



**NANYANG
TECHNOLOGICAL
UNIVERSITY**
SINGAPORE

Entrepreneurship Academy

DRIVING THE NEXT GENERATION OF ENTREPRENEURS AND INNOVATORS

SECOND MAJOR IN ENTREPRENEURSHIP



NTU Innovation and Entrepreneurship

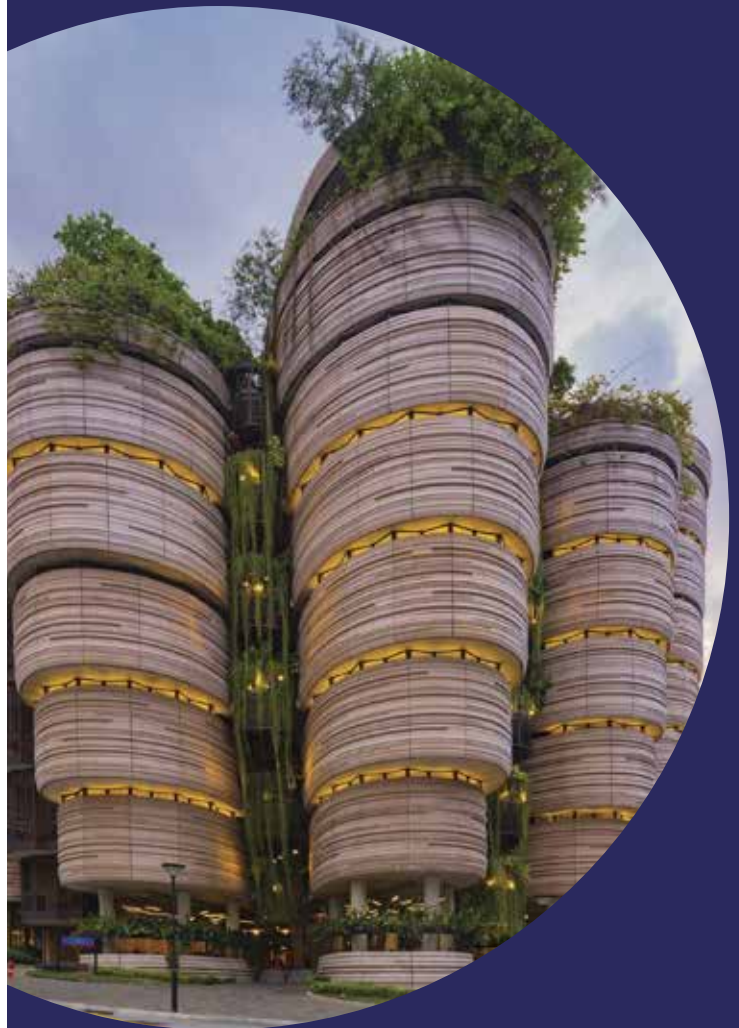


ABOUT NTU SINGAPORE

Young and research intensive, Nanyang Technological University, Singapore (NTU Singapore) has 33,000 undergraduate and postgraduate students in engineering, business, science, humanities, arts, social sciences, education and medicine. Ranked among the world's top universities, besides being reputed as one of the world's most beautiful campuses, the NTU Smart Campus is a living testbed of tomorrow's technologies and a model of sustainability, with 61 Green Mark Platinum awards for its building projects. In addition to its main campus in the western part of Singapore, NTU also has a medical campus in Novena, Singapore's healthcare district.

ABOUT NTUpreneur

NTU Entrepreneurship Academy (NTUpreneur), previously known as Nanyang Technopreneurship Center, is the focal point of entrepreneurship education within the University and the region. NTUpreneur nurtures and promotes a culture of innovation and entrepreneurship endeavours through academic programmes such as the Minor in Entrepreneurship (MiE), the Second Major in Entrepreneurship (SMiE) and the Overseas Entrepreneurship Programme (OEP) for undergraduates, Master of Science in Technopreneurship and Innovation (MSc TIP) and FlexiMasters™ for postgraduates and the Entrepreneurship Development Programmes (EDP) for working professionals.





SECOND MAJOR IN ENTREPRENEURSHIP

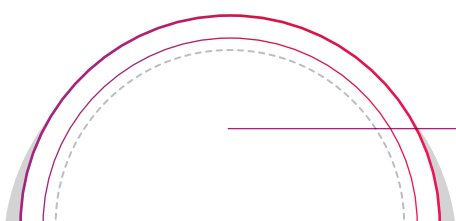
CULTIVATING INNOVATION AND ENTREPRENEURSHIP IN NTU

Technology is evolving rapidly and playing an increasingly significant role in the world's economic landscape. As drivers of technology innovation, entrepreneurs need to be sensitive to and quick in identifying the potential of technology and seize new opportunities to translate potential into products and services that benefit society. Entrepreneurship is a cornerstone of the growth strategies for the future economy. With Singapore being a leading startup hub in Asia and the world, NTU aims to bring about a step-change in its innovation and entrepreneurship culture and ecosystem.

NTU Entrepreneurship Academy (NTUpeneur) was established in January 2001 with seed funding from the Economic Development Board (EDB), Singapore. A multi-disciplinary university-level centre, NTUpeneur was created to be the focal point of technopreneurship education within the University and the region, and is committed to fostering, promoting and nurturing a culture of innovation and entrepreneurship.

NTUpeneur equips its students with the requisite knowledge and skills in entrepreneurship competence through the following programmes:

UNDERGRADUATE	POSTGRADUATE
Second Major in Entrepreneurship (SMiE)	Master of Science Technopreneurship and Innovation Programme (MSc TIP)
Minor in Entrepreneurship (MiE)	FlexiMasters™ & Graduate Certificate
Overseas Entrepreneurship Programme (OEP)	
Electives in Entrepreneurship	Electives in Entrepreneurship (for PhDs)



IMPACTING THE WORLD IN THE FIFTH INDUSTRIAL REVOLUTION

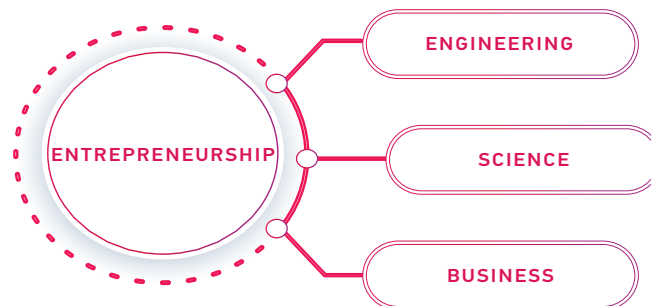
ABOUT SMiE

The Second Major in Entrepreneurship (SMiE) is developed with the goal to prepare NTU graduates to impact the world in the Fifth Industrial Revolution, in an era of ever increasing uncertainty and change. This also allows greater flexibility for undergraduates to pursue interdisciplinary programmes and pan-university majors. Students will be inspired to be venturesome and become more resilient in this ever-changing world.

SMiE IS OFFERED TO


Students from College of Engineering (CoE), College of Science (CoS) and Nanyang Business School (NBS).

SMiE students will be awarded a Bachelor of Engineering/Science/Business in their Engineering/Science/Business major with a separate certificate for the Second Major in Entrepreneurship.




PROGRAMME OPTIONS


There are three Business majors, five Science majors and twelve Engineering majors eligible for the SMiE.



College	Programme Code	Bachelor Degree
Business	ACC	Bachelor of Accountancy
	BUS	Bachelor of Business
	ACBS	Bachelor of Accountancy & Bachelor of Business



College	Programme Code	Bachelor Degree
Engineering	AERO	Bachelor of Engineering (Aerospace Engineering)
	BIE	Bachelor of Engineering (Bioengineering)
	CBE	Bachelor of Engineering (Chemical and Biomolecular Engineering)
	CEE	Bachelor of Engineering (Civil Engineering)
	CE	Bachelor of Engineering (Computer Engineering)
	CSC	Bachelor of Engineering (Computer Science)
	EEE	Bachelor of Engineering (Electrical and Electronic Engineering)
	ENE	Bachelor of Engineering (Environmental Engineering)
	IEM	Bachelor of Engineering (Information Engineering and Media)
	MAT	Bachelor of Engineering (Materials Engineering)
	ME	Bachelor of Engineering (Mechanical Engineering)
	REP	Renaissance Engineering Programme

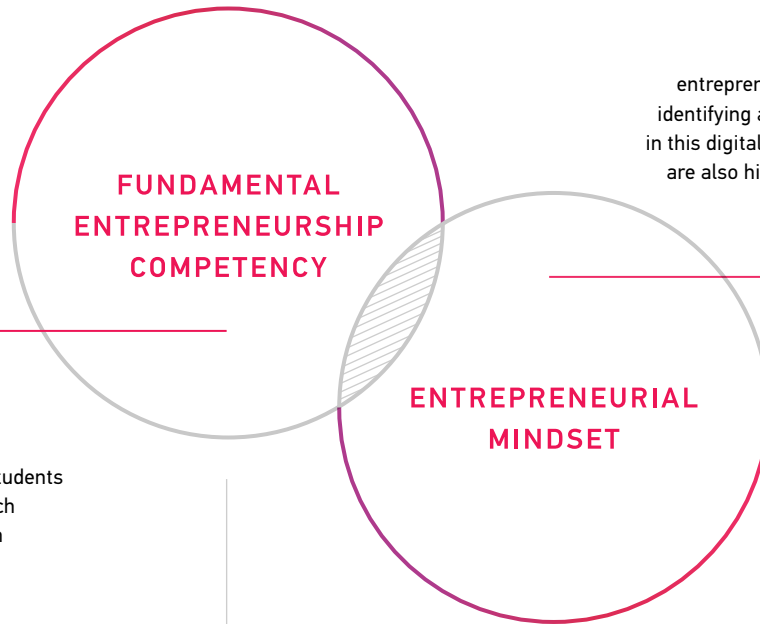


College	Programme Code	Bachelor Degree
Science	APHY	Bachelor of Science (Applied Physics)
	BS	Bachelor of Science (Biological Sciences)
	CHEM	Bachelor of Science (Chemistry & Biological Chemistry)
	EESS	Bachelor of Science (Environmental Earth Systems Science)
	MATH	Bachelor of Science (Mathematical Sciences)

WHY CHOOSE SMiE?

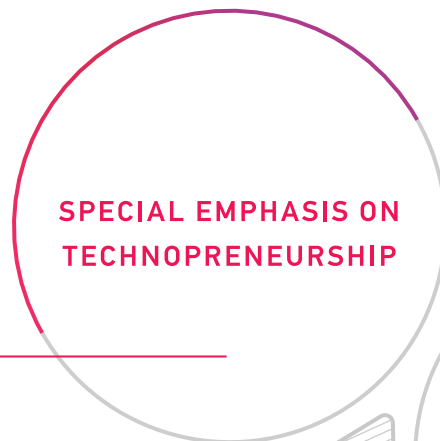
Hone Essential Skills

It equips students with essential entrepreneurship competency and mindset for identifying and launching new business ventures in this digital economy. These transferrable skills are also highly sought after by organisations, in order to succeed in this VUCA world.



Sharpening Your Competitive Edge for Future Success

This Second Major broadens and deepens the knowledge of NTU students in enterprise and innovation, which complements their core Majors in Business/Science/Engineering.



Building Meaningful Networks

SMiE students will be immersed in the Entrepreneurship Ecosystem, which brings together technology innovators, entrepreneurs, investors, policy-makers and other stakeholders.

They will have excellent networking and mentoring opportunities to learn and connect with distinguished NTUpreneur Advisors, Mentors and Alumni.

Riding the Wave of Technological Innovation

With the rise of the digital economy, SMiE differentiates NTU students with a strong competitive advantage in technopreneurship.

SMiE students will be exposed and challenged to be quick in identifying the potential of technology and seize new opportunities to that potential into products and services that benefit society.

They will be the next generation of leaders in driving technological innovation.



Gaining Entrepreneurial Experience and Global Perspective

SMiE students will join the flagship Overseas Entrepreneurship Programme (OEP) and have the 20-week overseas internship* in the world's leading entrepreneurial hubs. Students will gain a unique experience, which will equip them to be future-ready in a fast-changing global business landscape and accelerate their entrepreneurial journey.

* Students can also opt for local internship.

ACADEMIC STRUCTURE

The SMiE comprises of three key academic components:

Core Modules (12 AU)

Students will be required to take four modules for 12 AU as Core Modules so that they will be equipped with the fundamental entrepreneurship competency and the technopreneurial mindset, with an emphasis on experiential exposure and interactive learning.

Elective Modules (at least 13 AU)

To allow students to build further breadth and depth in entrepreneurship, they will select at least 13 AU of Elective Modules based on their interests and needs. A diversified range of topics will be offered by NTUpreneur and other Schools to promote interdisciplinary learning in SMiE.

Compulsory Experiential Component (10 AU)

To intensify experiential learning, students are required to take a compulsory 20-week internship with organisations, that can unclude startups and venture capital firms.

CORE MODULES (12 AU)	ELECTIVE MODULES (AT LEAST 13 AU)
<ul style="list-style-type: none">• Entrepreneurial Mindset and Technology Innovation• Entrepreneurial Ecosystems• Managing New Ventures• Financing Entrepreneurial Ventures	<ul style="list-style-type: none">• E-startups & Social Media Strategies• Enterprise Strategy• Business Venture Implementation• Entrepreneurial Business Development• Venture Capital Investment and Practices• Design and Systems Thinking for Entrepreneurs• Innovation and Commercialisation of Technologies• Deep Dive into Entrepreneurship• Innovation Marketing• Law of Intellectual Property & New Media• Social Entrepreneurship• From Passion to Action: Six Key Steps to A Start-up!• Entrepreneurship in Medtech and Biotechnology
20-WEEK EXPERIENTIAL PROGRAMME (10 AU)	
<p>20-week internship* with organisations, that can include startups, venture capital firms, entrepreneurship support organisations, and innovation setups in corporations.</p> <p><i>*With the option of Overseas Entrepreneurship Programme or Local Professional Attachment</i></p>	

FULL CURRICULUM

Course Code	Course Title	Academic Units (AU)	Offering Semester	Pre-requisite / Co-requisite
A. Core Modules (12 AU)				
ET5211	Entrepreneurial Mindset & Technology Innovation	3	1	-
ET5212	Entrepreneurial Ecosystems	3	1	-
ET5213	Managing New Ventures	3	2	-
ET5214	Financing Entrepreneurial Ventures	3	2	Pre-requisite: ET5213
B. Elective Modules (at least 13 AU)				
ET5122	E-Startups & Social Media Strategies	3	1 & 2	-
ET5134	Enterprise Strategy	3	1 & 2	Pre-requisite: ET5211
ET5135	Business Venture Implementation	3	1 & 2	Pre-requisite: ET5211 Co-requisite: ET5214
ET5215	Entrepreneurial Business Development	3	2	-
ET5216	Venture Capital Investment & Practices	4	1	Pre-requisite: ET5213
ET5217	Design & Systems Thinking for Entrepreneurs	4	2	-
ET5218	Innovation & Commercialisation of Technologies	3	1	-
ET5101	Deep Dive into Entrepreneurship	3	1	-
BU5503	Innovation Marketing	3	1 & 2	-
BU5302	Law of Intellectual Property & New Media	3	2	-
AB0603	Social Entrepreneurship	3	1 & 2	-
EE5083	From Passion to Action: Six Key Steps to A Start-up!	3	1	-
CB4216	Entrepreneurship in Medtech and Biotechnology	3	2	-
C. Compulsory Experiential Component (10 AU)				
20-week internship with organisations, that can include startups, venture capital firms, entrepreneurship support organisations, and innovation setups in corporations. E.g.				
<ul style="list-style-type: none"> • 20-week Overseas Entrepreneurship Programme (OEP) • 20-week Local Professional Internship (for CoE & CoS) • 20-week Local Professional Attachment or 2 x 10-week Local Professional Attachment (for NBS & CoS)^ 		10	-	-

^For NBS & CoS students who plan to take the 2 x 10-week Local Professional Attachment, you are strongly advised to complete the following modules in Year 1.

Year 1 Sem 1 - Entrepreneurial Mindset & Technology Innovation

Year 2 Sem 1 - Entrepreneurial Ecosystems

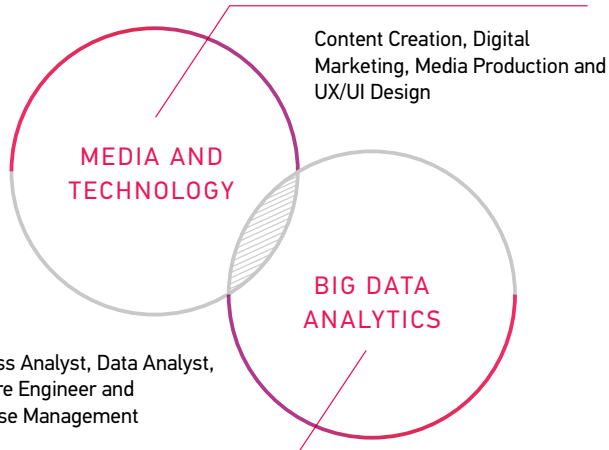
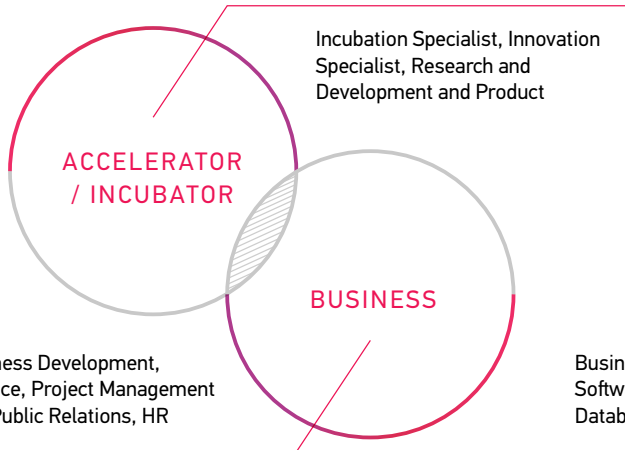
Year 1 Sem 2 - Managing New Ventures

Year 2 Sem 2 - Financing Entrepreneurial Ventures

GLOBAL EXPOSURE

OVERSEAS ENTREPRENEURSHIP PROGRAMME (OEP)

Nurturing future start-up founders and corporate innovators in global innovation hotspots.



OTHER ACADEMIC CONSIDERATIONS

ADMISSION REQUIREMENTS

Candidates must meet the minimum entry requirements of their Bachelor Degree, including the minimum subject requirements.

For more information, please contact the Office of Admissions.

COLLEGE OF ENGINEERING

The engineering schools will be in charge of putting up the ISFYP which should be entrepreneurship-related (e.g. new product in development phase etc).

COLLEGE OF SCIENCE

CoS students will have the option to take up two 10-week internships to giving them more flexibility should they wish to go on an overseas exchange program.

NANYANG BUSINESS SCHOOL

NBS students pursuing a single-degree programme (either ACC or BUS) and taking up the 20-week OEP or local internship with SMiE, may need to extend their programme duration by one semester (i.e. graduate in 3.5 years instead of 3 years), averaging 18 AU per semester.

NBS students pursuing a double-degree in accountancy and business (ACBS) and taking up the 20-week OEP or local internship with SMiE, may need to extend their programme duration by one semester (i.e. graduate in 4.5 years instead of 4 years), averaging 18 AU per semester.

GRADUATION

Students satisfying all academic requirements for the SMiE will be awarded a Bachelor of Engineering/Science/Business in their chosen Engineering/Science/Business major, with a separate certificate for the Second Major in Entrepreneurship upon graduation.

CAREER PATHWAYS

The SMiE provides NTU students the unique competitive advantages in highly transferrable skills, entrepreneurial mindsets, and global exposure to address the challenges of the future.

SMiE students will be the game changers and will have the versatility to choose from a wide range of career options:

- Entrepreneurs
- Venture capitalists
- Government policy makers
- Management consultants
- Business innovation and new venture development in large corporations



TESTIMONIALS



“I really enjoy the SMiE classes and learn so much about what it means to be an entrepreneur. There are no regrets taking this second major and I’m thrilled to be a part of it.”

Grace Sui-Ying Wiggins
Bachelor of Engineering in Bioengineering
College of Engineering

“An exciting journey filled with engaging lessons, diverse people and a common desire to enact change!”

Reily Lim Wei Yang
Bachelor of Accountancy
Nanyang Business School



CONTACT US

Nanyang Business School	Contact
Accountancy with a Second Major in Entrepreneurship	6790 4667 upo-enquiries@ntu.edu.sg
Business with a Second Major in Entrepreneurship	
Accountancy and Business with a Second Major in Entrepreneurship	

College of Engineering	Contact
Aerospace Engineering with a Second Major in Entrepreneurship	Ms Soh Mei Zhen 6790 5517
Mechanical Engineering with a Second Major in Entrepreneurship	
Bioengineering with a Second Major in Entrepreneurship	Assoc Prof Raymond Lau 6316 8830
Chemical and Biomolecular Engineering with a Second Major in Entrepreneurship	
Civil Engineering with a Second Major in Entrepreneurship	Mdm Ho-Woo Siew Cheun 6582 2439
Environmental Engineering with a Second Major in Entrepreneurship	
Computer Engineering with a Second Major in Entrepreneurship	Assoc Prof Nicholas Vun 6582 2439
Computer Science with a Second Major in Entrepreneurship	
Electrical and Electronic Engineering with a Second Major in Entrepreneurship	Ms Madona Fernandez 6790 6364
Information Engineering and Media with a Second Major in Entrepreneurship	Assoc Prof Chua Hock Chuan 6790 4547
Materials Engineering with a Second Major in Entrepreneurship	Dr Ratih Oktarini 6790 4854
Renaissance Engineering Programme with a Second Major in Entrepreneurship	Ellen Yeo 6908 2230

College of Science	Contact
Environmental Earth Systems Science with a Second Major in Entrepreneurship	ase_undergrad@ntu.edu.sg 6908 3366/3383
Biological Sciences with a Second Major in Entrepreneurship	vd-sbs-acad@ntu.edu.sg
Chemistry and Biological Chemistry with a Second Major in Entrepreneurship	cceb_ugmatters@ntu.edu.sg
Mathematical Sciences with a Second Major in Entrepreneurship	spmsundgrad@ntu.edu.sg 6513 8459
Applied Physics with a Second Major in Entrepreneurship	

CONNECT WITH US

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Information is accurate at the time of publication and subject to change without prior notice. The programme options offered are available as at time of printing. The University reserves the right to update any of the programme options and curricula without prior notice and obligation.