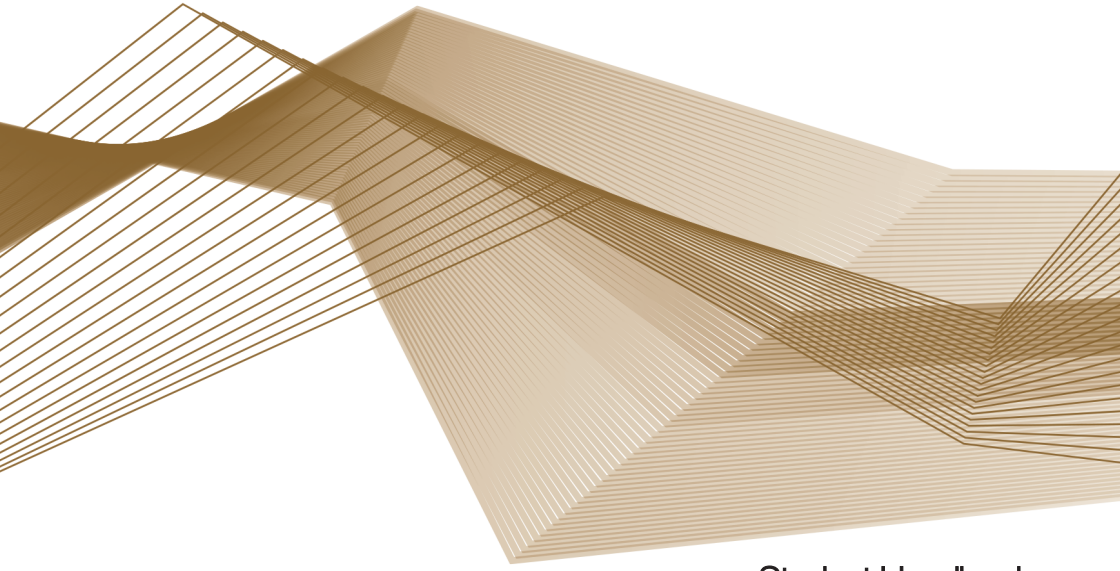
College of Engineering
工學院

Department of Materials Science and Engineering
材料科學及工程

香港城市大學
City University of Hong Kong

Bachelor of Engineering in Materials Science and Engineering
工學士 (材料科學及工程)



Student Handbook
2021-2022

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August 2019

1. Aims of Major

The major aims to educate and produce graduates who will be:

- equipped with working knowledge of the production, characterization, and service performance of engineering materials;
- proficient communicators equipped with a range of disciplines and skills, computer literacy, language proficiency, and the ability to think quantitatively and analyse problems critically;
- able to contribute their specialist skills, alongside other engineering specialists, to the design, manufacture, maintenance, testing and safety of engineering components, devices, structures and process plants;
- able to demonstrate an awareness of the context within which they work, and take responsibility for their own personal and professional development;
- demonstrate the ability to integrate knowledge learned in the major to support in at least an original discovery or creative design relevant to materials engineering.

Intended Learning Outcomes of Major (MILOs)

Upon successful completion of these major, students should be able to:

No.	*MILOs*	*Discovery-enriched curriculum related learning outcomes (please tick where appropriate)*		
		A1	*A2*	*A3*
1.	apply knowledge of mathematics, science, and engineering appropriate to the materials engineering discipline.		√	√
2.	design and conduct experiments, as well as analyze and interpret data.	√	√	
3.	design a system, component, or process to meet the desired needs within realistic constraints, such as economic, environmental, social, political and ethical expectations, health and safety, manufacturability and sustainability.	√	√	√
4.	function in multi-disciplinary teams.			√
5.	identify, formulate, and solve engineering problems.	√	√	√
6.	recognize professional and ethical responsibility.	√	√	
7.	communicate effectively.			√
8.	recognize the impact of engineering solutions in a global and societal context, especially the importance of health, safety and environmental considerations	√		

	for both workers and the general public.			
9.	recognize the need for, and to engage in life-long learning.		√	√
10.	stay abreast of contemporary issues.		√	
11.	use the techniques, skills, and modern engineering tools necessary for engineering practice appropriate to the materials engineering discipline.		√	√
12.	use computers and IT relevant to the materials discipline along with understanding of their processes and limitations.		√	
13.	create an original design, or explore the materials engineering area for discovery of new knowledge.	√	√	√

A1: Attitude
Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability
Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

A3: Accomplishments
Demonstrate accomplishments of discovery/innovation/creativity through producing / constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

2. Degree Requirements

2.1. Minimum Number of Credit Units Required for the Award and Maximum Number of Credit Units Permitted

Degree Requirements	Normative 4-year Degree	Advanced Standing I	Advanced Standing II (Senior-year Entry)
Gateway Education requirement	30 credit units	21 credit units	12 credit units
College/School requirement	6 credit units	waived	waived
Major requirement*	72 credit units (Core: 60 Elective: 12)	72 credit units (Core: 60 Elective: 12)	69 credit units (Core: 57 Elective: 12)
Free electives / Minor (if applicable)	12 credit units	0 credit unit	0 credit unit
Minimum number of credit units required for the award	**120 credit units**	**93 credit units**	**81 credit units**

* Pending for approval

2.2. Gateway Education Requirement

(The catalogue term of the Gateway Education requirement that students will follow will be the same as their admission term.)

For Normative 4-year students

Curriculum Catalogue Term	Semester A 2019/20
	Normative 4-year Degree
University requirements	
English	
• GE1401 University English	3 credit units
• Discipline-specific English	3 credit units
GE1501 Chinese Civilisation – History and Philosophy	3 credit units

Distributional requirements Area 1: Arts and Humanities Area 2: Study of Societies, Social and Business Organisations Area 3: Science and Technology	12 credit units *(At least one course from each of the three areas)*
College/School-specified courses ^	9 credit units
Total	**30 credit units**

^ College/School-specified courses for fulfilling the Gateway Education requirement

Course Code	Course Title	Level	Credit Units	Remarks
Normative 4-year Degree				
MA1200/ MA1300	Calculus and Basic Linear Algebra I/ Enhanced Calculus and Linear Algebra I	B1	3	
MA1201/ MA1301	Calculus and Basic Linear Algebra II/ Enhanced Calculus and Linear Algebra II	B1	3	
MSE2066	Materials Engineers in Society	B2	3	

For Advanced Standing I and II Students

Curriculum Catalogue Term	**Semester A 2019/20**	
	Advanced Standing I (Note 1)	**Advanced Standing II (Senior-year Entry) (Note 2)**
University requirements		
English		
• GE1401 University English	3 credit units	Not a compulsory requirement
• Discipline-specific English	3 credit units	3 credit units

GE1501 Chinese Civilisation – History and Philosophy	3 credit units	Not a compulsory requirement
Distributional requirements Area 1: Arts and Humanities Area 2: Study of Societies, Social and Business Organisations Area 3: Science and Technology	6 credit units *(From two different areas)*	3 credit units
College/School-specified courses ^	6 credit units	6 credit units
Total	**21 credit units**	**12 credit units**

Note 1: For students with recognised Advanced Level Examination or equivalent qualifications.
Note 2: For Associate Degree/Higher Diploma graduates admitted to the senior year.

^ College/School-specified courses for fulfilling the Gateway Education requirement

Advanced Standing I				
Major in Materials Science and Engineering				
MSE2066	Materials Engineers in Society	B1	3	Students taking Major elective *MSE3114 Computational Methods for Physicist and Materials Engineers* or *PHY4172 Computational Physics* may apply for exemption. They are required to complete any course of 3 credits (**excluding major core courses and major electives)** to replace the exempted credits.
MA1201/ MA1301	Calculus and Basic Linear Algebra II/ Enhanced Calculus and Linear Algebra II	B1	3	
Advanced Standing II (Senior-year Entry)				
MSE2066	Materials Engineers in Society	B2	3	
Any courses not within the Major Requirements (including core courses and electives)		B1/2/3/4	3	For students who failed the MA placement test and are required to complete the pre-requisite courses for their MA core course#, they are advised to take *MA1200 Calculus and Basic Linear Algebra I and/or MA1201 Calculus and Basic Linear Algebra II* to fulfil this requirement.

			#Please refer to the Curriculum Information Record (CIR) for your major and the Course Syllabus of the relevant MA courses for details.

2.3. College/School Requirement, if any

(The catalogue term of the College/School requirement that students will follow will be the same as their admission term.)

Course Code	Course Title	Level	Credit Units	Remarks
Normative 4-year Degree (6 credit units)				
Science (6 Credit Units) Choose **two** from the following three subject areas				
Physics				
PHY1201	General Physics I	B1	3	
Chemistry				
CHEM1300	Principles of General Chmistry	B1	3	
Advanced Standing I (0 credit unit)				
College Requirements waived				
Advanced Standing II (Senior-year Entry) (0 credit unit)				
College Requirement waived				

2.4. English Language Requirement

Normative 4-year degree students and Advanced Standing I students who passed the 6 credit units of specified GE English courses, and Advanced Standing II students who passed the 3 credit units of discipline-specific GE English course are recognized as fulfilling the University's English Language Requirement.

<u>For Normative 4-year students and Advanced Standing I students</u>

Students scoring below Level 4 in HKDSE English Language or Grade D in HKALE AS-level Use of English or students who do not possess an equivalent qualification are required to complete two 3-credit unit courses, EL0200A English for Academic Purposes 1 and EL0200B English for Academic Purposes 2, prior to taking the GE English courses. Students who demonstrate that they have achieved a grade B or above in their overall course results for EL0200A will achieve 3 credits and also be considered to have satisfied the pre-requisite

for entry to the GE English courses without needing to take EL0200B. The credit units of EL0200A and EL0200B will not be counted towards the minimum credit units required for graduation and will not be included in the calculation of the cumulative grade point average (CGPA). However, they will be counted towards the maximum credit units permitted.

2.5. Chinese Language Requirement

Students scoring below Level 4 in HKDSE Chinese Language, or below Grade D in HKALE AS-level Chinese Language and Culture will be required to complete a 3-credit unit course CHIN1001 University Chinese I. The 3 credit units will not be counted towards the minimum credit units required for graduation and will not be included in the calculation of the cumulative grade point average (CGPA). However, they will be counted towards the maximum credit units permitted.

In addition to the above requirement, Colleges/Schools also have the discretion to specify other Chinese language courses for their students, including students who do not possess the above qualifications (Senate/70/MM27-28 refers). Please indicate if there are such requirements.

For course details, please refer to ARRO website (http://www.cityu.edu.hk/catalogue/ug/current/catalogue/catalogue_UC.htm?page=B/B_course_MSE.htm). Please always refer to this website for the most updated information.

2.6. Major Requirement

(The catalogue term of the major requirement that students will follow will be the effective term of the declared/allocated major.

For normative 4-year degree students who will join the majors allocation exercise, the catalogue term of major requirement will be one year after admission.

For advanced standing students and 4-year degree students who already have a major at the time of admission, the catalogue term of major requirement will be the same as their admission term.)

Core Courses

- Normative 4-year degree (60 credit units);
- Advanced Standing I (60 credit units);
- Advanced Standing II (57 credit units)

Course Code	Course Title	Level	Credit Units	Remarks
CS1302	Introduction to Computer Programming	B1	3	
PHY1202	General Physics II	B1	3	Students with Grade D or above in HKAL Physics OR students with equivalent qualification may apply for exemption. They are required to complete any course of 3 credits to replace the exempted credits Advanced Standing II students are not required to take this course.
MSE1001	Programme Introduction	B1	3	
MSE2102	Introduction to Materials Engineering	B2	3	
MSE2104	Mechanics of Solids	B2	3	
MSE2106	Quantum Properties of Materials	B2	3	
MSE2107	Measurement Theory and Application	B2	3	
MSE2108	Materials Chemistry	B2	3	
MSE2109	Bonding and Structure of Materials	B2	3	
MSE2243	Workshop Practice	B2	3	
MSE3109	Kinetic Processes in Engineering Materials	B3	3	
MSE3110	Deformation and Fracture	B3	3	
MSE3114	Computational Methods for Physicists and Materials Engineers	B3	3	
MSE3171	Materials Characterization	B3	3	
MSE3172	Electronic Properties of Solids	B3	3	
MSE3190	Thermodynamics of Materials	B3	3	

MSE3244	Design Laboratory	B3	3	
MSE4116 / FS4003	Dissertation CES Placement Project	B4	6	
MSE4101	Materials Engineers in Society	B4	3	
MA2001 / MA2158 / MA2181	Multi-variable Calculus and Linear Algebra Linear Algebra and Calculus Mathematical Methods for Engineering	B2	3	Advanced Standing students may be required to complete MA1200 Calculus and Basic Linear Algebra I and MA1201 Calculus and Basic Linear Algebra II (the pre-requisite courses) before they are allowed to enroll MA2001/ MA2158/ MA2177/ MA2181. They are advised to apply and sit for the placement test * organized by MA department before the commencement of Semester A of their admitted academic year. * Placement Test for MA1200 – ASI student Combined Placement test for MA1200 & MA1201 – ASII students * Placement Test for MA1200 – ASI student Combined Placement test for MA1200 & MA1201 – ASII students
MNE2016	Engineering Graphics	B2	3	

Electives (12 credit units)

Course Code	Course Title	Level	Credit Units	Remarks
MA2172	Applied Statistics for Sciences and Engineering	B2	3	
MA2177	Engineering Mathematics and Statistics	B2	3	Advanced Standing students may be required to complete MA1200 Calculus and Basic Linear Algebra I and MA1201 Calculus and Basic Linear Algebra II (the pre-requisite courses).

				They are advised to apply and sit for the placement test * organized by MA department before the commencement of Semester A of their admitted academic year. * Placement Test for MA1200 – ASI student Combined Placement test for MA1200 & MA1201 – ASII students
MSE3111	Ceramic Materials	B3	3	
MSE3130	Biomaterials	B3	3	
MSE4121	Thin Films	B4	3	
MSE4170	Environmental Degradation	B4	3	
MSE4118	Composite Materials – with An Introduction to Nanocomposites	B4	3	
MSE4119	Advanced Computational Methods for Materials Science and Engineers	B4	3	
MSE4124	Failure Analysis and Case Studies	B4	3	
MSE4178	Nanostructures & Nanotechnology	B4	3	
MSE4179	Advanced Materials Characterization	B4	3	
MSE4307	Building Materials	B4	3	
MSE4714	Special Topics in Materials Science and Engineering I	B4	3	
MSE4715	Special Topics in Materials Science and Engineering II	B4	3	
FS4002	Industrial Attachment Scheme	B3	3	
FS4005	Overseas Internship Scheme	B3	3	

For course details, please refer to ARRO website (http://www.cityu.edu.hk/catalogue/ug/current/catalogue/catalogue_UC.htm?page=B/B_course_MSE.htm).

Please always refer to this website for the most updated information.

Students may ask for special approval for waiving the course prerequisites. The waiving of course prerequisites would be subject to the approval from both the course leader and the major leader on the basis of the students' academic background.

3. Accreditation by Professional / Statutory Bodies

The BEng degree in Materials Engineering has been provisionally accredited by the Hong Kong Institution of Engineers (HKIE) as an award satisfying the academic requirements for its Corporate Membership.

4. Recommended Study Plan

1. A set of core courses (see tables below) is pre-registered for students according to their recommended study plan.

2. Students are advised to plan their study according to the suggested pattern to avoid possible time conflict between courses. They should also pay attention to the Degree Requirements (Section 2) when planning their studies.

3. For GE courses, Chinese course, Electives and Free Electives, students will need to register them on web during the add/drop period.

4. Students wishing to drop/change a pre-assigned course will need to do so on web or using the paper form during the add/drop period. However, after dropping/changing the course, the places may be taken up by other students and you may not be able to enroll in the pre-assigned course again.

For Normative 4-year Degree Students

Year 1

Semester A		Semester B		Summer Term	
Course Code	**CUs**	**Course Code**	**CUs**	**Course Code**	**CUs**
PHY1201	**3**	**PHY1202**	**3**		
MA1200/ MA1300	**3**	**MA1201/ MA1301**	**3**		
MSE1001	**0**	**CS1302**	**3**	☒ Go Global - Exchange ☐ Go Global - Internship ☒ Go Global - Learning Abroad ☒ Go Global - Service Learning	
GE1401 / EL0200A	**3**	**GE2410 / EL0200B**	**3**		
GE1501	**3**	**GE Course**	**3**		
CHEM1300	**3**				
☐ Go Global - Exchange ☐ Go Global - Internship ☐ Go Global - Learning Abroad ☒ Go Global - Service Learning		☐ Go Global - Exchange ☐ Go Global - Internship ☒ Go Global - Learning Abroad ☒ Go Global - Service Learning			

Year 2

Semester A		Semester B		Summer Term	
Course Code	**CUs**	**Course Code**	**CUs**	**Course Code**	**CUs**

MSE2102	**3**	**GE Course**	**3**	**MSE2243**	**3**
MSE2104	**3**	**GE Course**	**3**		
MSE2106	**3**	**MSE2107**	**3**	☒ Go Global - Exchange ☐ Go Global - Internship ☒ Go Global - Learning Abroad ☒ Go Global - Service Learning	
MSE2108	**3**	**MSE2109**	**3**		
MA2001/ MA2158/ MA2181	**3**	**MSE3144**	**3**		
☒ Go Global - Exchange ☐ Go Global - Internship ☒ Go Global - Learning Abroad ☒ Go Global - Service Learning		☒ Go Global - Exchange ☐ Go Global - Internship ☒ Go Global - Learning Abroad ☒ Go Global - Service Learning			

Year 3

Semester A		Semester B		Summer Term	
Course Code	**CUs**	**Course Code**	**CUs**	**Course Code**	**CUs**
MSE3171	**3**	**MSE3109**	**3**	**FS4002 (Optional) #**	**3**
MSE3190	**3**	**MSE3110**	**3**	**OR FS4005 (Optional) #**	**3**
MSE3244	**3**	**MSE3113**	**3**	☒ Go Global - Exchange ☒ Go Global - Internship ☒ Go Global - Learning Abroad ☒ Go Global - Service Learning	
Major Elective	**3**	**MSE3172**	**3**		
Free Elective	**3**	**Major Elective**	**3**		
☒ Go Global - Exchange ☒ Go Global - Internship ☒ Go Global - Learning Abroad ☒ Go Global - Service Learning		☒ Go Global - Exchange ☒ Go Global - Internship ☒ Go Global - Learning Abroad ☒ Go Global - Service Learning			

 # FS4002 and FS4005 can be considered as an elective.

Year 4

Semester A		Semester B		Summer Term	
Course Code	**CUs**	**Course Code**	**CUs**	**Course Code**	**CUs**
MSE4116	**3**	**MSE4116**	**3**		
MSE2066	**3**	**Free Elective**	**3**		
Major Elective	**3**	**Free Elective**	**3**	☐ Go Global - Exchange ☐ Go Global - Internship ☐ Go Global - Learning Abroad ☐ Go Global - Service Learning	
Elective B2Major Elective	**3**	**GE Course**	**3**		
Free Elective	**3**				
☒ Go Global - Exchange ☒ Go Global - Internship ☒ Go Global - Learning Abroad ☒ Go Global - Service Learning		☒ Go Global - Exchange ☒ Go Global - Internship ☒ Go Global - Learning Abroad ☒ Go Global - Service Learning			

On top of the above 72 required credits in major requirement, students have to satisfy the degree requirement of 30 credits in Gateway Education and 6 credits in College Requirement as specified by the University and 12 credits Free Electives.

For Advanced Standing I Students

Year 2

Semester A		Semester B		Summer Term	
Course Code	**CUs**	**Course Code**	**CUs**	**Course Code**	**CUs**
MSE1001	**0**	**CS1302**	**3**	**MSE2243**	**3**
MSE2102	**3**	**PHY1202**	**3**		
MSE2108	**3**	**MSE2109**	**3**		
GE1501	**3**	**GE2410/ EL0200B**	**3**		
GE1401 / EL0200A	**3**	**GE Course**	**3**		
^ MA1200/ MA1300	**(3)**	**MA1201/ MA1301**	**3**	☒ Go Global - Exchange ☐ Go Global - Internship ☒ Go Global - Learning Abroad ☒ Go Global - Service Learning	
☐ Go Global - Exchange ☐ Go Global - Internship ☐ Go Global - Learning Abroad ☒ Go Global - Service Learning		☐ Go Global - Exchange ☐ Go Global - Internship ☒ Go Global - Learning Abroad ☒ Go Global - Service Learning			

^ *For students who failed the MA placement test and are required to complete the pre-requisite courses for their MA core courses, they are* ***REQUIRED*** *to take both MA1200 Calculus and Basic Linear Algebra I.*

Year 3

Semester A		Semester B		Summer Term	
Course Code	**CUs**	**Course Code**	**CUs**	**Course Code**	**CUs**
MSE2104	**3**	**MSE2107**	**3**	**FS4002 (Optional) #**	**3**
MSE2106	**3**	**MSE3109**	**3**	**OR FS4005 (Optional) #**	**3**
MSE3171	**3**	**MSE3110**	**3**		
MSE3190	**3**	**MSE3114**	**3**	☒ Go Global - Exchange ☒ Go Global - Internship ☒ Go Global - Learning Abroad ☒ Go Global - Service Learning	
MSE3244	**3**	**MSE3172**	**3**		
GE Course	**3**	**MA2001/ MA2158/ MA2181**	**3**		
☒ Go Global - Exchange ☒ Go Global - Internship ☒ Go Global - Learning Abroad ☒ Go Global - Service Learning		☒ Go Global - Exchange ☒ Go Global - Internship ☒ Go Global - Learning Abroad ☒ Go Global - Service Learning			

 # FS4002 and FS4005 can be considered as an elective.

Year 4

Semester A		Semester B		Summer Term	
Course Code	**CUs**	**Course Code**	**CUs**	**Course Code**	**CUs**
MSE4116	**3**	**MSE4116**	**3**		
MSE2066	**3**	**MSE3113**	**3**		

Major Elective	**3**	**Major Elective**	**3**	☐ Go Global - Exchange ☐ Go Global - Internship ☐ Go Global - Learning Abroad ☐ Go Global - Service Learning
Major Elective	**3**	**Major Elevtive**	**3**	
	3			
☒ Go Global - Exchange ☒ Go Global - Internship ☒ Go Global - Learning Abroad ☒ Go Global - Service Learning		☒ Go Global - Exchange ☒ Go Global - Internship ☒ Go Global - Learning Abroad ☒ Go Global - Service Learning		

On top of the above 72 required credits in major requirement, students have to satisfy the degree requirement of 21 credits in Gateway Education as specified by the University.

For Advanced Standing II Students

Year 3

Semester A		Semester B		Summer Term	
Course Code	**CUs**	**Course Code**	**CUs**	**Course Code**	**CUs**
MSE1001	**0**	**CS1302**	**3**	**MSE2243**	**3**
MSE2102	**3**	**MSE2109**	**3**	**GE1501 (*ENG is only available in Sem A/B)**	**3**
MSE2104	**3**	**MSE3109**	**3**		
MSE32108	**3**	**MSE3114**	**3**		
MSE3190	**3**	**GE2410**	**3**	☒ Go Global - Exchange ☒ Go Global - Internship ☒ Go Global - Learning Abroad ☒ Go Global - Service Learning	
GE Course	**3**	**Major Elective**	**3**		
# MA1200/ MA1300	**(3)**	**# MA1201/ MA1301**	**(3)**		
☐ Go Global - Exchange ☐ Go Global - Internship ☐ Go Global - Learning Abroad ☒ Go Global - Service Learning		☐ Go Global - Exchange ☐ Go Global - Internship ☒ Go Global - Learning Abroad ☒ Go Global - Service Learning			

*^ For students who failed the MA placement test and are required to complete the pre-requisite courses for their MA core courses, they are **REQUIRED** to take both MA1200 Calculus and Basic Linear Algebra I and MA1201 Calculus and Basic Linear Algebra II to fulfil this requirement.*

Year 4

Semester A		Semester B		Summer Term	
Course Code	**CUs**	**Course Code**	**CUs**	**Course Code**	**CUs**
MSE2066	**3**	**MSE2107**	**3**	**FS4002 (Optional) #**	**3**
MSE2106	**3**	**MSE3110**	**3**	**OR FS4005 (Optional) #**	**3**
MSE3171	**3**	**MSE3113**	**3**		
MSE3244	**3**	**MSE3172**	**3**	☒ Go Global - Exchange ☒ Go Global - Internship	
MSE4166	**3**	**MSE4166**	**3**		

Major Elective	**3**	**Major Elective/ MA2001/ MA2158/ MA2181**	**3**	☒ Go Global - Learning Abroad ☒ Go Global - Service Learning
Major Elective/ MA2001/ MA2158/ MA2181	**3**			
☒ Go Global - Exchange ☒ Go Global - Internship ☒ Go Global - Learning Abroad ☒ Go Global - Service Learning		☒ Go Global - Exchange ☒ Go Global - Internship ☒ Go Global - Learning Abroad ☒ Go Global - Service Learning		

 # FS4002 and FS4005 can be considered as an elective.

On top of the above 69 required credits in major requirement, students have to satisfy the degree requirement of 12 credits in Gateway Education as specified by the University.

5. Academic Regulations

Student should observe the University's Academic Regulation for 4-year Undergraduate Degrees at all times. For further details and most updated information, please always refer to the website of Academic Regulations and Records Office (ARRO) (https://www.cityu.edu.hk/arro/content.asp?cid=165).

6. Academic Honesty

Students must pursue their studies with academic honesty. Academic honesty is central to the conduct of academic work. Students are expected to present their own work, give proper acknowledgement of other's work, and honestly report findings obtained. As part of the University's efforts to educate students about academic honesty, all students are expected to complete the Online Tutorial and Quiz on Academic Honesty and make a Declaration on their understanding of academic honesty.

Plagiarism is a serious offence involving "the use of somebody else's ideas, words, etc. as one's own". Examples of such acts are copying other students' work in examinations, tests, or coursework assignments, repetition of part or whole sentences/paragraphs/any materials from hard-copy publications or online sites for one's own use **without acknowledgement of the source in one's work.**

Students who commit an act of academic dishonesty which is regarded as a **serious academic offence** in the University may lead to disciplinary action with a penalty including without limitation, expulsion from the University, debarment from re-admission, deprivation of an academic award already conferred or revocation of a certification granted.

For details of the rules on Academic Honesty, students should refer to the website of Office of the Provost (www.cityu.edu.hk/provost/academic_honesty/rules_on_academic_honesty.htm).

7. Assessment

Students are assessed through a variety of methods, creating ample opportunity to demonstrate their abilities. The means of assessment vary from course to course but typically include coursework as well as the more traditional written examinations. Coursework consists of written assignments, computer simulations, tutorials, project, laboratory reports and presentations etc. Examinations are held at the end of each course.

For undergraduate courses, students have to obtain at least 30% of the maximum marks in the final examination in order to pass a course (i.e. D or above) where there is an examination component in the assessment for the majority of courses. For the details, please refer to the individual course syllabus.

Students should check the updated minimum passing mark for specific courses under the section of "Programmes and Courses" of the ARRO's website (www.cityu.edu.hk/arro).

7.1. Mitigation

A student who believes that his/her ability to attend an examination, or in-course assessment with a weighting of 20% or above, has been adversely affected by circumstances beyond his/her control may submit a mitigation request with the scanned relevant supporting documents (e.g. medical certificate) to the Department via AIMS **no later than 5 working days from the scheduled date for completing the affected examination or assessment. It is the student's responsibility to hand in the original copies of all the required documents to the Department by the aforesaid deadline as well.**

Upon receipt of a mitigation request (including the original copies of the required documents), the Department will investigate the case, in consultation with the course-offering academic unit (if appropriate). Only compelling reasons such as illness, hospitalization, accident, family bereavement or other unforeseeable serious circumstances will be considered. If the case is substantiated, the Assessment Panel will then decide if a make-up examination or coursework or other alternative assessment will be offered to the student concerned. **Only one make-up examination will be arranged per course per semester.**

7.2. Award Classifications

The various classifications are based on the CGPAs. The general guidelines are as follows:

Classification of Award	CGPA
First Class Honours	3.50 or above
Upper Second Class Honours	3.00 – 3.49
Lower Second Class Honours	2.50 – 2.99
Third Class Honours	2.00 – 2.49
Pass	1.70 – 1.99

7.3. Academic Regulations on Termination of Study

The Examination Board may terminate the study of a student under the following circumstances:

(i) The student's SGPA is below 1.70 for any three enrolled semesters; or

(ii) The student's academic progress is unsatisfactory and is unable to meet the conditions stipulated by the home academic unit after being put on Academic Probation for one consecutive semesters.

Students' studies will be **TERMINATED** if they **FAIL** to pass a required course, or its equivalent/substitute course, after **THREE** attempts.

Further details can be obtained from the ARRO's website, under the section of "Current Students"→"Regulations & Guidelines" (www.cityu.edu.hk/arro).

8. Late drop policy

Students can add or drop a course during the add/drop period prescribed by the University. After the add/drop deadline, requests for late drop of courses will **NOT** be entertained unless under exceptional circumstances (e.g. medical grounds). Such late requests must be submitted no later than the end of the teaching period for the relevant semester/term for approval by the Head of the course-offering academic unit.

9. Laboratory safety

Students under 18 MUST read the Information and complete the "Parental Consent Form for Students under the Age of 18" in relation to Safety Regulations in Laboratories. The form should be signed by your parents and be returned to the General Office of Department of

Materials Science and Engineering (P6405, 6/F, Yeung Kin Man Academic Building) **by 11 September 2021**.

General Rules on Safety in Laboratories

All laboratory workers are bound by the Safety Regulations of the City University as well as the relevant enacted laws and ordinances.
In addition, the following rules should be adhered to.

1. Undergraduate students are NOT ALLOWED TO WORK in a laboratory WITHOUT SUPERVISION.
2. Undergraduate students are NOT ALLOWED TO KEEP ANY KEY of the laboratories.
3. New research students/staff are NOT ALLOWED TO WORK in a laboratory before the completion of the safety training.
4. Students/staff SHOULD NOT WORK ALONE in a laboratory; when he/she needs to work with hazardous chemicals, e.g., strong acids and alkalis or on electricity connection, there MUST be at least one more person in the same room. All research personnel should seek the help of a companion when he/she must work in the laboratory outside normal office hours, otherwise he/she is required to utilize the Personal Alarm System in labs. Experiments should not be left unattended.
5. Prior approval from your supervisor is needed to stay in a laboratory beyond 11:00 p.m. Please download and print this form (https://www6.cityu.edu.hk/mse/programmes/Safety/1overnight.pdf) for this application.
6. SMOKING, EATING & DRINKING ARE STRICTLY FORBIDDEN. Do not bring food or drinks into a laboratory.
7. DO NOT RUN OR PLAY in laboratories.
8. Loose clothing is potentially hazardous. Secure ties and tie up long hair. You are also advised to wear laboratory coat.
9. Familiarise yourselves with the FIRE EXITS and ESCAPE ROUTES. These are posted in every laboratory.
10. Familiarise yourself with EMERGENCY PROCEDURES. These are posted at the entrance of each laboratory.
11. Wastes & solvents must be disposed of properly. Consult your supervisor or the technicians in case of doubt.
12. All accidents must be reported to the technical officer/supervisor immediately.
13. Wearing EYE PROTECTION is mandatory when working with hazardous chemicals or operating UV instruments or LASERS, and in laboratories where such notices are posted. Consult your supervisor or the technicians for the appropriate type of eye-protection equipment. In other areas, you are encouraged to wear eye protection as a good safety practice. Users of laser classes 3B and 4 are reminded to undergo eye-sight tests arranged by the university. This should be carried out before the first use of laser and again before leaving the university.
14. Before commencement of a new experiment, you should complete a RISK ASSESSMENT (You may download the form here: http://www.cityu.edu.hk/mse/programmes/Safety/5risk-assessment.pdf) and obtain approval from your supervisor.

15. There is a separate set of rules governing the use of Radiation Laboratories. These are posted at the entrance of the Radiation Laboratory. All users must observe these rules.

Safety Guidelines:

- Declaration form_Non-CityU lab users
- Guidelines of Handling and Characterization of Human Tissues
- Laboratory Safety Discipline Policy
- Electron Microscope Regulations

Useful Links:

- https://www.cityu.edu.hk/ceng/research/infrastructure/laboratory-safetyParental Consent Form for Student under the Age of 18

In case of questions, please contact:

Department Safety and Chemical Officer:
Prof. Qichun Zhang
Room P7713
Tel. 3442 9988

Dr Abhijit Pramanick
Room G6758
Tel. 3442 7052

10. Communication channels

There are various channels of communication between students and the Department. On an informal basis, students having academic difficulties with a course are encouraged to approach their academic advisors, lecturer or tutor concerned.

A formal consultative channel between students and faculties is established via the Joint Staff/Student Consultative Committee (JSSCC) and Programme Committee. The Programme Committee is charged with the responsibility of monitoring the operation and quality assurance of the programme. 2-3 student representatives from each cohort will be nominated for joining the committees. The Committees meet at least once a semester. At the meetings, students can express their views on the curriculum and organization of the programme.

Students are also welcome to approach the major leaders, academic advisors or course leaders whenever they encounter any study-related difficulties.

Major Leader
Dr Stephen Tsang
Office: P6706, 6/F, YEUNG (Purple Zone)
Phone: 3442 4618
Email: ssaitsang@cityu.edu.hk

Deputy Major Leader
Dr Jun Fan
Office : GP6712, 6/F, YEUNG (Green Zone)
Tel: 3442 9978
E-mail: junfan@cityu.edu.hk

Academic Advisors
Dr CY Chung
Office : G6713, 6/F, YEUNG (Green Zone)
Tel: 3442 7835
E-mail: appchung@cityu.edu.hk

Dr Xiaoyan Zhong
Office : MMW-6409, 6/F, Mong Man-Wai Building
Tel: 3442 6250
E-mail: xzhong25@cityu.edu.hk

11. Useful information

11.1 Course registration for 2019-20

- For 2019-20, students will be pre-registered in some of the required courses including MSE1001, MSE2102, MSE2104, MSE3109, MSE3110, MSE3171, MSE3172, MSE3190, MSE3244, MSE4101, MSE4116, MA1200, MA1201, GE1401 and GE2410 and PHY1201, PHY1202, PHY1203, MA2172 and MNE2016.
- The web registration period for Semester A will start **from 23 August 2021 and end on 6 September 2021** but **you need to check your time ticket from "AIMS"**. For details on course registration, please refer to "Course Registration" under ARRO website (https://www.cityu.edu.hk/arro/content.asp?cid=152).
- Please check your curriculum requirements, review your study plan and then make appropriate adjustments to your course registration **after consulting your academic advisors if necessary**.
- Add/Drop of courses can be made through AIMS for web-enabled courses during the web registration period.
- For non-web-enabled courses, students should seek endorsement from the **course-offering academic units** by using the Add/Drop Form before submitting the change request to ARRO.
- If a student drops a course after the add/drop period, an 'X' grade will be assigned for the course. The 'X' grade will be printed on the student's transcript.

Important notes

How to do the Add/ Drop on web

- Go to www.cityu.edu.hk from any terminal on campus or off campus and click "Students".
- Log onto "AIMS" and then click "Course Registration".
- Choose "Add or Drop Classes".

For details on course registration arrangements for 2019-2020, please refer to "Course Registration" under ARRO website (https://www.cityu.edu.hk/arro/content.asp?cid=152).

11.2 How to access your personal class schedule

- Go to CityU home page (www.cityu.edu.hk) from any terminal on campus or off campus.
- Log onto "e-Portal" under "Quick Links" or "My CityU". *If you have problems in logging in, please follow the instructions in "Having problems logging in?".*
- Select "View Student Schedule" under the "Courses I am taking" box.
- Press the "View Detail Schedule" button at the bottom of your timetable to display details of your class schedule.

11.3 How to get instructors' handouts through Canvas

- Go to CityU home page (www.cityu.edu.hk) from any terminal on campus or off campus.
- Log onto "Canvas" under "Quick Links".
- Click "Courses".

Canvas User Guides are available at "e-Learning" under the "IT Links" of the OCIO website (http://www6.cityu.edu.hk/elearn/elearn_stud.html).

11.4 How to check curriculum requirements and course syllabuses

- Go to CityU home page (www.cityu.edu.hk)
- Click "Academic Programmes".

11.5 How to access your student email account

- Go to www.cityu.edu.hk from any terminal on campus or off.
- Click "Email" under "My CityU"
- Click "@my.cityu.edu.hk (office 365)"

**For email communication, please state your name, student number, contact telephone number, programme and entry cohort.*
**Always check and clear your email account, and make sure it does not exceed the quota (a maximum of 25GB).*

11.6 How to access DegreeWorks

DegreeWorks is a web-based academic advising and degree audit tool primarily introduced for undergraduate students under the 4-year degree curriculum. DegreeWorks matches a student's academic record against the curriculum requirements. It offers a user-friendly interface that helps students learn easily what courses they still need to take to fulfill the requirements of College/School, GE, major, minor, etc. It also facilitates communication between students and advisors.

Students are encouraged to use the "Planner" function in DegreeWorks. "Planner" helps you create a long term study plan for your degree completion. Using this tool, you can easily discuss your academic goals and plan with your Advisor.

- Go to www.cityu.edu.hk from any terminal on campus or off campus.
- Log onto "AIMS".
- Go to the "Study Plan" tab in AIMS.
- Then you can view the Student advising worksheet and advising notes, and access other features available in DegreeWorks.

Important notes

Students are advised to go through the online tutorials and all materials available on ARRO's website to learn more about DegreeWorks.

- Go to www.cityu.edu.hk/arro
- Click "Current Students".
- Choose "DegreeWorks".
- Read "Introduction", "Tutorials" and "Frequently Asked Questions".

12. Student Development Services (SDS)

The SDS offers many student-centred services to students. It provides support and assistance for students in the following areas:

- Attainment of an all-round development
- Enrichment of campus life
- Development of career plans and choices
- Solving personal problems
- Enhancement of physical and mental well-being
- Provision of financial assistance
- Scholarship application
- Welfare provisions

If you need any advice on your personal issues other than academic concerns, you may approach SDS to schedule a counselling appointment:

Tel.: 3442 8478
E-mail: sds@cityu.edu.hk
Address: Student Development Services, 6/F, Amenities Building

13. Administrative Support from General Office

Address	:	P6405, 6/F, Yeung Kin Man Academic Building (YEUNG)
Office Hours	:	9:00 a.m. – 12:30 p.m. 2:00 p.m. – 5:45 p.m.
Telephone	:	(852) 3442 2985
Fax	:	(852) 3442 0892
Email	:	mse@cityu.edu.hk
Website	:	http://www.cityu.edu.hk/mse/home.aspx

14. Appendix: Academic Staff Profile

STAFF	AREAS OF SPECIALISM
Acting Head and Chair Professor **Prof Wenjun Zhang** BSc PhD *Lanzhou University, China* Email : apwjzh@cityu.edu.hk	Thin film technology Diamond and superhard materials Surface and interface analysis Nanomaterials and nanodevices
Associate Head and Professor **Prof Johnny C Y Ho** BSc MSc PhD *University of California, Berkeley, USA* Email : johnnyho@cityu.edu.hk	Monolayer Assisted Nano-Scale Processing Synthesis and Characterization of Fundamental Properties of Nano-Materials Large-Scale and Heterogeneous Integration of Nano-Materials for Flexible and High Performance Technological Applications
University Distinguished Professor **Prof C T Liu** BSc *National Taiwan University, Taiwan* MSc PhD *Brown University, USA* Senior Fellow, Institute for Advanced Study, City University of Hong Kong Member, Academia Sinica Taiwan Fellow, Hong Kong Institute of Science Email : chainliu@cityu.edu.hk	Physical metallurgy and mechanical behaviour of metals, alloys, nanostructure materials, intermetallic compounds and bulk amorphous alloys Microstructure and phase transformation Alloy design of high-temperature structural materials, precious metal alloys, Ti-base alloys, metal-matrix composites Innovative material processing

Chair Professors

Provost and Chair Professor

Prof Alex Jen

BSc *National Tsing Hua University, Taiwan*
PhD *University of Pennsylvania, USA*
Fellow, The Materials Research Society
Member, Washington State Academy of Sciences
Fellow, The American Chemical Society
Fellow, The American Chemical Society, Div. of Polymeric Materials Science & Engineering
Fellow, The Optical Society of America
Fellow, The International Society of Optical Engineering
Fellow, American Association for the Advancement of Science
Member of Advisory Board, Institute of Chemistry, Academia Sinica, Taiwan
Email : alexjen@cityu.edu.hk

Utilizing molecular, polymeric, and biomacromolecular self-assembly to create ordered arrangement of organic and inorganic functional materials for photonics, opto-electronics, nanomedicine, and nanotechnology
Employing the "molecular engineering" approach to tailor size, shape, sequence, and functionality of organic/hybrid functional materials and explore their applications

Director of the Centre for Functional Photonics and Chair Professor

Prof Andrey L Rogach

Diploma PhD *Belarusian State University, Belarus*
Dr habil *Ludwig-Maximilians University, Germany*
Email : andrey.rogach@cityu.edu.hk

Colloidal semiconductor (quantum dots) and metal nanocrystals

Chair Professor

Prof Fu-Rong Chen

BSc *National Tsing Hua University, Taiwan*
PhD *Stony Brook University, USA*
Email : frchen@cityu.edu.hk

Low Dose 3D atomic resolution electron tomography
Soft materials dynamics imaging
Quantum electron microscopy
Solar energy tunable (SET) glass

Chair Professor

Prof Yun Chi

BSc *National Tsing Hua University, Taiwan*
PhD *University of Illinois at Urbana–Champaign, USA*
Academician, Asia Pacific Academy of Materials
Email : yunchi@cityu.edu.hk

Organic and organometallic materials
OLEDs
DSSC
Perovskite solar cells (PSC)

Chair Professor

Prof Paul K Chu
BSc *The Ohio State University, USA*
MSc PhD *Cornell University, USA*
Fellow, American Vacuum Society
Fellow, American Physical Society
Fellow, Institute of Electrical and Electronics Engineers
Fellow, Materials Research Society
Fellow, Hong Kong Institution of Engineers
Fellow, Hong Kong Academy of Engineering Science
Email : paul.chu@cityu.edu.hk

Plasma science and engineering
Surface engineering of functional materials
Biomaterials and nanobiology
Energy and sensor materials
Nanostructured thin films and interfaces

Chair Professor

Prof Jacob C C Huang
BS *National Tsing Hua University, Taiwan*
MS, PhD UCLA, USA
Email: chihuang@cityu.edu.hk

Thin film metallic glasses
Low density high entropy alloys

Chair Professor

Prof Yuntian Zhu
PhD *The University of Texas at Austin, USA*
B.S. *Hefei University of Technology, China*
Fellow, The Minerals, Metals and Materials Society (TMS)
Fellow, Materials Research Society (MRS)
Fellow, American Physical Society (APS)
Fellow, ASM International
Fellow, American Association for the Advancement of Science (AAAS)
Email: yuntizhu@cityu.edu.hk

Deformation mechanisms at dislocation level
Mechanical behaviors of heterostructured materials
Nano/ ultrafine-grained materials

Chair Professor

Prof King-Ning Tu
PhD *Harvard University, USA*
B.S National Taiwan University, Taiwan
Email: kntu@cityu.edu.hk

Thin Film Materials Science
Kinetics in Nanoscale Materials
Reliability Science in Microelectronic Devices

Professors

Prof Jr-Hau HE
BS PhD *National Tsing Hua University, Taiwan*
Email : jrhauhe@cityu.edu.hk

Light -mater interaction
Photon management on the light harvesting devices

Associate Dean of Chow Yei Ching School of Graduate Studies

Prof Robert K Y Li
BA BAI MA PhD *Dublin University, Ireland*
Email : aprkyl@cityu.edu.hk

Polymer engineering
Composite materials

Prof Lawrence C M Wu
BSc(Eng) PhD *University of Bristol, UK*
PgDMS *University of West of England, UK*
Fellow, Hong Kong Institution of Engineers
Email : lawrence.wu@cityu.edu.hk

Engineering failure analysis
Nano-materials for solar cells and biosensor

Director of Education Development and Gateway Education and Professor

Prof C H Shek
BSc(Eng) PhD *University of Hong Kong*
Email : apchshek@cityu.edu.hk

Phase transformation in metallic materials
Nanostructured materials
Bulk metallic glasses

Prof Feng Wang
BEng PhD *Zhejiang University, China*
Email : wang.feng@cityu.edu.hk

Luminescent Nanomaterials
Photon Upconversion
Optical Spectroscopy

Prof Chunyi Zhi
BSc *ShanDong University, China*
PhD *IOP, CAS, China*
Email : cy.zhi@cityu.edu.hk

Wearable energy harvesting & storage devices
Aqueous eletrolyte battery

Prof Angus H L Yip
PhD *University of Washington, USA*
BSc *MPhil The Chinese University of Hong Kong*
Email: a.yip@cityu.edu.hk

Processing-property relationship study of organic and hybrid perovskite electronic devices
Device physics and photophysics of optoelectronic materials and devices
Emerging light emitting materials and devices
Printing and patterning techniques of flexible and large-area electronic devices
Design of new photovoltaic technology for building integration
Self-powered greenhouse with artificial lighting technology

Prof Qichun Zhang
Ph.D *University of California, Riverside, USA*
M.S. *University of California, USA*
M.S. *Chinese Academy of Sciences, China*
B.S. *Nanjing University, China*
Email: qiczhang@cityu.edu.hk

Carbon-rich materials and their applications
Novel electrode materials for Microbial Fuel Cells and energy storage devices

Associate Professors

Dr Jonathan C Y Chung
BSc(Eng) PhD *University of Hong Kong*
Member, Hong Kong Institution of Engineers (Materials & Biomedical)
Email : appchung@cityu.edu.hk

Metallic materials
Shape memory alloy
Powder metallurgy
Battery materials

Dr Jun Fan
BEng *Tsinghua University, China*
MSc *McMaster University, Canada*
PhD *Princeton University, USA*
Email : junfan@cityu.edu.hk

Theoretical and Computational Biophysics

Dr Derek Ho MASc BASc *University of British Columbia, Canada* PhD *University of Toronto, Canada* Member, Institute of Electrical and Electronics Engineers Email : derekho@cityu.edu.hk	Smart chemical, optical, and bio-sensors CMOS computational image sensors Lab-on-a-chips and instrumentation for time-resolved luminescence imaging Materials synthesis and device fabrication of metal-oxide semiconductor Circuits for sensor interface and signal processing, with emphasis on bioelectronics Sensor system integration for medical, industrial, and environmental applications
Dr Dangyuan Lei BSc *Northwest University, USA* MSc *Chinese University of Hong Kong* PhD *Imperial College London, UK* Email: dangylei@cityu.edu.hk	Nanophotonics and optical spectroscopy
Dr Y Y Li BSc *Peking University, China* MSc PhD *University of California, San Diego, USA* Email : yangli@cityu.edu.hk	Electrochemical nanofabrication Functional porous nanomaterials Sensors Electrode materials Smart biomaterials
Dr Stephen Tsang MPhil BEng *The Chinese University of Hong Kong* PhD *University of Toronto, Canada* Email : saitsang@cityu.edu.hk	Advanced materials for photovoltaic application Solution processed electronic materials Semiconductor device physics Spectroscopy techniques
Dr A L Roy Vellaisamy BSc *St Xavier's College, India* MSc *Loyola College, India* PhD *Nagpur University, India* Email : val.roy@cityu.edu.hk	Materials and technologies for sensors Memory devices and thermo-electric energy harvesting devices
Dr J Antonio Zapien PhD *The Pennsylvania State University, USA* BSc *UNAM, Mexico* Email : apjazs@cityu.edu.hk	Nanomaterials and nanotechnology Nano-photonics and nano-optoelectronics Optical properties of materials Nucleation and growth of thin films
Dr Xiaoyan Zhong PhD *Tsinghua University, China* B.S *Tsinghua University, China* Email: xzhong25@cityu.edu.hk	Electron magnetic circular dichroism Electron energy-loss spectroscopy Aberration-corrected transmission electron microscopy Atomic scale magnetic imaging and spectroscopy

Assistant Professors

Dr Abhijit Pramanick
BE *National Institute of Technology, India*
ME *Indian Institute of Science, India*
PhD *University of Florida, USA*
Email: apramani@cityu.edu.hk

Ferroelectric and multiferroic materials
Ceramics
X-ray and neutron scattering

Dr Jian Han
PhD *University of Pennsylvania, USA*
B.S *Shanghai Jiao Tong University, China*
Email: jianhan@cityu.edu.hk

Thermodynamics and kinetics of defects; dislocations, interfaces and triple junctions
Mechanical properties of materials and the underlying mechanisms
Irradiation damage in polycrystals
Molecular dynamics; classical/kinetic Monte Carlo simulations; topological framework for local structure analysis

Dr Qiyuan He
PhD *Nanyang Technological University*
MSc *Fudan University*
BSc *Wuhan University*
Email: qiyuanhe@cityu.edu.hk

Nanoelectronics devices
Chemical/bio-sensors
Thin film electronics
Two-dimensional semiconductors
On-chip electrochemistry

Dr Zhaoxuan Wu
BEng *National University of Singapore, Singapore*
PhD *Nanyang Technological University, Singapore*
Email: zhaoxuwu@cityu.edu.hk

Dislocation core, crack-tip, fracture behaviors and alloying effects in hcp metals

Dr Tao Yang
PhD *City University of Hong Kong*
MSc *Xiamen University, China*
Email: taoyang6@cityu.edu.hk

Physical metallurgy of advanced metallic metals, especially the multicomponent high-entropy alloys, superlattice intermetallic alloys, and hetero-structured alloys
Nanoprecipitation and grain-boundary segregation engineering
High-temperature structural materials
Electrocatalysis intermetallic alloys

Dr Zhiyuan Zeng
BS *Central South University, China*
MS *Zhejiang University, China*
PhD *Nanyang Technological University, Singapore*
Email: zhiyzeng@cityu.edu.hk

Battery intercalation for material synthesis, mechanism study and energy applications
Failure mechanism study of Li-ion batteries using in-situ/ex-situ characterizations
Rational design of 2D transition metal dichalcogenides composites for CO2 reduction
Fabrication of graphene nanomesh by using AAO template for FET application

Adjunct Professor
Dr Hon Wah Pang
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Service life of concrete structures
Investigation and repair of aged concrete buildings

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