



**NANYANG  
TECHNOLOGICAL  
UNIVERSITY**  
SINGAPORE

# R10 Town Hall

**Prof Lalit Goel**  
Director, REP

**27 Sep 2021**  
**2 pm**



# Today's Agenda

- Overview of Overseas Partner Universities
- Credit Transfer Policy and Professional Attachment
- Academic Matters / Course Registration
- Dean's List AY2020-2021



# **OVERVIEW OF OVERSEAS PARTNER UNIVERSITIES**





# IMPERIAL COLLEGE LONDON

Imperial College  
London

- Specialises primarily in science, engineering, management and medicine, as well as having a leading business school
- Term starts in Fall (October)



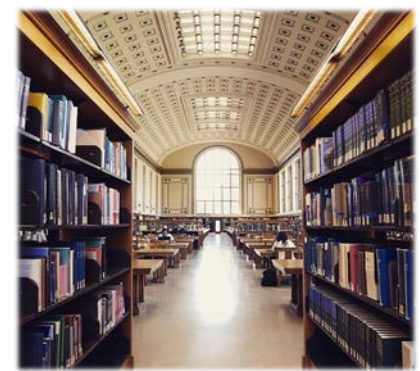
# IMPERIAL COLLEGE LONDON

- Student Life – diverse student population. Nobel laureates. Campus is in South Kensington (Zone 1), hostel will be at Woodward Hall (Zone 3)
- Course coordinator in each Engineering department for students to seek advice
- Courses are measured in ECTS, slightly different from NTU's system

# UNIVERSITY OF CALIFORNIA, BERKELEY



- Specialises in engineering, research and entrepreneurship
- Well known for producing a high number of entrepreneurs
- Semester starts in Fall (August)





# UNIVERSITY OF CALIFORNIA, BERKELEY



- For **Computer Science students** to note (arrangement since R5)
  - List of courses is pre-fixed by Berkeley, in consultation with REP Office and registration is on a first-come-first-served basis
  - List of courses may be subject to change, working closely with UCB on the list; here is an example of past CS courses (UCB will send us the updated list next year)

Course Number	Course Name
CS 188	Introduction to Artificial Intelligence
CS 170	Efficient Algorithms and Intractable Problems
CS 161	Computer Security
CS 164	Programming Languages and Compilers
INFO 154	Data Mining and Analytics
INFO 159	Natural Language Processing
IEOR 160	Nonlinear and Discrete Optimisation
IEOR 162	Linear Programming and Network Flows
IEOR 174	Simulation for Enterprise-scale Systems
INFO 253B	Back-End Web Architecture
INFO 290T	Special Topics in Technology

- For other specialisations, UCB will also provide a similar list of courses



# UNIVERSITY OF BRITISH COLUMBIA



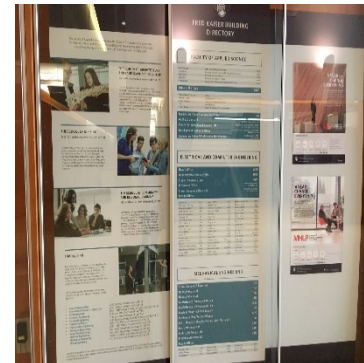
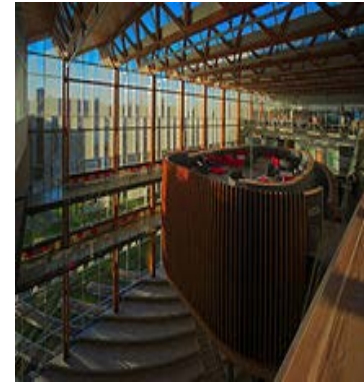
- Diversity of engineering courses, strong research expertise and innovation
- Flexible learning and teaching pedagogy, with state-of-the-art infrastructure and facilities and strong engagement with the community
- 7 Nobel prize winners among current and former faculty and alumni
- Semester starts in Fall (September)





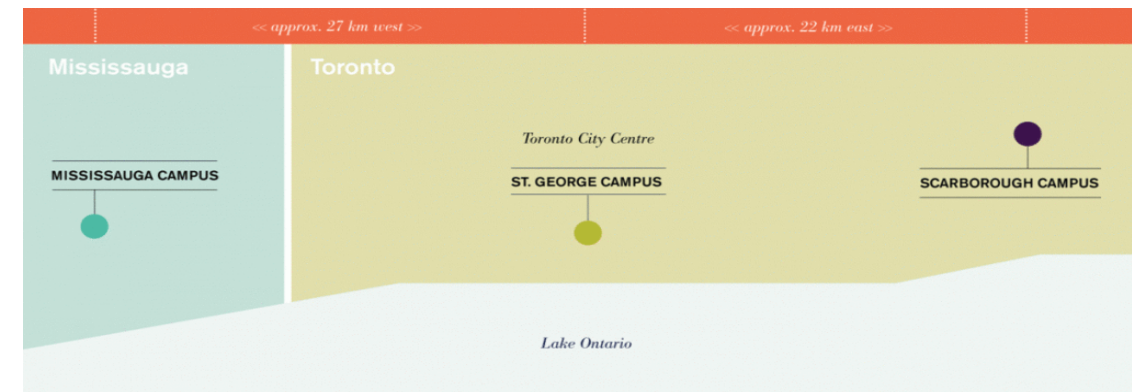
# UNIVERSITY OF BRITISH COLUMBIA

- Engineering courses are offered under Faculty of Applied Science
  - Chemical Engineering
  - Chemical and Biological Engineering
  - Civil Engineering
  - Computer Engineering
  - Electrical Engineering
  - Environmental Engineering
  - Materials Engineering
  - Mechanical Engineering
- Courses are measured in credits, similar to NTU (3 or 4 credits courses, Computer courses tend to be 4 credits)
- Can apply for any hostel on campus, subject to availability



# UNIVERSITY OF TORONTO

- Strong focus in innovation, with assistance to help entrepreneurs turn their ideas into viable ventures. In the past five years, more than 150 research-based start-ups were launched from the university
- Dynamic student life with 1,000+ organisations and boundless choices to explore – athletic teams, arts and culture, academic associations and community involvement
- Notable alumni include:
  - **Frederick Banting** *Co-discover of insulin and Nobel Prize recipient*
  - **Lester B. Pearson** *14th Prime Minister of Canada and Nobel Peace Prize recipient*
  - **Jeff Skoll** *Founder & Chair, The Skoll Foundation; first President of eBay Inc*
- Semester starts in Fall (September)
- Different campus





# UNIVERSITY OF TORONTO



- Engineering courses are offered under Faculty of Applied Science & Engineering
  - Biomaterials and Biomedical Engineering
  - Chemical Engineering and Applied Chemistry
  - Civil Engineering
  - Electrical and Computer Engineering
  - Engineering Science
  - Materials Science and Engineering
  - Mechanical and Industrial Engineering
- Computer Science courses are offered under Faculty of Arts and Science
- Courses are measured in 0.5 credits (1 half-year course) / 1 credit (1 full-year course)
- Can apply for those hostel on campus that are designated for Engineering students
  - some are opened for female students only
  - subject to availability





# UNIVERSITY OF WATERLOO



- Largest engineering school in Canada, >10k students enrolled in 2018
- Learning pedagogy is about problem-based learning
  - focus on experiential learning to encourage students to take risks and be open to experiences that will change them and help them grow
  - Entrepreneurship ecosystem - enables students to create their own businesses based on an idea and gives them the room to see if it works
- Prides itself on its innovation and strong co-op education programme
- Diverse student life with 250+ student clubs and 30 athletic clubs
- Semester starts in Fall (September)



# UNIVERSITY OF WATERLOO

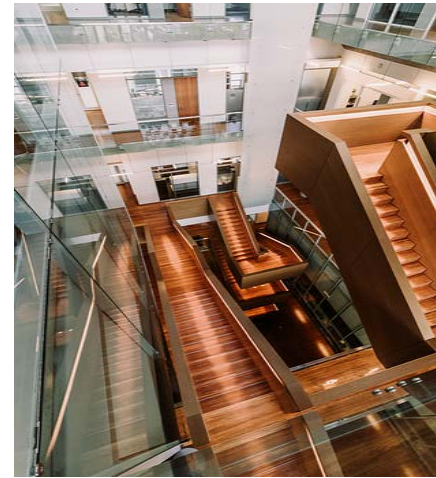


- Engineering courses are offered under Faculty of Engineering
  - Biomedical Engineering
  - Chemical Engineering
  - Civil Engineering
  - Computer Engineering
  - Electrical Engineering
  - Environmental Engineering
  - Mechanical Engineering
  - Mechatronics Engineering
  - Nanotechnology Engineering
- Courses are assigned unit weights, which vary from 0.00 to 3.00 credits. Most one-term courses carry a 0.5 unit weight. Course unit weights are used to calculate weighted averages
- Its David R. Cheriton School of Computer Science is one of the largest mathematics and computing centres in the world
- Can apply for different types of hostels on campus



# UNIVERSITY OF WATERLOO

- Home to the world's largest concentration of math and computer science talent
- Has established a few good institutes such as the Waterloo Artificial Intelligence Institute, Waterloo Cybersecurity and Privacy Institute and the Institute for Quantum Computing, which is one of the world's leading quantum experimentation centres and a key part of the Waterloo quantum ecosystem
- UW is now known as THE top recruiting ground for companies in the Bay Area and has become a magnet for tech-company recruiters like Google, Amazon
- Its 38<sup>th</sup> ranking in Engineering & Technology, which includes computer science and most engineering disciplines has put it ahead of Yale University (43<sup>rd</sup>) and Columbia University (47<sup>th</sup>) in US, and also fast catching well-known engineering and technology powerhouses like Cornell University (36<sup>th</sup>) in US and KTH Royal Institute of Technology (31<sup>st</sup>) in Sweden





# Summary of the Partner Universities

	ICL	UCB	UBC	UofT	UW
Culture	European Arts and Culture	Creative and Entrepreneurial Culture	Innovative experiential learning opportunities	Strong focus in innovation and diverse student life	Strong in innovation and co-op education programme
Uniqueness	Academic depth and rigor	Entrepreneurship and innovation	Strong cross-disciplinary collaboration	Entrepreneurship and innovation	Entrepreneurship and innovation

# R10 – Preliminary Choices of Overseas Universities

Specialisation	UCB	ICL	UBC	UofT	UW
Civil Engineering		1			
Computer Engineering	1		1		
Computer Science	26	1	1		
Electrical and Electronic Engineering	4		3	2	
Environmental Engineering	1				
Mechanical Engineering	3	3	4	1	
<b>Total</b>	<b>35</b>	<b>5</b>	<b>9</b>	<b>3</b>	<b>0</b>

Submit your final choice of overseas partner university online by **26 OCT 2021**



# Allocation of places for Overseas Universities

Specialisation	UCB	ICL	UBC	UofT	UW
Civil Engineering		1			
Computer Engineering	1		1		
Computer Science	26	1	1		
Electrical and Electronic Engineering	4		3	2	
Environmental Engineering	1				
Mechanical Engineering	3	3	4	1	
<b>Total</b>	<b>35</b>	<b>5</b>	<b>9</b>	<b>3</b>	<b>0</b>

Overseas Partner University	Number of Places
UCB	25
ICL	9
UBC	6
UofT	6
UW	6
<b>Total</b>	<b>52</b>



# Process and Timeline

Activity	Date
Consultation with REP Fellows, and seek advice from Seniors and REP Office	Oct 2021
Clinic sessions with REP Office	Sep/Oct 2021
Final Decision on your overseas university – please submit your final choice online	26 Oct 2021

- In the event of overwhelming response for a particular overseas university, REP Office will update on ways to resolve this***

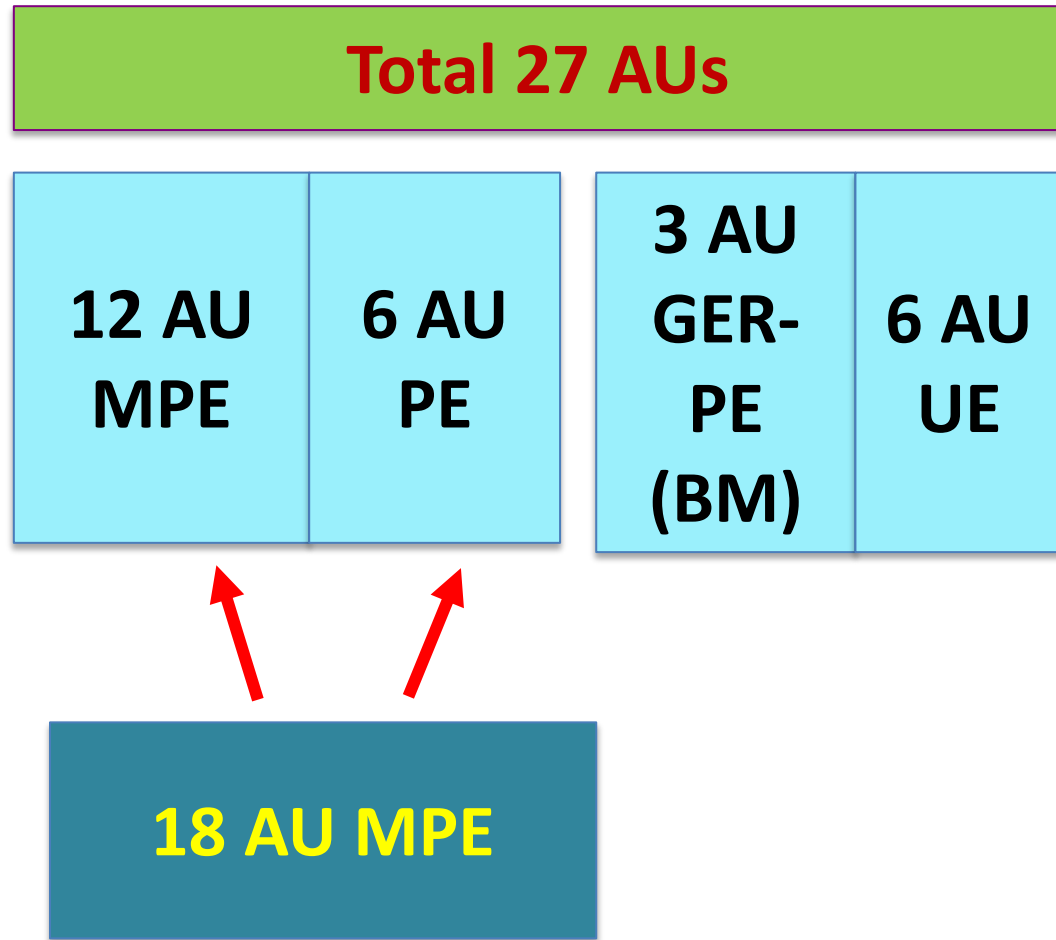
Specialisation	REP Fellows
Computer Engineering Computer Science	Assoc Prof Nicholas Vun SCSE
Mechanical Engineering Aerospace Engineering	Assoc Prof Leong Kai Choong MAE
Electrical and Electronic Engineering	Assoc Prof Teh Kah Chan EEE
Civil Engineering Environmental Engineering	Prof Tan Kang Hai CEE



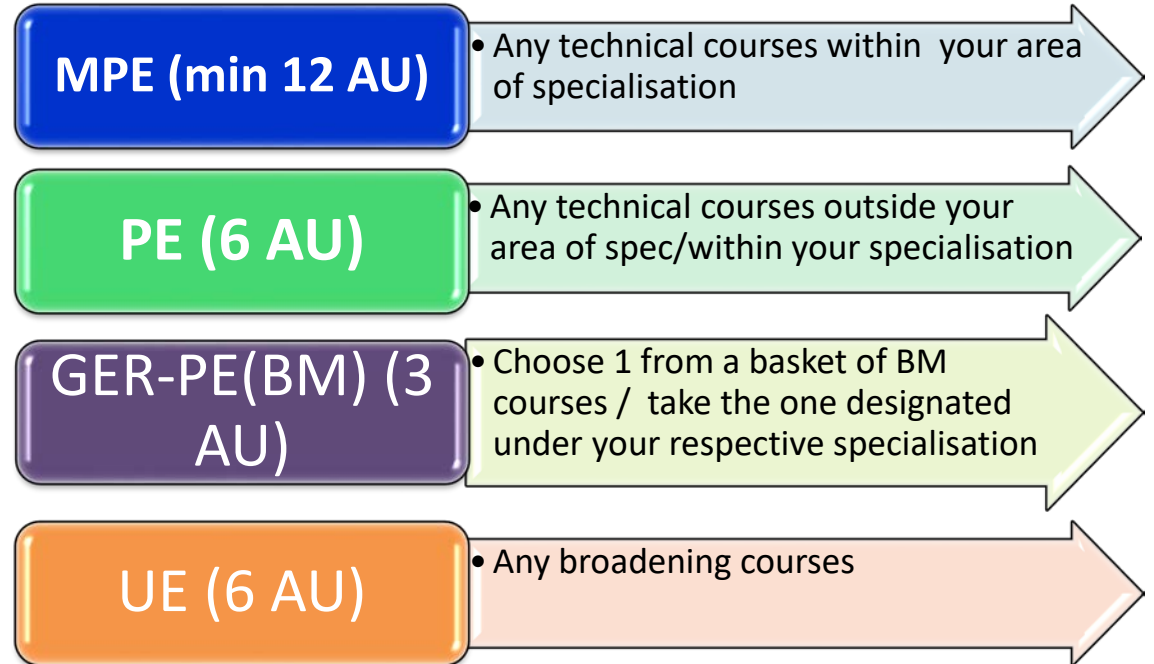
# **CREDIT TRANSFER POLICY AND PROFESSIONAL ATTACHMENT**



# Credit Transfer Policy for Overseas Year



- Course selection at overseas universities and credit transfer shall be based on:



- Any AU in excess of 18 AU for MPE will be credited as UE
- Enhanced NTU transcript
- Degree audit will reflect mapped NTU course codes (for MPE) amounting to a credit transfer of **18 AU MPE, 3 AU GER-PE(BM) and 6 AU UE**
- Technical courses not mapped to NTU courses but endorsed by the School as an engineering course in the specialisation will be credited as MPE

# Professional Attachment Calendar

Overseas University	Professional Attachment Period (after Year 2 Semester 2)	Academic Semester
Imperial College London, UK	July to September	October to June

Overseas University	Academic Semester	Professional Attachment Period (after Year 3 Semester 2)
UC Berkeley, US	August to May	May to July
University of British Columbia, Canada	September to April/May	May to July
University of Toronto, Canada	September to April/May	May to July
University of Waterloo, Canada	September to April/May	May to July





# Estimated Timeline on Professional Attachment

Activity (for ICL)	By
Submit your resume and inform CAO if you want to self-source	Oct/Nov 2021
Deadline for self-sourcing <i>(CAO may assist if unsuccessful, depending on availability of internship opportunities at that point)</i>	Jan 2022
CAO-assisted sourcing	End of year – Mar 2022
Confirmation of placements	Early May 2022
Depart for ICL	End Sep/Early Oct 2022

Activity (for UCB/ UBC/UofT/UW)	By
Submit your resume to CAO	UCB - mid Jul 2022 UBC/UofT/UW- mid Aug 2022
If you are self-sourcing, please inform CAO before the 'official call' and guidance will be provided by their career consultants	
Depart for US (UCB)	Mid Aug 2022
Depart for Canada (UBC/UofT/UW)	Early Sep 2022
CAO-assisted sourcing	Mid Aug 2022 – early Feb 2023
Deadline for self-sourcing	Mid Jan 2023

*Do inform CAO early if you wish to self-source*

*Do note departure dates are subject to university's advisory and overseas university's schedule*



# Things to Note

- Please ensure your passport validity > 2 years
- For those heading to ICL, do take note of the Schengen 90/180 law and try not to make any holiday plans to European countries in May / June (provided travelling is allowed then and you are doing an internship overseas before start of term in ICL in October)
  - *The visa **90/180 days rule** means that the Schengen zone visitor or the Schengen visa holder can travel freely within the [Schengen zone](#) for a maximum stay of up to 90 days in any half year period. The 90/180 days rule means that once the visitor has spent a total of 90 days in the Schengen zone (either consecutively or separately) within any half year, he or she must leave the Schengen zone.*
  - *Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, and Sweden.*

*This may change depending on the policy of the European countries and UK*



# Planning for Contingency due to COVID-19

- Due to COVID-19, planning for contingency in case overseas exchange is not able to proceed in AY2022
- REP Office will continue to monitor the situation

# **ACCOUNT MANAGERS FOR OVERSEAS UNIVERSITIES**





# Account Managers

Country	Overseas University	Account Manager
US	University of California, Berkeley	Chow Kwok Weng
UK	Imperial College London	Ellen Yeo
Canada	University of British Columbia	
Canada	University of Toronto	
Canada	University of Waterloo	

# ACADEMIC MATTERS



# AY2020-2021 CURRICULUM

Year 1	Mathematics I (4 AU)	Electronic and Information Engineering (3 AU)	Chemical and Biomolecular Engineering Fundamentals and Applications (3 AU)	Materials & Manufacturing (3 AU)	Fundamentals of Management (3 AU)	Writing & Reasoning (3 AU)	Ethics and Moral Reasoning (1 AU)
Semester 1							
Year 1	Mathematics II (4 AU)	Introductory Thermal Sciences and Electromagnetism (3 AU)	Introduction to Engineering Mechanics (3 AU)	Engineering Computation (3 AU)	Accounting (3 AU)	Sustainability: Seeing through the haze (1 AU)	Engineers & Society (3 AU)
Semester 2							
Year 2	Renaissance Design I (4 AU)	Major Prescribed Core (3 AU)	Major Prescribed Core (3 AU)	Major Prescribed Core (3 AU)	Financial Management (3 AU)	Communicating as a 21st Century Engineer (3 AU)	#Data Science & AI (3 AU)
Semester 1							
Year 2	Renaissance Design II (4 AU)	Major Prescribed Core (3 AU)	Major Prescribed Core (3 AU)	Major Prescribed Core (3 AU)	Strategic Marketing (3 AU)	Foundations of Engineering Leadership (1 AU)	Kickstart Your Career Success (1 AU)
Semester 2							
Year 3	Professional Attachment (5AU)	4 Major Prescribed Elective (12 AU)	2 Prescribed Elective (6 AU)	1 Business Management (3 AU)	2 Unrestricted Elective (6 AU)		
Exchange							
Year 4	Final Year Project / Renaissance Capstone Project (8 AU)	Major Prescribed Elective (3 AU)	Major Prescribed Elective (3 AU)	Prescribed Elective (3 AU)	GER PE-LA (3 AU)	Advanced Topics in Engineering Leadership (3 AU)	
Semester 1							
Year 4		Major Prescribed Elective (3 AU)	Prescribed Elective (3 AU)	Business Analytics & Applied Machine Learning (3 AU)	Digital Transformation (3 AU)	Ethics & Governance Issues in Technology Management (3 AU)	
Semester 2							
Year 5	The Law of Obligations & Intellectual Property (3 AU)	System Thinking & Holistic Decision Making (3 AU)	Operations & Supply Chains (3 AU)	Entrepreneurship, Strategy and Innovation: Real World Applications (6 AU)	MSc Elective (3AU) ^		
Semester 1							
Total AU Requirement (UG - 138 AU)	Core = 47 AU	MPE = 51 AU	GER-Core = 16 AU	GER-PE(LA) = 3 AU	GER-PE(BM) = 15 AU	UE = 6 AU	
Total AU Requirement (PG - 30 AU)							

#Based on schools' offering semester ^may take in Year 4 Semester 1, Year 4 Semester 2 or Year 5 Semester 1



# **COURSE REGISTRATION FOR AY2021 SEMESTER 2**



# Course Registration for AY2021 Semester 2

- AY2021 Semester 2 starts on 10 Jan 2022, Monday
- Look out for email on course registration schedule for AY2021 Semester 2, class Schedule will be available by mid Nov 2021
- Do note Add/Drop period is from 10 to 21 Jan 2022 (10 am to 10 pm daily)
- Please follow the curriculum map as closely as possible
- For waiver of pre-requisites for a particular technical course, the offering School will need to review (i.e. if you are considering Minor or overloading)
- Do look out for more details on course registration from REP Office



# Q&A

