Faculty Undergraduate Summer Research Internship

<https://www.erg.cuhk.edu.hk/erg/SummerResearchInternship>

Non-final year undergraduate students with a cumulative GPA of 3.4 or above are eligible to apply.



The screenshot displays the website for the Faculty Undergraduate Summer Research Internship. The navigation bar includes links for Home, About, Education, Admissions, People, Research, and News, along with social media icons. The main banner features the text "INNOVATION FOR LIFE" on a green background, flanked by images of students in a classroom and a group of students working on a laptop. The "EDUCATION" sidebar lists links for Departments, Academic Programmes, Teaching and Learning, Information for Students (highlighted in green), and ELITE Stream. The main content area is titled "Undergraduate Summer Research Internship" and includes sections for the Objective and The Scheme.

EDUCATION

- > DEPARTMENTS
- > ACADEMIC PROGRAMMES
- > TEACHING AND LEARNING
- > **INFORMATION FOR STUDENTS**
- > ELITE Stream

Undergraduate Summer Research Internship

Objective

The Faculty Undergraduate Summer Research Internship programme is launched to offer CUHK engineering undergraduate students with funding support to undertake a research project under the supervision of professors in summer. The objectives are to give students exposure to research environment, and grooms them for graduate studies and overseas summer research schemes.

The Scheme

1. Non-final engineering year undergraduate students with a CGPA of 3.4 or above are eligible.
2. Students who are planning and/or is going to participate summer programmes; or take summer courses overseas for more than three weeks accumulatively; or need to take more than three weeks of accumulated leave are NOT eligible for the internship programme.

Summer Internship Opportunities

2. Local Internship

Government, Hospitals & Companies

- CUHK Medical Center
- Gleneagles Hospital
- Hong Kong Adventist Hospital (Stubbs Road)
- Hong Kong Adventist Hospital (Tsuen Wan)
- Hospital Authority
- St Paul's Hospital
- GE Medical Systems HK Ltd
- Others



Stream Preference and Declaration

Students may choose not to specialize in any stream or to specialize in one of the three streams and complete **at least 12 units from the elective courses listed in the study scheme**, at most one elective at 2000 or below level, plus BMEG4998/ESTR4998 and BMEG4999/ESTR4999, prescribed by the stream.

Important Date

By 9 February 2025 (Fri)

Survey on Stream Preference & BMEG Elective Course Offering in the next academic year 2025-26. (For Year 1 Senior-year entry and Year 2 or above students)

<https://cloud.itsc.cuhk.edu.hk/webform/view.php?id=13700210>

By 31 May 2025 (Fri)

Students who are expected to graduate in Term 2, 2024-25 ** and would like to declare stream, please complete the form

<https://cloud.itsc.cuhk.edu.hk/webform/view.php?id=13700214>

A Certified Letter for the BME Stream will be issued to students who have fulfilled the course requirement of the stream by August 2025.

Elective Course Offering 2022-25

Course Code	Stream	Course Title	Unit(s)	2022-23	2023-24	2024-25
BMEG3102	BIIM	Bioinformatics	3	Term 2	Term 2	Term 2
BMEG3103	MIB/ BIIM	Big Data in HealthCare	3	Term 1	Term 1	Term 1
BMEG3105	BIIM/MCTE	Data Analytics for Personalized Genomics and Precision Medicine	3	Term 1	Term 1	Term 1
BMEG3130	MIB	Tele-Medicine and Mobile Healthcare	3	Term 1	X	X
BMEG3140	MCTE	Molecular and Cellular Engineering Laboratory	3	Term 1	Term 1	Term 1
BMEG3210	MIB/MCTE	Biofluids	3	X	Term 2	X
BMEG3330	MIB	Neuroengineering	3	Term 2	Term 2	Term 1
BMEG3420	MIB	Medical Robotics	3	Term 2	X	Term 2
BMEG3440	MIB/BIIM/MCTE	Global Engineering Medical Innovation	3	Term 2	Term 2	Term 2
BMEG3910	-	Undergraduate Research in Biomedical Engineering	3	Term 1/2	Term 1/2	Term 1/2
BMEG4103	BIIM	Biomedical Modelling	3	X	X	X
BMEG4220	MIB	Body Sensor Networks Wearable Biomedical Devices and Personalized	3	X	X	Term 1
BMEG4320	BIIM	AI & Imaging for Biomedical Engineering	3	X	Term 1	X
BMEG4330	MIB/BIIM	Advanced Imaging and Spectroscopy Techniques in Biomedicine	3	X	X	X
BMEG4410	MIB/MCTE	BioMEMS	3	X	Term 2	X
BMEG4450	MIB/MCTE	Bionanotechnology	3	Term 2	Term 2	Term 2
BMEG4510	MCTE	Biomolecular Engineering	3	Term 2	X	Term 2
BMEG4520	MIB/BIIM/MCTE	Cardiovascular Engineering	3	Term 2	Term 2	X
BMEG4530	MCTE	Musculoskeletal Tissue Engineering	3	X	X	Term 2

Programme Curriculum Updates

Effective from 2025-26 intake

1. Introduction of the new 2-unit major required course (2000 level) about **Bionic Human and the Future of Being Human**
 - The course broadens students' perspectives on nature, science and technology. Students will learn to appraise with a scientific attitude and to evaluate human's role in being part of nature and the impact of science and technology on modern life.
 - Sharing teaching with a new UGEB course
 - Students taken UGEB/BMEG1217 Bionic Human and the Future of Being Human may consider applying for course substitution (subject to approval by the Department and Faculty).
2. The units of BMEG2602 Hospital Experience and Engineering Practicum will be increased from 1 unit to 2 units.

Programme Curriculum Updates

Effective from 2025-26 intake

3. After the creation of the new major required course and revision of the unit for BMEG2602, the major requirement will be changed as below:
 - Major required courses: increased from 33 units to 36 units
 - Major elective courses: decreased from 15 units to 12 units
 - Stream requirement: no change (Students may choose not to specialize in any stream or to specialize in one of the three streams and complete a minimum of 12 units of courses, at most one elective at 2000 or below level, plus BMEG4998 and 4999[e], prescribed by the stream.)
 - These amendments will not revise the total required units by the BME program, i.e. 75 units.

Collect Feedback from BME students:

1. Do you have any comments on the above proposal?
2. Any comments on adding the new course to the existing study scheme which will be included in the calculation of Major GPA.

CUHK BME Joint Summer Course (Subject to approval by various governing committees)

BMEG3920 Global Innovation and Collaboration in Biomedical Engineering: Big Health Solutions for a Healthier Future (3 credit)

Three Participating Campuses (each campus recruits up to 10 students)

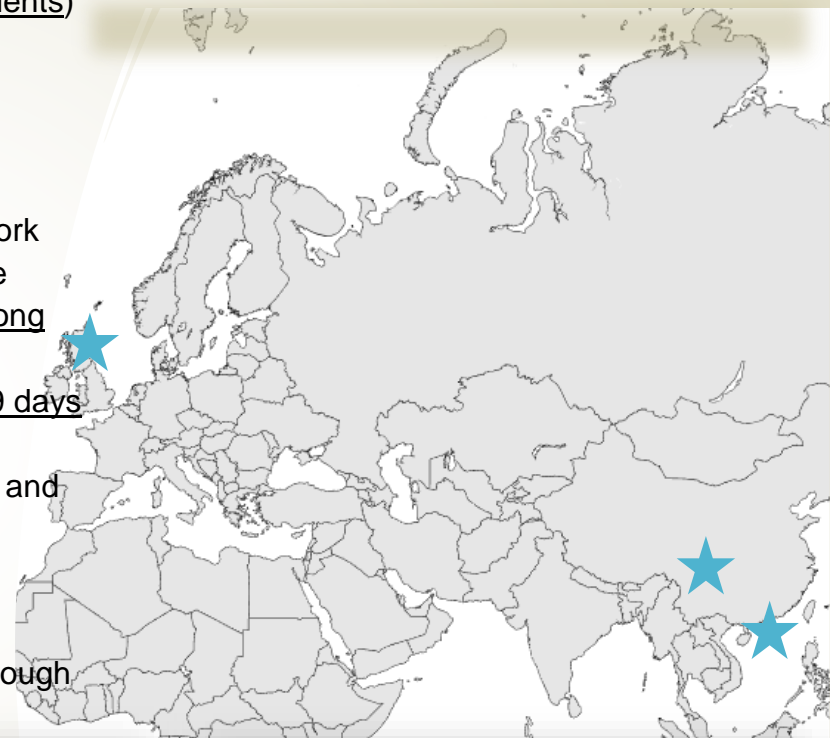
- The Chinese University of Hong Kong, HK
- Glasgow College, UESTC (Chengdu and Hainan), CN
- University of Glasgow, UK

Course Highlights

- **International Collaboration:** Students from all three campuses work together, fostering global perspectives and cross-cultural exchange
- **Dual-Locale Format:** The course is conducted in Chengdu and Hong Kong, scheduled for Summer 2025
- **18-day program** with hands-on projects and interactive learning (9 days in Chengdu and 9 days in Hong Kong)
- **Comprehensive Curriculum:** Combines both classroom teaching and project-based learning

Extracurricular Activities:

- **Cultural Tours:** Discover and experience local traditions
- **Company Visits:** Gain industry exposure and practical insights through site visits in the Greater Bay Area and the Chengdu-Chongqing Economic Circle



香港中文大學
The Chinese University of Hong Kong



University
of Glasgow



Q & A Session

Follow us for BME-updated news!



<http://www.bme.cuhk.edu.hk>



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