香港中文大學
The Chinese University of Hong Kong

Department of
Biomedical Engineering
The Chinese University of Hong Kong

TOWN HALL MEETING
Make BME Great Together

http://www.bme.cuhk.edu.hk/new/files/undergraduatest
d/TownHallMeeting18Mar2022.pdf

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

Prof. Raymond Tong

18 March 2022
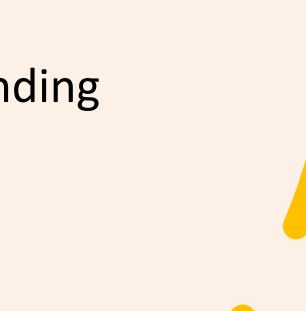
http://www.bme.cuhk.edu.hk

BMEDEPT MeWe CUHK BME

CUHK Biomedical Engineering

CUHK Biomedical Engineering

Agenda

1. Programme Outcome & HKIE Required Outcomes
2. Updates on Summer Exchange and Internship
3. Stream Declaration of Final Year Graduating Students
4. Students' Stream Preference
5. Proposed Elective Course Offering in 2022-23
6. Policy of Course Cancellation due to Low Enrollment Rate
7. Graduate Employment Survey
8. Student Ambassadors Scheme
9. Biomedical Engineering Outstanding Achievement Scholarships
10. BME Society
11. BME Activities

Programme Outcome & HKIE Required Outcomes (1)

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 Outcome & HKIE Required Outcomes (2)

Matching between the Programme Outcomes and the HKIE Required Outcomes

HKIE's 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

Programme Outcome & HKIE Required Outcomes (3)

Matching between the Programme Outcomes and the HKIE Required Outcomes

Example:

Programme Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
	Apply knowledge of math, science & engineering to BME	Experiment on humans & biological specimens, analyze & interpret data	Innovate a system, part or process to meet desired needs within constraints	Identify, formulate, & solve engineering problems critically	Use techniques, skills, & modern engineering tools for BME practice	Use IT tools relevant to BME with an understanding of their limitation	Communicate effectively	Lead, manage projects, & function on multi-disciplinary teams	Understand ethics, global, societal & professional responsibilities	Learn new knowledge & skills across disciplines & continuously
HKIE Graduate Attributes	A	B	C	E	K	L	G	D	F, H	I,J
REQUIRED COURSES										
BMEG2001 Intro to BME	✓	✓	✓	✓	✓					
BMEG2011 BME Lab & Hospital Experience	✓	✓	✓	✓	✓	✓	✓	✓		

Updates on Summer Exchange and Internship

Overseas Summer Research Internship

Overseas University	No. of BME Students who have confirmed to be accepted by the oversea hosts (as of 17 March 2022)
New Jersey Institute of Technology, USA	1
National Taiwan University, Taiwan	1
Chang Gung University, Taiwan	1
University of Limoges, XLIM Research Institute (CNRS), France	2

>> apply & follow-up on visa application ASAP

Local Summer Industrial Internships

More may be available later in April/May, e.g. EMSD, Johnson & Johnson's etc.

START to PREPARE your CV for the potential Interview by companies

Please be alerted of our email notification

Placement & Internship Programme via CINTEC

https://pip.cintec.cuhk.edu.hk/web/

Placement & Internship Programme via Career Planning and Development Centre (CPDC)

https://cpdc.osa.cuhk.edu.hk/

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.
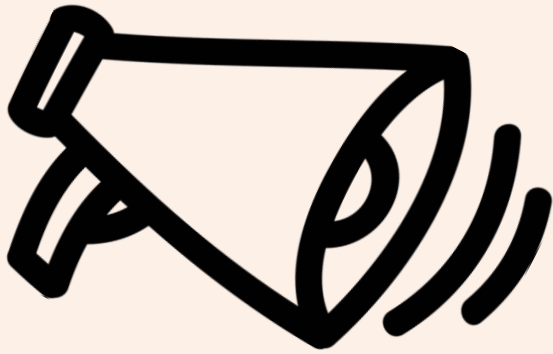
Stream Declaration for BME Final Year Graduating Students

i.e. Students who are expected to be graduated in 2021-22 Term 2

Stream Declaration Form:

https://forms.gle/8SZ51GFT7bg3EAAP6
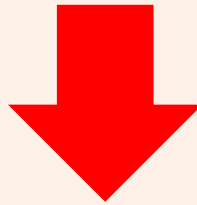
Please complete the online google form **by 10 June 2022 (Friday)**

** Certified Letter for BME Stream will be issued to students who have fulfilled the course requirement of stream of their admission year

香港中文大學生物醫學工程學系
Department of Biomedical Engineering
The Chinese University of Hong Kong

CUHKBME

1 August 2020

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

Stream of Specialization

    This is to certify that <Student Name> (Student ID: XXXXXXXXX) has fulfilled all the requirements for the stream of specialization in **Medical Instrumentation and Biosensors** for the B.Eng. degree in Biomedical Engineering.

For verification of student data, please send request to bmeinfo@cuhk.edu.hk or contact us (+852) 3943 1935.

香港中文大學生物醫學工程學系
Department of Biomedical Engineering
The Chinese University of Hong Kong

CUHKBME

1 August 2020

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

Stream of Specialization

    This is to certify that <Student Name> (Student ID: XXXXXXXXX) has fulfilled all the requirements for the stream of specialization in **Biomedical Imaging, Informatics and Modeling** for the B.Eng. degree in Biomedical Engineering.

For verification of student data, please send request to bmeinfo@cuhk.edu.hk or contact us (+852) 3943 1935.

Yours faithfully,

Professor Raymond K.Y. Tong
Chairman
Department of Biomedical Engineering
The Chinese University of Hong Kong

香港中文大學生物醫學工程學系
Department of Biomedical Engineering
The Chinese University of Hong Kong

CUHKBME

1 August 2020

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

Stream of Specialization

    This is to certify that <Student Name> (Student ID: XXXXXXXXX) has fulfilled all the requirements for the stream of specialization in **Molecular, Cell and Tissue Engineering** for the B.Eng. degree in Biomedical Engineering.

For verification of student data, please send request to bmeinfo@cuhk.edu.hk or contact us (+852) 3943 1935.

Report on Survey Results for Stream Preference & Elective Course Offering in 2022-23

<u>Survey on Preference of Stream & BMEG Elective Courses in 2022-23</u>

- 54 students responded to the survey

No. of Response: 54

- Year 1 (Senior-year Entry)
- Year 2
- Year 2 (Advanced Standing)
- Year 3
- Year 4 or above (students who have extended graduation term to 2022-23)

2, 4%
21, 39%
27, 50%
4, 7%
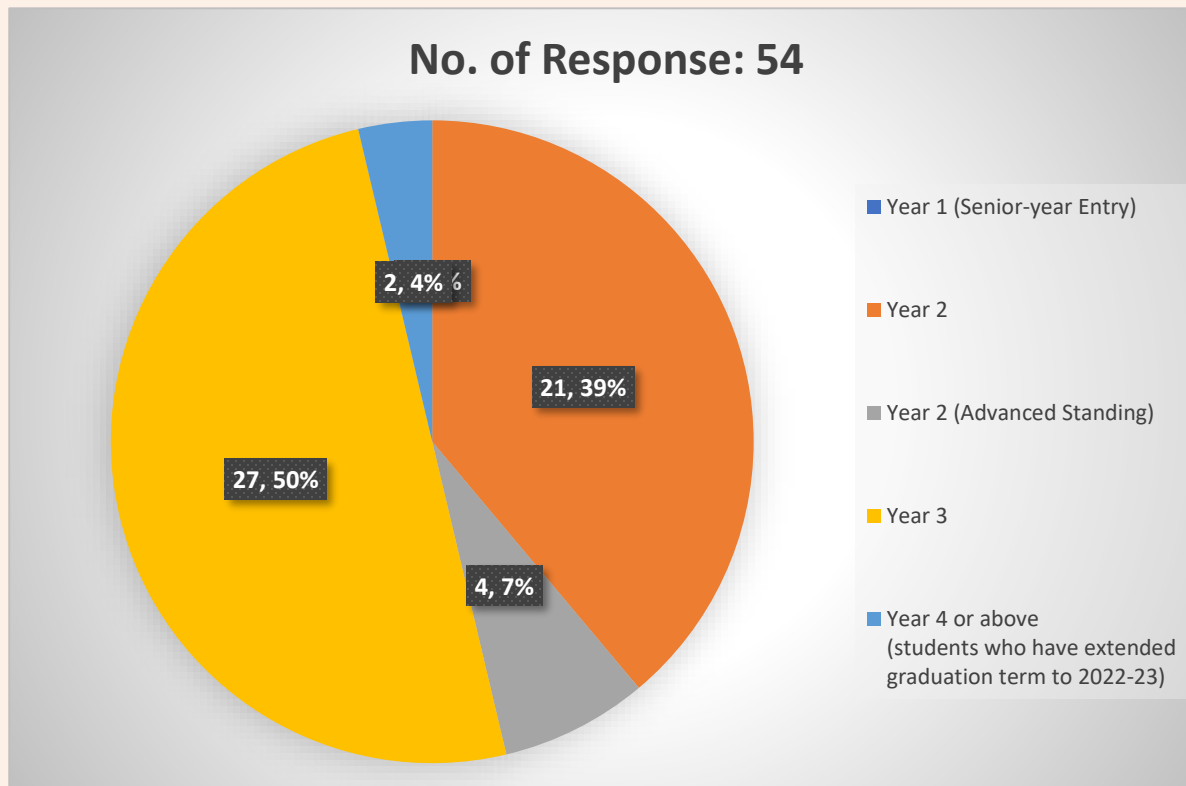
Students' Stream Preference:

- 1st - Molecular, Cell and Tissue Engineering (MCTE)

- 2nd - Medical Instrumentation and Biosensors (MIB)

- 3rd - Biomedical Imaging, Informatics and Modeling (BIIM)

Stream Preference
No. of Response: 54

Medical Instrumentation and Biosensors

Biomedical Imaging, Informatics and Modeling

Molecular, Cell and Tissue Engineering

I do not have any stream preference and do not want to declare any stream.

27%
19%
50%
4%
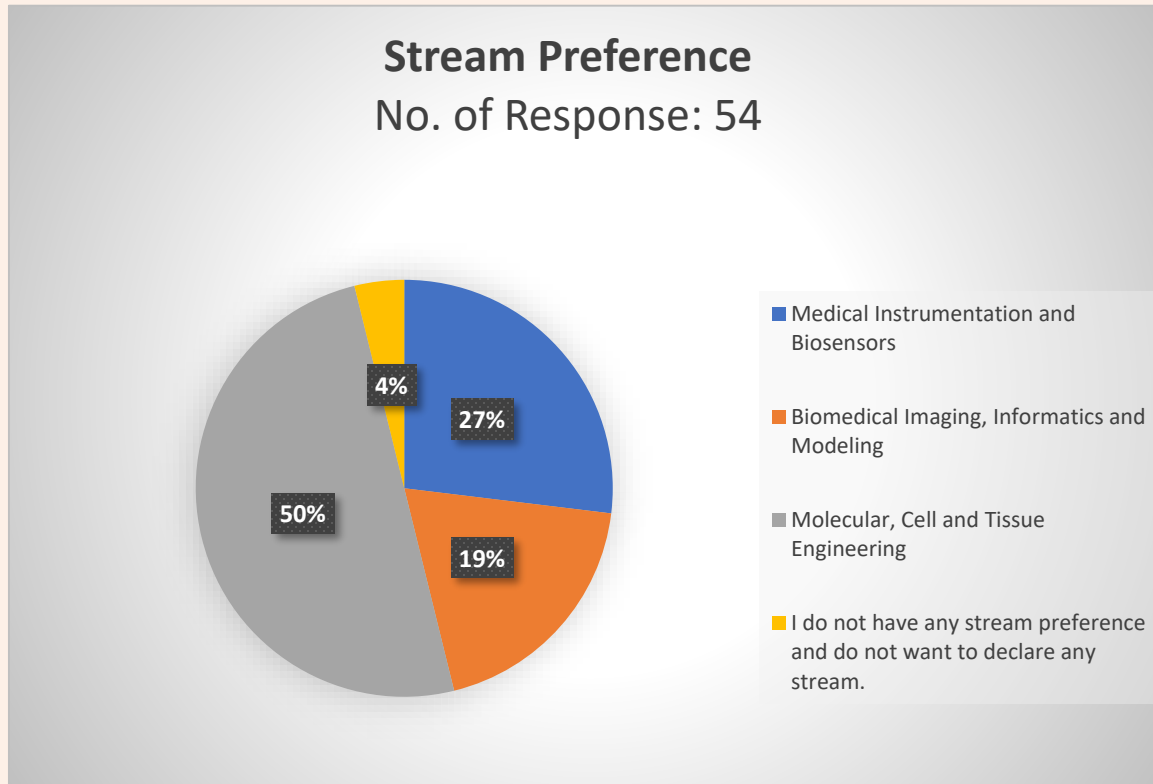
Students' Preference of BMEG Elective Course offering in 2022-23

Survey on Preference of BMEG Elective Courses in 2022-23
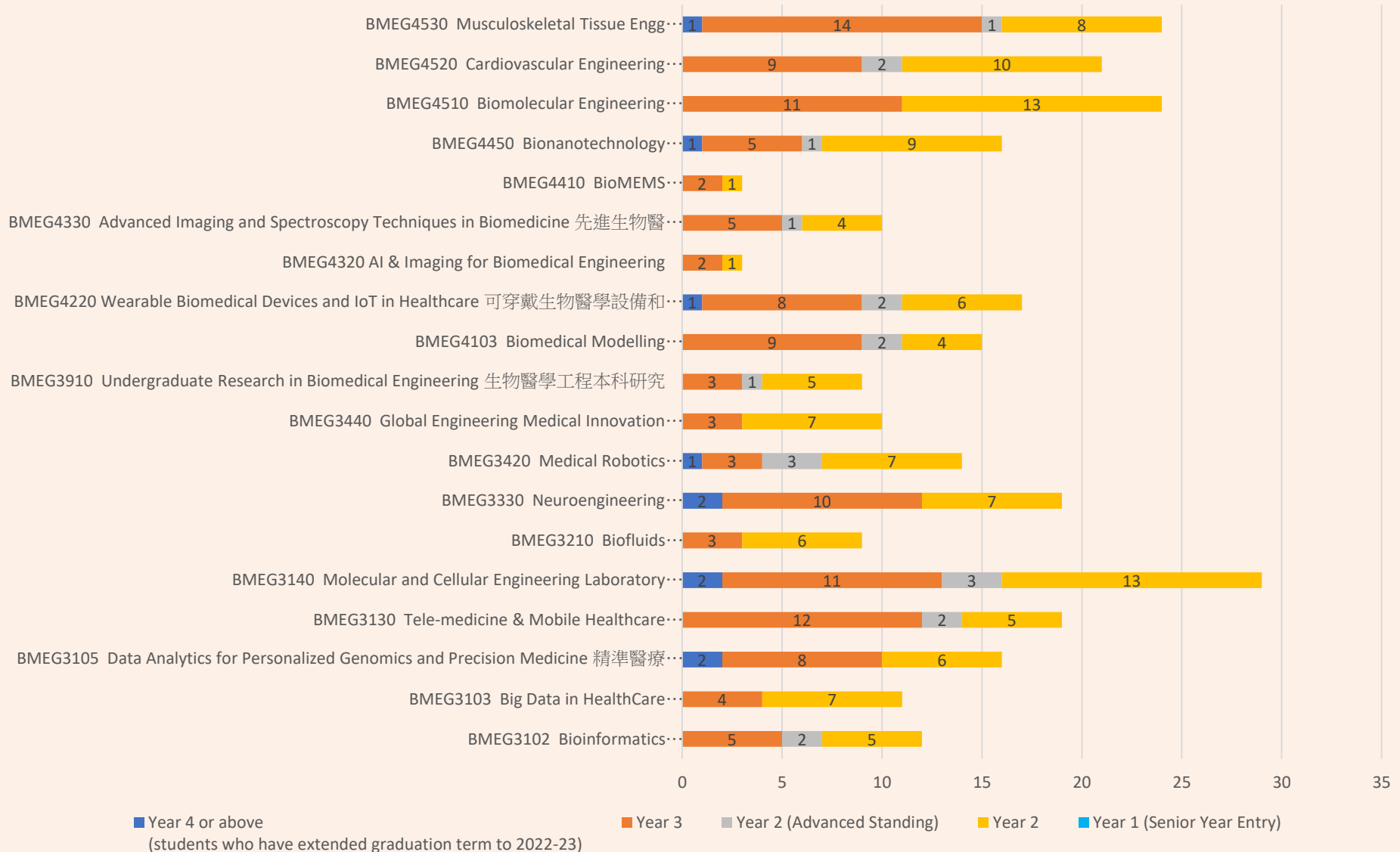
Proposed BMEG elective course offering in 2022-23 for consideration
*TBC – subject to the final teaching assignment
(final teaching assignment is not yet confirmed, the course offering plan and offering term may vary)

Course Code	Stream	Course Title	Unit(s)	2019-20	2020-21	2021-22	2022-23 Pending
BMEG3102	BIIM	Bioinformatics	3	Term 2	Term 2	Term 2	X
BMEG3103	MIB/ BIIM	Big Data in HealthCare	3	X	X	Term 2	X
BMEG3105/ ESTR3605	BIIM/MCTE	Data Analytics for Personalized Genomics and Precision Medicine	3	X	X	Term 1	X
BMEG3130	MIB	Tele-Medicine and Mobile Healthcare	3	X	Term 1	X	Term 1
BMEG3140/ESTR3604	MCTE	Molecular and Cellular Engineering Laboratory	3	-	Term 2	Term 1	Term 1
BMEG3210/ESTR3212	MIB/MCTE	Biofluids	3	X	X	Term 2	X
BMEG3330/ESTR3602	MIB	Neuroengineering	3	X	Term 2	Term 2	Term 2
BMEG3420/ESTR4200	MIB	Medical Robotics	3	X	X	Term 2	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	Term 1/2
BMEG4103	BIIM	Biomedical Modelling	3	X	X	X	X
BMEG4220	MIB	~~Body Sensor Networks~~ Wearable Biomedical Devices and IoT in Healthcare	3	X	X	X	Term 1/2
BMEG4320/ESTR4200	BIIM	AI & Imaging for Biomedical Engineering	3	X	X	Term 1	X
BMEG4330/ESTR4201	MIB/BIIM	Advanced Imaging and Spectroscopy Techniques in Biomedicine	3	Term 1	X	X	X
BMEG4410/ESTR4203	MIB/MCTE	BioMEMS	3	Term 2	X	Term 1	X
BMEG4450/ESTR4202	MIB/MCTE	Bionanotechnology	3	Term 2	X	Term 2	Term 2
BMEG4510/ESTR4204	MCTE	Biomolecular Engineering	3	X	Term 1	X	Term 1
BMEG4520	MIB/BIIM/MCTE	Cardiovascular Engineering	3	Term 1	Term 2	Term 2	Term 2
BMEG4530/ESTR4214	MCTE	Musculoskeletal Tissue Engineering	3	Term 2	Term 2	X	Term 2

Course Offering in 2021-22

UPDATE

BMEG4220 Wearable Biomedical Devices and IoT in Healthcare

- Course Renamed (previous course name: Body Sensor Networks)
- Course Offering: 2021-22 Term 1

Course Description:

This course addresses two closely related areas in biomedical engineering. The contents of the first part include: an introduction to wearable medical devices and bio-sensing technologies, design of on-body and in-body biosensors, communication topologies, protocols, standards and media of body sensor networks (BSN). The second part is concerned with deployment of healthcare services through the internet system. Specific topics include: review of remote healthcare deployment through an information network, enabling technologies such as high definition imaging and mobile communication, information security, data management and state-of-the-art development.
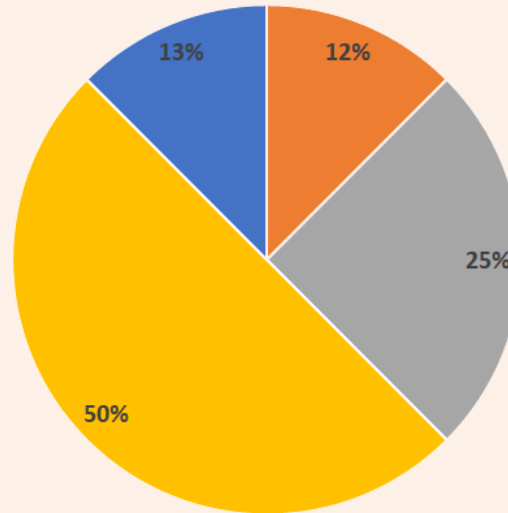
Policy of Course Cancellation Due to Low Enrollment Rate

- Minimum enrollment no. for elective courses: 12

- Elective courses may be cancelled if the enrollment no. is **BELOW 12** after the course registration period of the semester

- General Office will inform students who registered the course will be cancelled and provide assistance to students for course registration
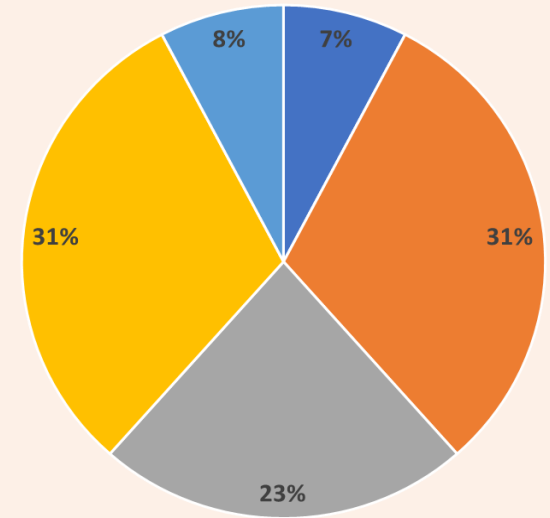
Graduate Employment Survey

Legend:
- Sales / Marketing
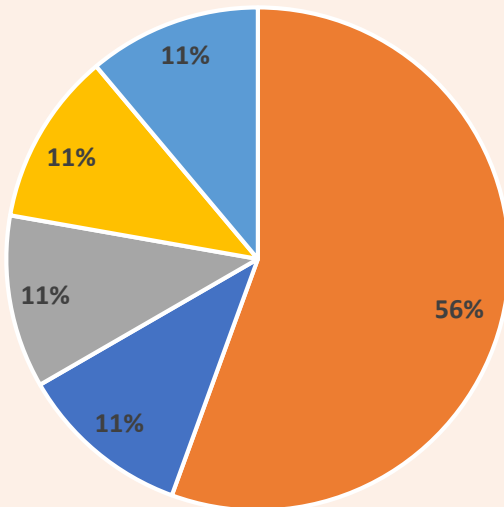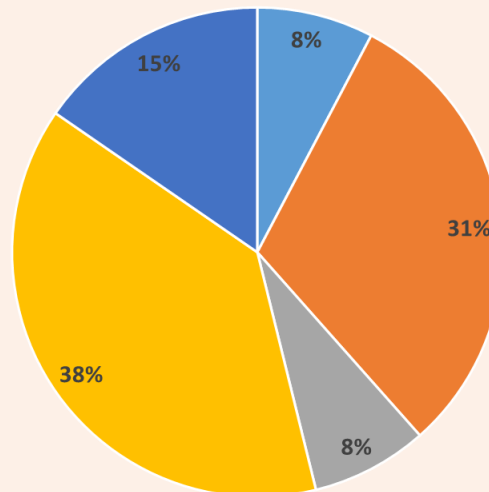- Technical Engineering / Product support
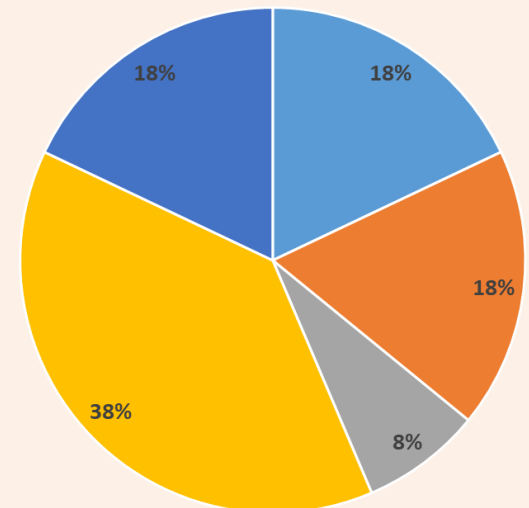- Lab / research
- Further study
- Others

2021
- 12% Technical Engineering / Product support
- 25% Lab / research
- 50% Further study
- 13% Others

2020
- 7% Others
- 8% Sales / Marketing
- 31% Technical Engineering / Product support
- 23% Lab / research
- 31% Further study

2019
- 11% Sales / Marketing
- 56% Technical Engineering / Product support
- 11% Others
- 11% Lab / research
- 11% Further study

2018
- 8% Sales / Marketing
- 31% Technical Engineering / Product support
- 8% Lab / research
- 38% Further study
- 15% Others

2017
- 18% Sales / Marketing
- 18% Technical Engineering / Product support
- 8% Lab / research
- 38% Further study
- 18% Others

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BME Student Ambassadors 2021-22

| Name	Admission Channel	Year of Study	Gender	Contact
CHAN Chi Chung Francis	JUPAS	Year 4	M	1155126345@link.cuhk.edu.hk
LEUNG Chi Kit Boris	Non-JUPAS Local	Year 4	M	1155124628@link.cuhk.edu.hk
LI Xuanxuan	Non-JUPAS International	Year 4	F	1155123725@link.cuhk.edu.hk
NG Wing Fai Sofie	Non-JUPAS Local	Year 4	F	1155113921@link.cuhk.edu.hk
Dayeon ROO	Non-JUPAS International	Year 4	F	1155122982@link.cuhk.edu.hk
Moldir SHYNGYS	Non-JUPAS International	Year 4	F	1155120928@link.cuhk.edu.hk
LI Szehon Anson	JUPAS	Year 3	M	1155141910@link.cuhk.edu.hk
SZE Hoi Kuen Patrick	JUPAS	Year 3	M	1155142404@link.cuhk.edu.hk
WONG Chee Ching CC	Non-JUPAS Local	Year 2	F	1155155836@link.cuhk.edu.hk

Francis   Boris   XuanXuan   Sofie   Dayeon   Moldir   Anson   Patrick   CC

October 2021
Give sharing to secondary school students
(Consultation Day)

March 2021
Career Forum 2021

January 2021
Local-International Buddy Scheme
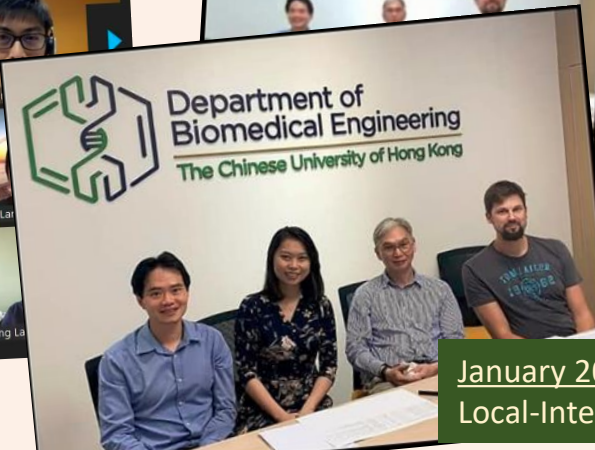
BME Student Ambassadors

RECRUITMENT 2022-23

- nurture peer connections between junior and senior students

- helps new students explore CUHK's learning environment

- develop social network through sharing and interactions with BME buddies

Eligible Applicants

Year 2 or above undergraduate students who are:

- Enthusiastic about serving BME
- Creative, cheerful and confident
- Sincere to share and patient to listen

Recognition

Certificate of Appreciation will be awarded to Student Ambassadors

Apply Now! **Online Application Form**

**Application Deadline:
25 July 2022 (Monday)**

Biomedical Engineering Outstanding Achievement Scholarships 2020-21

Number of Award

EIGHT awards of $10,000 each

Eligibility and Award Criteria

✓ Year 1 to Year 4 or above BME undergraduate students

✓ Year GPA of 3.0 or above in the previous year of study

✓ Participated in co-curricular and/or extra-curricular activities:

- Awards, especially those related to BME discipline
- Community Service, e.g. contributions to BME Department and/or Profession
- Other achievement, e.g. sports, competitions, voluntary work

✓ Financial needs

*Awardees in 2020-21:

Name	Year of Study in 2020-21
WONG, Chee Ching	Year 1
LEE, Wing Yin	Year 2
LIN, Yi Ting	Year 2
MAK, Kin Shing Wickey	Year 2
TRAN, Thi Trang	Year 2
SZE, Hoi Kuen	Year 2
WANG, Han Yi	Year 2
BAEKOVA, Aiana	Year 3
SHYNGYS, Moldir	Year 3
CHENG, Chak Kit	Year 4

* Special Approval in 2020-21 for the extra two awards

For details and application procedure, we will email to students on around May 2022, application deadline will be on early July 2022. Please be alerted of our notification email later on.

BME Society

Flaretrikos 燊鷺工 – 12TH Biomedical Engineering Society

cuhk_flaretrikos

Member		Position
MAN, Kin Tai (Kirtus)	文健泰	President & Representative of United College
YEUNG, Lok Yeung (Kart)	楊樂暘	Internal Vice President & Representative of New Colleges
HO, Yu On (Martin)	何予安	External Vice President & Representative of United College
CHAN, Cheuk Ka (Ka)	陳綽家	Secretary & Representative of Chung Chi College
CHAN, Ching Yeung (Tom)	陳正揚	Financial Secretary
LUK, Chun Kit (Karl)	陸俊杰	Representative of New Asia College & Publication and Design Officer
CHEUNG, Shun Hang (Jo)	張信恒	Publication and Design Officer
AU-YEUNG, Yau Sang (Henry)	歐陽祐生	Representative of Shaw College & Recreation and Sports Officer

BME Activities

Lab Exposure 2022 (Year 1 students only)

March - April 2021
Photo Day

1 April 2022
BME Career Forum
Registration is required
https://forms.gle/YqVe8CYsGFx3Ctzr7