

# NUS SCALE

DEVELOPING **PROFESSIONALS**

TRANSFORMING **ORGANISATIONS**

SHORT-TERM STUDY PROGRAMMES FOR YOUTHS - 2019

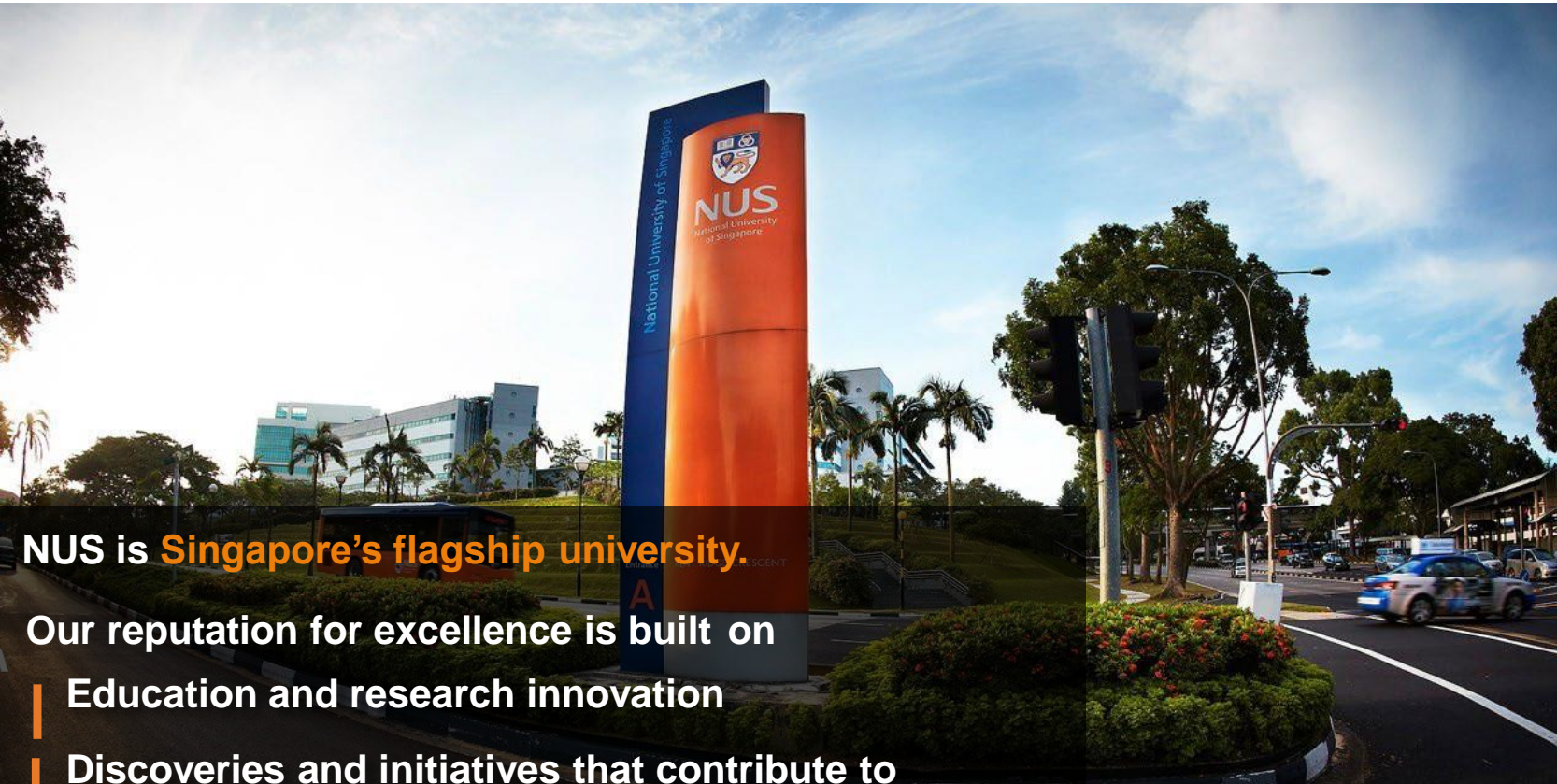
# SCALING NEW HEIGHTS WITH YOU



# ABOUT NATIONAL UNIVERSITY OF SINGAPORE (NUS)



School of Continuing and Lifelong Education



**NUS is Singapore's flagship university.**

**Our reputation for excellence is built on**

**Education and research innovation**

**Discoveries and initiatives that contribute to country and society**

**#1**

**in Asia**

QS Universities Ranking 2019

**#11**

**in the world**

QS Universities Ranking 2019

**#8**

**Graduate Employability in Asia**

QS Universities Ranking 2019

**#4**

**World's Most International Universities**

Times Higher Education World University Rankings 2018

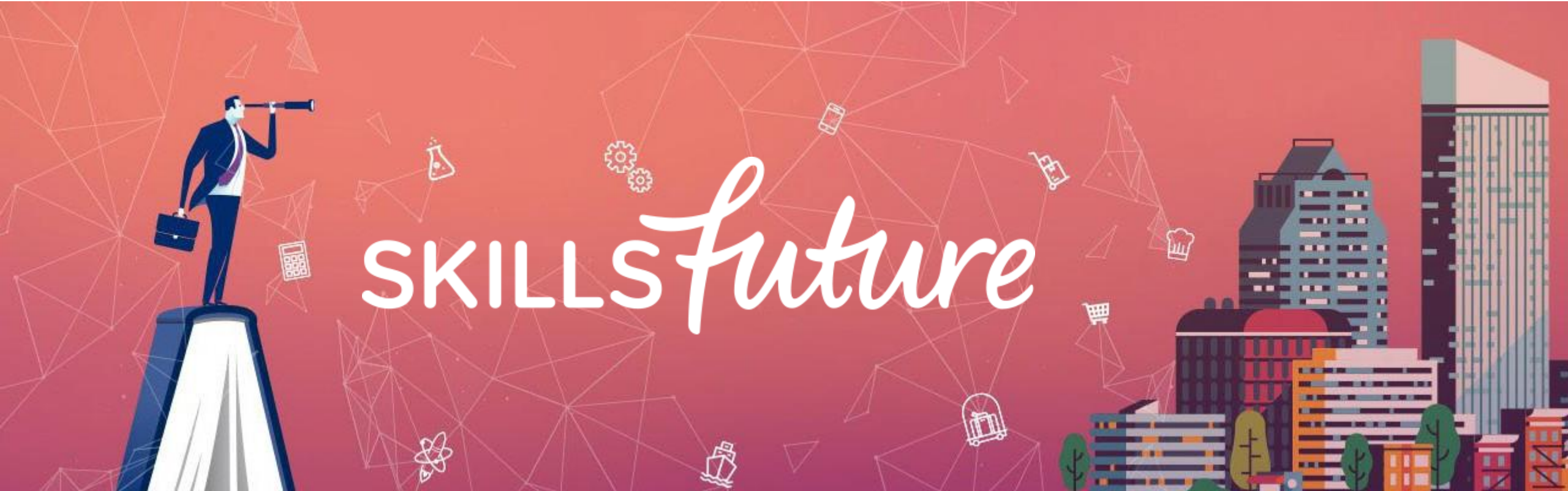
# Areas of specialisation



# NUS SCALE was conceived in 2016 in response to Singapore's SkillsFuture initiative



School of Continuing and Lifelong Education



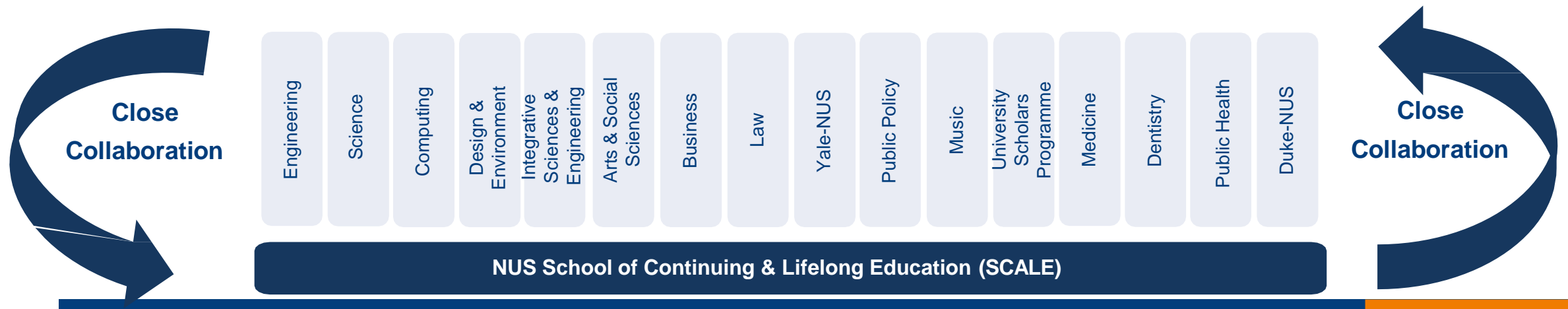
<http://www.skillsfuture.sg/>

# NUS SCALE is the gateway to continuous and executive education in NUS

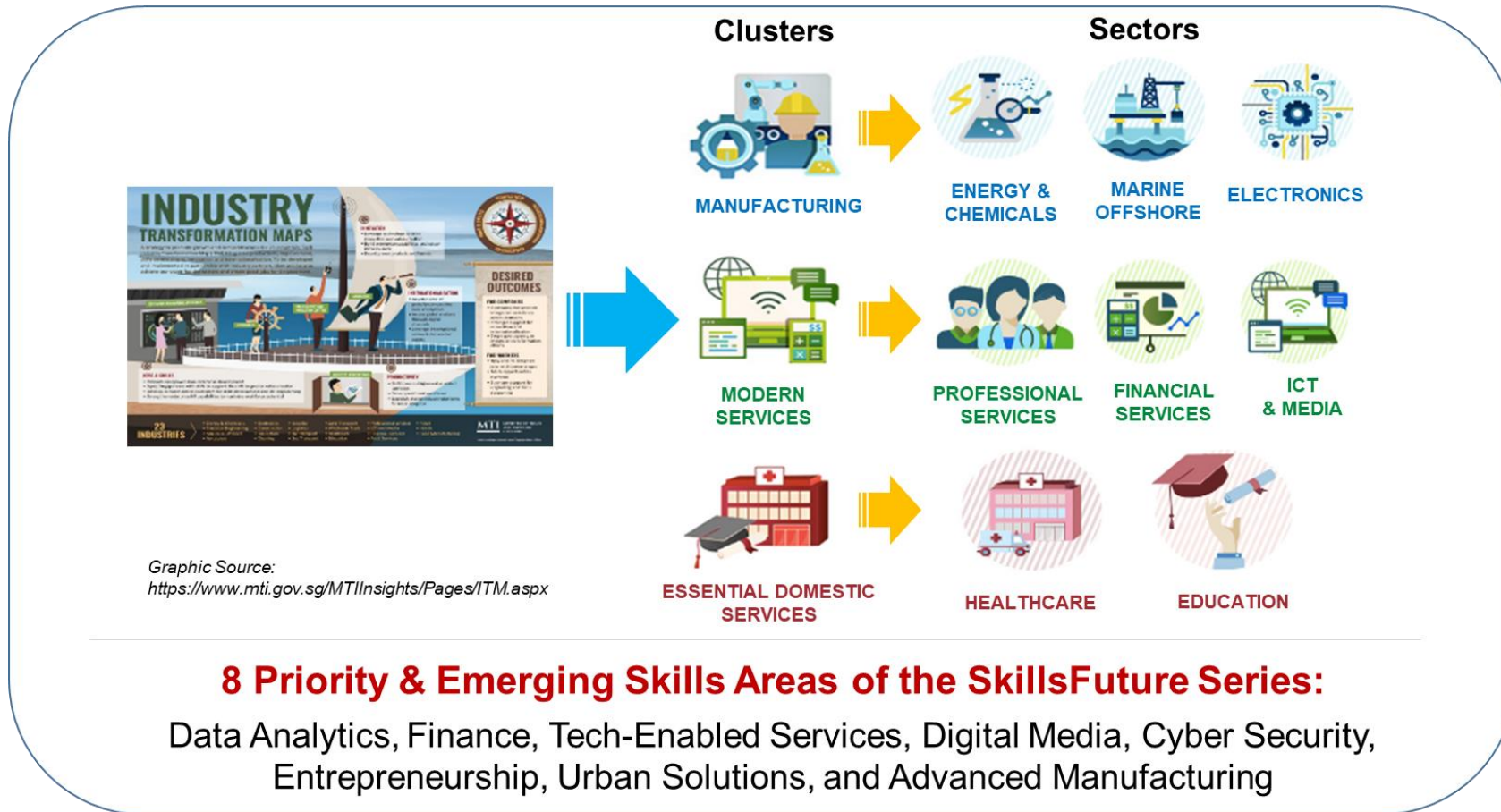
Provides *multi-disciplinary* learning opportunities to:

- Support youth career and impact aspirations
- Support aspiring working adults acquire new skills, knowledge and qualifications from a leading University
- Enable companies and industries to stay competitive

By drawing from the 16 other reputable NUS Faculties and Schools, backed by NUS research excellence



# NUS SCALE is aligned to the vision of a future-ready workforce



Graphic Source:  
<https://www.mti.gov.sg/MTIInsights/Pages/ITM.aspx>

Taking reference from Singapore’s Industry Transformation Maps, and SkillsFuture frameworks, our programmes are designed to build a workforce that is prepared for the next phase of economic development –

- an advanced economy
- a SMART city
- and an inclusive society

# PROPOSED PROGRAMME #1: BUSINESS AND SERVICE INNOVATION

	Day 1	Day 2	Day 3	Day 4	Day 5
Half day session  0900-1200h / 1400-1700h	Banking and Finance (Innovation Outlook)	Marketing and Branding	Leadership and Management	Service Innovation	Innovative Design Thinking Workshop team design challenge  Design Thinking is a human-centered methodology for innovation. It draws on methods from engineering and design, combining ideas from arts, tools from social sciences and insights from the business world.  <i>Presentation of certificates of completion</i>

Notes:

- Up to 40 students may be accepted into this programme.



# PROPOSED PROGRAMME #2: MUSICAL ART AND CULTURE

Day 1	Day 2	Day 3 (Optional)	Day 4	Day 5
Patrons of the Arts	<p>Social and Cultural Studies Through Music</p> <p>Western Music in a Singaporean Context</p>	<p>Noon Recital</p> <p>The Wednesday Noon Recitals offer short student performance from the full range of Conservatory activity, an ideal introduction to the world of classical music</p>	<p>Foundations for Musical Discovery</p> <p>Social History of the Piano</p>	<p>Musical Play &amp; Reflections (2h)</p> <p><i>Presentation of certificate of completion</i></p>

## Notes:

- Students may join current NUS students in the classes. Some classes may be structured for a combined lesson between the immersion students and NUS students followed by an independent lesson for the immersion students only.
- Up to 25 students may be accepted into this programme.

# PROPOSED PROGRAMME #3 ARTIFICIAL INTELLIGENCE AND FUTURE TECHNOLOGIES

	Day 1	Day 2	Day 3	Day 4	Day 5
1400-1700h	Introduction to AI	AI and Machine learning	Machine Learning	Computer Vision/Text Processing	Final Participant Presentation  <i>Presentation of certificates of completion</i>

Notes:

- This is an introductory course, recommended for non-STEM students and lower level undergraduates in STEM studies.
- Up to 40 students may be accepted into this programme.

# PROPOSED PROGRAMME #4: LEADING FOR PERSONAL AND CAREER SUCCESS



	Day 1	Day 2	Day 3	Day 4	Day 5
Half day session:  0900-1200h / 1400-1700h	The Human Mind:  Interpersonal Agility	Cultivating Resilience	Career planning	Key human skills in the 21 <sup>st</sup> century  Grow the leader within	Participants' presentation: Career Plan  <i>Presentation of Certificate of Completion</i>

Notes:

- Up to 40 students may be accepted into this programme.

# PROPOSED PROGRAMME #5: SCIENCE AND TECH DEVELOPMENT UNDER THE 4TH REVOLUTION : IP AND COMPETITION LAW



	Day 1	Day 2	Day 3	Day 4	Day 5
Half day session:  0900-1200h / 1400-1700h	Strategies for Innovation and Intellectual Property Operation	IP & Competition Law in the global context	Science and Technology Development under the 4th Industrial Revolution	Digital Marketing and Platform Strategy	Introduction of analytics driven pricing strategy in big data context  <i>Presentation of certificate of completion</i>

Notes:

- This is an introductory course, recommended for non-STEM students and lower level undergraduates in STEM studies.
- Up to 40 students may be accepted into this programme.

# PROPOSED PROGRAMME #6: SCIENCE AND TECH DEVELOPMENT UNDER THE 4TH REVOLUTION : IP AND INNOVATION

	Day 1	Day 2	Day 3	Day 4
Half day session:  0900-1200h / 1400-1700h	The Spirit of Technopreneur and entrepreneurial spirit	Science and Technology Development under the 4 <sup>th</sup> Industrial Revolution	Innovation Journey and Strategy: The Singapore Experience	The Development of New Energy  <i>Presentation of certificate of completion</i>

## Notes:

- This is an introductory course, recommended for non-STEM students and lower level undergraduates in STEM studies.
- Up to 40 students may be accepted into this programme.

# PROPOSED PROGRAMME #7 PLANNING & DESIGN FOR A SUSTAINABLE ENVIRONMENT

	Day 1	Day 2	Day 3	Day 4	Day 5
Half day session  0900-1200h / 1400-1700h	Planning for Liveability and Competitiveness	Business tourism and Hotel design	New Town planning and design	Garden City and Sustainable development	Project presentations: Themed Gardens  <i>Presentation of certificate of completion</i>

Notes:

- Up to 40 students may be accepted into this programme.

# PROPOSED PROGRAMME #8 FINTECH FOUNDATION PROGRAMME

	Day 1	Day 2	Day 3	Day 4	Day 5
Half day session  0900-1200h / 1400-1700h	<b>Introduction to Fintech</b>  Gain insights to the financial technology revolution and disruption	<b>Design Thinking</b> Gain awareness of how Design Thinking can be applied in a wide range of contexts	<b>Introduction to Fintech</b> Understand the current state of various thematic areas in the Fintech ecosystem of banking, asset and wealth management and financial infrastructure	<b>Design thinking</b> Continue investigating how design thinking can be used to bring new/existing ventures successfully to market	<b>Blockchain and Crypto 101</b>  <b>Final presentation</b>  Explore the world of blockchain and cryptocurrencies, understand their potential impact to the financial services industry Experience how these technologies work through a hands-on session of receiving, transferring, buying and selling of cryptocurrencies  <i>Presentation of certificate of completion</i>

Notes:

- Up to 40 students may be accepted into this programme.

# PROPOSED PROGRAMME #9 CREATIVE INTELLIGENCE VS A.I.

	Day 1	Day 2	Day 3	Day 4	Day 5
Half day session  0900-1200h / 1400-1700h	Introduction to creativity and creative intelligence	A.I. VS Creative intelligence	Creative intelligence methodology	Transforming problems into opportunities using Creative intelligence	Participant presentation: Innovation through Creative intelligence  <i>Presentation of certificate of completion</i>

Notes:

- Up to 40 students may be accepted into this programme.



# PROPOSED PROGRAMME #10 BRINGING INNOVATION TO MARKET

	Day 1	Day 2	Day 3	Day 4	Day 5
Half day session  0900-1200h / 1400-1700h	Introduction to innovation	Idea generation	Testing and evaluating innovation	How to market innovation	Participant presentation: Bringing innovation to market  <i>Presentation of certificate of completion</i>

Notes:

- Up to 40 students may be accepted into this programme.

# PROPOSED PROGRAMME #11 NON-LINREAR APPROACH TO DESIGN THINKING

	Day 1	Day 2	Day 3	Day 4	Day 5
Half day session  0900-1200h / 1400-1700h	<b>How we perceive the world</b>  Empathize by empathic communication	<b>How we define a problem: giving a form to the problems</b>	<b>How we transform the world</b>  Ideate to transform the problems in opportunity	<b>How we use a non-linear world</b>  Design thinking cycle and the systematic chart	<b>Presentation of the design thinking projects</b>  <i>Presentation of certificate of completion</i>

Notes:

- Up to 40 students may be accepted into this programme.

# PROPOSED PROGRAMME #12 ROBOTICS

	Day 1	Day 2	Day 3	Day 4	Day 5
Half day session  0900-1200h / 1400-1700h	<b>Introduction and Hardware</b> <ul style="list-style-type: none"> <li>- Introduction to autonomous robotics systems</li> <li>- Mechanics of robots</li> <li>- Electrical power distribution system</li> <li>- Sensors</li> <li>- Robot's hardware assembly</li> </ul>	<b>Coding</b> <ul style="list-style-type: none"> <li>- Introduction to C++</li> <li>- Introduction to Linux (Ubuntu)</li> </ul>	<b>Robot Operating System (ROS)</b> <ul style="list-style-type: none"> <li>- Introduction to ROS</li> <li>- Write simple ROS Publisher and Subscriber</li> </ul>	<b>Low Level Control</b> <ul style="list-style-type: none"> <li>- Throttle and steering motor integration</li> <li>- Serial protocols</li> <li>- Joystick integration</li> <li>- Stereo camera integration</li> </ul>	<b>Finale</b> <ul style="list-style-type: none"> <li>- Object Detection System (YOLO) integration for people detection</li> <li>- Simple tracking feature development</li> <li>- People-following feature development</li> </ul>

Notes:

- Up to 25 students may be accepted into this programme.
- The programme is designed for student age 14 – 18.

# PHOTO GALLERY



# YOUR INVESTMENT

These are indicative professional and administrative fees, and the expenses for designing and delivering the programme in NUS.

Programme fee, for a 5-day, half-day programme: #1 Business and Service Innovation #3 Artificial Intelligence and Machine Learning #4 Leading for Personal and Career Success #7 Planning and Designing for A Sustainable Environment #8 Fintech foundation programme #9 Creative intelligence VS A.I. #10 Bringing innovation to market #11 Non-linear approach to design thinking	SGD35,000 (up to 40 students <sup>1</sup> )
Programme fee, for #2 Musical Art and Culture:	SGD30,000 (up to 25 students <sup>2</sup> )
Programme fee, for #12 Robotics:	SGD35,000 (up to 25 students <sup>2</sup> )
Programme fee, for: #5 IP and Competition Law #6 IP and Innovation	SGD7,000 per half-day (up to 40 students <sup>1</sup> )

Half Day programmes are at average SGD7,000 and Full Day Programmes are at average SGD12,000. Please refer to notes on next page.

## Notes:

- The programme is suitable for High School, Undergraduate and Postgraduate students.
- Proposed programme can be revised in discussion with the client and can be customised.
- Specific timings can be adjusted based on faculty and client's schedule.
- NUS SCALE is committed to deploying the best of its faculty and faculty associates to design and deliver the programmes.
- Airfare, visa, travel insurance, local transport, meals and accommodation are not covered in the programme fee.

<sup>1</sup> We recommend no more than 40 participants per class for optimal learning and participation.

<sup>2</sup> We recommend no more than 25 participants per class for optimal learning and participation.



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Contact: We look forward to hearing from you and working with you to shape and deliver a programme that is meaningful. Please do not hesitate to contact us at [scale.global@nus.edu.sg](mailto:scale.global@nus.edu.sg) should you have any questions.

More information can be found at <http://scale.nus.edu.sg/>.