



**NANYANG  
TECHNOLOGICAL  
UNIVERSITY**  
SINGAPORE



# COURSE CALENDAR

JANUARY - JUNE 2018

College of Professional and Continuing Education

[copace.ntu.edu.sg](http://copace.ntu.edu.sg)



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# COLLEGE OF PROFESSIONAL AND CONTINUING EDUCATION

## ABOUT US

In line with the government's emphasis on advancing adult education and professional development for Singapore's workforce to better meet future challenges, NTU established the College of Professional and Continuing Education (PaCE College) to consolidate continuing education and training capabilities and expertise within the university.

PaCE College develops programmes for continuing professional education and development, to equip Singapore professionals, managers and executives (PMEs) with updated knowledge and skills to keep pace with the rapid technological changes in today's increasingly competitive economy and industrial landscape.

The college draws upon NTU's world-renowned faculty and strong industrial connections to support working adults to update, upgrade and upskill in their journey to attain their professional goals and personal educational aspirations.

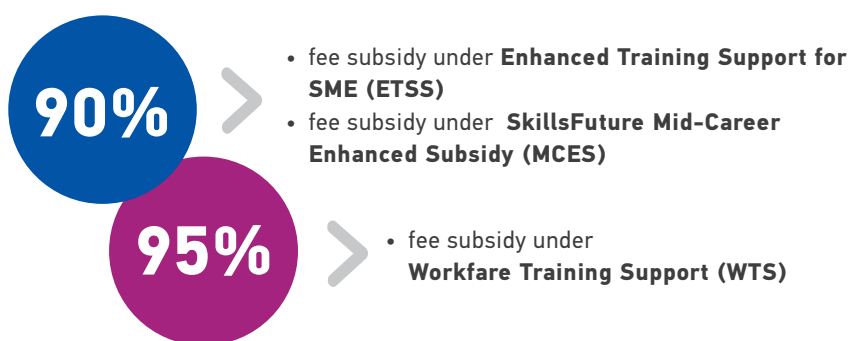
Besides the credit-bearing courses drawn from various undergraduate and graduate academic programmes across a wide spectrum of disciplines, PaCE College also offers executive, personal development and enrichment non-credit courses. The College will offer multiple educational pathways to professional, intellectual, and creative development through its continuing education programmes.

# FUNDINGS AND SUBSIDIES FOR SHORT COURSES

## WSQ PE GRADUATE DIPLOMA IN DESIGN AND PROCESSES

The Precision Engineering Workforce Skills Qualifications (PE WSQ) Graduate Diploma in Design and Processes is a joint programme by Nanyang Technological University, PaCE College and SkillsFuture Singapore (SSG). The objective of this programme is to inculcate the core competencies including fundamental knowledge and skills in precision engineering design and processes necessary for managers and engineers in precision engineering related manufacturing industries. Participants will have to complete 2 core modules and any 3 elective modules to qualify for the WSQ PE Graduate Diploma Qualification.

**CAT B Grant Fee Subsidy (SG/SPR) and up to:**



CORE MODULES	ELECTIVE MODULES
<ul style="list-style-type: none"> <li>• WSQ Geometric Dimensioning &amp; Tolerancing</li> <li>• WSQ Implement Optical Metrology</li> </ul>	<ul style="list-style-type: none"> <li>• WSQ Manage High Vacuum Technology</li> <li>• WSQ Design for Assembly in Manufacturing</li> <li>• WSQ Tolerance Stackup and Analysis in Mechanical Design</li> <li>• WSQ Lean Six Sigma Methodology</li> <li>• WSQ Apply Statistics for Lean Six Sigma</li> </ul>



**SINGAPORE  
WORKFORCE SKILLS  
QUALIFICATIONS**

### Criteria for WSQ Funding

To be eligible for course fee funding, participants:

- Must be Singaporeans or Permanent Residents of Singapore
- Must achieve at least 75% attendance and pass all required assessments
- Eligibility acceptance subject to SSG's final approval before course commencement

Participants who do not fulfil the above criteria are not eligible for WSQ funding and certification, and are required to pay the course fee in full.

### Certification and Accreditation

Participant will be awarded a Statement of Attainment (SOA) for successfully completing each module. A WSQ PE Graduate Diploma in Design and Processes upon completion of 2 core modules and any 3 electives.

## NATIONAL SILVER ACADEMY (NSA)

NSA aims to encourage and support seniors in lifelong learning by broadening the learning options and breaking down barriers to provide affordable learning. Courses supported by NSA are in areas which are more life skills-oriented.

A Certificate of Completion will be awarded at the end of the course.

Subsidised courses listed below:

LIFE SKILLS-ORIENTED COURSES	
<ul style="list-style-type: none"> <li>• Achieving Peak Performance with Mental Skills, Emotional Strength &amp; Team Approach</li> <li>• Capitalising on Productive Emotions</li> <li>• Enhancing Wellness &amp; Resilience for Successful Life &amp; Work</li> <li>• Read Faster! Memorise Better! Think Clearer!</li> <li>• Warrior or Worrier? Conflict Resolution and Stress Management Strategies</li> </ul>	<ul style="list-style-type: none"> <li>• Creative Thinking Made Easy</li> <li>• Secret to Motivating Your Team</li> <li>• Stay Calm and Stand Up: Becoming more Assertive in the Workplace</li> </ul>



### Criteria for NSA Subsidy

To be eligible for course fee funding, participants:

- Must be Singaporeans
- Must be at the age of 50 or above during the year of the course
- Must not have attended more than 3 NSA supported courses from NTU per year
- Subsidy placement is on a first-come-first-served basis





## EMPLOYMENT AND EMPLOYABILITY INSTITUTE (e2i)

The e2i funding aims to support Engineers and Professionals, Managers and Executives (PMEs) in upgrading their skills and increase their current competency level in their relevant industries. A Certificate of Completion will be awarded at the end of the course.

Funded courses listed below:

BUSINESS / PERSONAL DEVELOPMENT / COMMUNICATION	COMPUTER / ENGINEERING
<ul style="list-style-type: none"> <li>• Practical Business Finance for Non-Financial Executives</li> <li>• Facilitative Leadership Skills Workshop</li> <li>• Achieving Excellence in Technical Writing</li> <li>• Designing and Delivering Effective Technical Presentations</li> <li>• Critical Thinking for Innovation and Peak Performance</li> <li>• Effective People &amp; Team Performance Management for non-HR Managers</li> <li>• Essential Skills for New Managers</li> <li>• Key Emotional Competence for Managers</li> <li>• Strategic Thinking &amp; Dynamic Management for Middle Managers</li> <li>• Achieving the Psychological Advantage in Leadership</li> <li>• Crisis Communication – Learning from Case Studies</li> <li>• Leading Beyond Managing</li> <li>• Strategic Operations Leadership</li> </ul>	<ul style="list-style-type: none"> <li>• Applied HAZOP for Engineers</li> <li>• Failure Analysis and Prevention for Engineering Materials, Structures and Devices</li> <li>• Developing Object-Oriented Applications in C++</li> <li>• Using C Language Effectively for Embedded Systems</li> <li>• Software Optimisation for Embedded Systems</li> <li>• Using Linux for the Internet of Things</li> <li>• Real Time Embedded Software for the Real World</li> <li>• Cloud Computing Security and Compliance 101</li> <li>• DIY Analytics – Making Data-driven Decisions for A More Profitable Business</li> </ul>



*Better Jobs For Life*  
Employment and Employability Institute

### Criteria for e2i Funding

To be eligible for course fee funding, participants:

- Must be Singaporeans or Permanent Residents of Singapore
- Must achieve at least 75% attendance

Funding placement is on a first-come-first-served basis.

Up to  
**40%**  
course fee  
subsidy

## UNION TRAINING ASSISTANCE PROGRAMME (UTAP)

UTAP is an individual skills upgrading account specially for NTUC members. Under the NTU and NTUC collaboration, a total of 55 short courses are eligible for UTAP funding support. Union members enjoy UTAP funding at 50% of the unfunded course fees capped at \$250 per year.

Refer to [www.ntuc.org.sg](http://www.ntuc.org.sg) for more details.

Up to  
**\$250**  
course fee subsidy  
for NTUC members

## SKILLSFUTURE (SF) SERIES

The SkillsFuture Series is a series of industry-relevant training programmes that focus on emerging skills which SkillsFuture Singapore Agency (SSG) has identified. There are currently eight emerging areas which SSG has selected under the SkillsFuture Series.

They are namely: (i) data analytics, (ii) finance, (iii) tech-enabled services, (iv) digital media, (v) cyber security, (vi) entrepreneurship, (vii) advanced manufacturing, and (viii) urban solutions.

According to SkillsFuture Singapore, the “new initiative aims to equip working adults with specific skills sets to meet changing job demands in the eight emerging areas, enabling them to stay relevant and competitive for the future. Individuals will gain access to quality industry-relevant programmes starting with over 400 courses catered at beginner, intermediate, and advanced levels”.

### BUSINESS / PERSONAL DEVELOPMENT / COMMUNICATION

- Media Management
- Generating Creative Ideas to Design Effective Graphics
- Managing Your Business Knowledge Assets
- Accounting & Finance for Advanced Manufacturing

### COMPUTING / ENGINEERING

- Cloud Computing Security and Compliance 101
- Developing Object-Oriented Applications in C++
- DIY Analytics - Making data-driven decisions for a more profitable business
- Real Time Embedded Software for the Real World
- Cloud Computing - What IT Auditors Needs to Know
- Linux Device Drivers for Embedded Systems
- Software Optimisation for Embedded Systems
- Using C Language Effectively for Embedded Systems
- Using Linux for the Internet of Things
- Failure Analysis and Prevention for Engineering Materials, Structures and Devices
- Industrial Internet of Things for Advanced Manufacturing
- Design for Sustainability
- Data Analytics and Market Sensing
- Neural Networks and Deep Learning
- Preparing for Cybersecurity
- Measurement and Mitigation of Risk in Globalized Supply Chains
- Algorithms - An Introduction with Applications
- Intermediate Algorithmic Techniques
- Advanced Algorithmic Techniques With Applications
- A Practical Introduction to Augmented Reality
- Design thinking Workshop
- Introduction to 3D Printing
- Design Thinking in New Product Development
- Together we create a better and smarter city
- Lab on Chip
- Essentials of MATLAB: Fundamentals, Statistics and Machine Learning
- Robotics for Clinicians: Hands-on Assessment-Driven Rehabilitation Technology

## SKILLSFuture Series

### Criteria for SkillsFuture (SF) Series Subsidy

To be eligible for course fee funding, participants:

- Must be Singaporeans or Permanent Residents of Singapore
- Must successfully enroll and be accepted into the training programme

# 70%

fee subsidy for  
Singaporeans and  
PRs aged 21  
and above

# 90%

fee subsidy under  
Enhanced Training Support  
for SME (ETSS) and  
SkillsFuture Mid-Career  
Enhanced Subsidy  
(MCES)

## NTU ALUMNI COURSE CREDIT

To promote lifelong learning and encourage alumni to acquire deep skills in a timely, accessible manner through modularised and technology-enhanced learning programmes, NTU has launched the NTU Alumni Course Credit initiative.

This initiative also seeks to empower NTU alumni to undertake upskilling and reskilling efforts in order to stay relevant in the ever-changing global workforce.

From 1 November 2017 (Wednesday), all NTU/NIE alumni will each receive S\$1,600 in credits that they can use to apply to all courses offered by the College of Professional and Continuing Education (PaCE College).

Alumni can apply for the courses online via the PaCE College website. Each alumnus can take up to two courses per year restricted to one course per semester.

### Criteria for NTU Alumni Course Credit

To be eligible for course credits, participants:

- Must be an alumnus of NTU or NIE, regardless of nationality

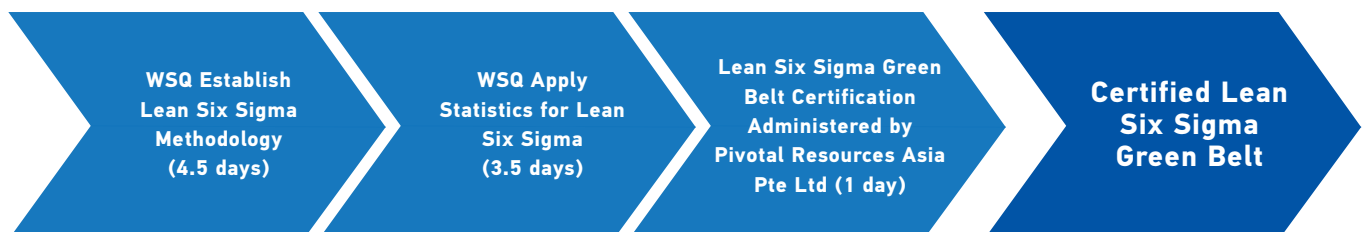
**\$1,600**  
credit for all  
NTU/NIE alumni

## ACCELERATED LEAN SIX SIGMA GREEN BELT

NTU's College of Professional and Continuing Education (PaCE College), in collaboration with Singapore Workforce Development Agency (WDA) offers two WSQ Lean Six Sigma courses. Course participants who have completed both WSQ Establish Lean Six Sigma Methodology and WSQ Applying Statistics for Lean Six Sigma courses are able to pursue the Lean Six Sigma Green Belt Certification awarded by Pivotal Resources Asia Pte Ltd.

Time Saving	Cost Saving	Double Certification
<ul style="list-style-type: none"> <li>• Modular Course Structure</li> <li>• Accelerated pathway to Lan Six Sigma Green Belt</li> </ul>	<ul style="list-style-type: none"> <li>• Cat B Grant Fee subsidy for WSQ Lean Six Sigma Courses</li> <li>• Obtain Lean Six Sigma Green Belt through WSQ Courses</li> </ul>	<ul style="list-style-type: none"> <li>• WSQ Statement of Attainment (SOA)</li> <li>• Lean Six Sigma Green Belt Certification</li> </ul>

## PATHWAY TO LEAN SIX SIGMA GREEN BELT



## Effective Event Management

The content is very practical and useful for my work. I will recommend it to my colleagues!

### Vincent Goh

Team Leader  
Central Singapore Community  
Development Council



## Accounts/Business/HRM

No	Course Title	WSQ	e2i	NSA	UTAP	SFS	Fees	Days	Jan	Feb	Mar	Apr	May	Jun
<b>BUSINESS</b>														
A1	Business Continuity and Crisis Management Preparedness against Pandemic Flu and other Medical Crisis								For in-house arrangements only					
A2	Practical Business Finance for Non-Financial Executives (PDU)						\$631.30	2	29-30		8-9			
A3	DIY Analytics - Making Data-Driven Decisions for a More Profitable Business						\$631.30	2			13-14			6-7
A4	Effective Event Management						\$631.30	2	Not available in print. Please check website.					
A5	Effective People & Team Performance Management for Non-HR Managers						\$631.30	2		8-9				
A6	Innovating for Results						\$631.30	2					10-11	21-22
A7	Managing Your Business Knowledge Assets						\$631.30	2				25-26	22-23	
A8	Project Management Appreciation						\$631.30	2				5-6	17-18	
A9	Basic Accounting Management						\$631.30	2		5-6	22-23			
A10	Accounting & Finance for Advanced Manufacturing						\$834.60	2		26-27		19-20		
A11	Systems Thinking and Process Improvement						\$834.60	2		26-27		23-24		
<b>CUSTOMER SERVICE</b>														
A12	Art of Saying No to Customers Without Offending Them						\$631.30	2			22-23		21-22	
A13	Effective Communication Skills for Healthcare Professionals								For in-house arrangements only					
<b>HR DEVELOPMENT</b>														
A14	Effective Interviewing Techniques								For in-house arrangements only					
A15	Strategic Thinking & Dynamic Management for Middle Managers						\$631.30	2				5-6		4-5
<b>LEADERSHIP, COACHING, &amp; TEAMBUILDING</b>														
A16	Achieving the Psychological Advantage in Leadership						\$631.30	2			5-6			8-9
A17	Effective Counselling Skills						\$631.30	2	25-26		15-16			
A18	Essential Skills for New Managers						\$631.30	2		5-6		19-20		18-19
A19	Inspiring Creativity, Innovation and Change								For in-house arrangements only					
A20	Key Emotional Competence for Managers						\$631.30	2			28-29		21-22	
A21	Leading Beyond Managing						\$631.30	2		8-9		19-20		
A22	Social Intelligence for Leaders - How to Be a Positive Influence in the People You Lead						\$374.50	1	5		14			
A23	Strategic Operations Leadership						\$631.30	2			28-29			
A24	The Art of Managing People						\$631.30	2				25-26		6-7
A25	Tough Problem Solving Through Systems Thinking						\$631.30	2				9-10		18-19

### Legend

PDU – Qualify for Professional Development Unit by PEB





## Excellence in Technical Writing

Dr Heah is very knowledgeable about the language and report writing. I have learnt and re-learned things I may not have known or forgotten.

**Ms Lau Aik Miang**  
Senior Engineer  
Defence Science & Technology Agency

## Communication Skills

No	Course Title	WSQ	e2i	NSA	UTAP	SFS	Fees	Days	Jan	Feb	Mar	Apr	May	Jun
<b>NEGOTIATION SKILLS</b>														
B1	Advanced Negotiation Skills						\$631.30	2			6-7		7-8	
B2	Negotiation Skills						\$374.50	1				16	14	
<b>ARTICULATION SKILLS</b>														
B3	Communication Skills for Service Sector Professionals						For in-house arrangements only							
B4	Crisis Communication – Learning from Case Studies						\$631.30	2				26-27		
B5	KPI: Keys to Persuasion and Influence						\$631.30	2		5-6			17-18	
<b>COMPOSITION SKILLS</b>														
B6	Essential Grammar for Professional Communication						For in-house arrangements only							
B7	Achieving Excellence in Technical Writing						\$631.30	2	Not available in print. Please check website.					
B8	Writing Professional and Results-Oriented Email						\$631.30	2	4-5					
B9	Creative Posters and Invitations for Marketing						\$631.30	2	4-5					
B10	Generating Creative Ideas to Design Effective Graphics						\$631.30	2	8-9					
<b>PRESENTATION SKILLS</b>														
B11	Designing and Delivering Effective Technical Presentations						\$631.30	2	Not available in print. Please check website.					
B12	Media Management						\$631.30	2					14-15	
B13	Situation-specific Presentation Skills						\$888.10	3	Not available in print. Please check website.					

## WSQ Geometric Dimensioning & Tolerancing

It is very relevant to real applications on the job. I will recommend my colleagues to take up the course.

**Mr Ooi Choon Kiat**  
R&D Engineer  
Becton Dickinson Critical Care System Pte Ltd

## Engineering

No	Course Title	WSQ	e2i	NSA	UTAP	SFS	Fees	Days	Jan	Feb	Mar	Apr	May	Jun
<b>CIVIL &amp; ENVIRONMENTAL ENGINEERING</b>														
C1	Principles and Fundamentals of Facilities Management						\$417.30	1			12		21	
C2	Strategic and Sustainable Project Management Services						\$417.30	1			19			4
C3	Design for Sustainability						\$834.60	2	Not available in print. Please check website.					
C4	Together we create a better and smarter city						\$834.60	2			5-6		14-15	
<b>ELECTRICAL &amp; ELECTRONIC ENGINEERING</b>														
C5	Design and Analysis of Feedback Control Systems for Real-world Applications - Advanced Control								For in-house arrangements only					
C6	Design and Analysis of Feedback Control Systems for Real-world Applications - Basic Control								For in-house arrangements only					
C7	Understanding Common Converter and Drive Harmonics, Cost Analysis and Mitigation Techniques (PDU)						\$834.60	2	Not available in print. Please check website.					
<b>MATERIALS ENGINEERING</b>														
C8	Basic Orthopaedic Biomechanics - Part I (CME)						\$449.40	1.5						8-9
C9	Failure Analysis and Prevention for Engineering Materials, Structures and Devices (PDU)						\$1,048.60	3				25-27		
C10	Pressure Vessels and Piping - Analysis for Design								For in-house arrangements only					
C11	Supply-Chain Coordination and Management Strategies								For in-house arrangements only					
C12	Fracture Mechanics Concepts for Assessment of Crack-Like Flaws								For in-house arrangements only					
C13	Introduction to 3D Printing						\$834.60	2					2-3	
C14	Lab on Chip						\$834.60	2	Not available in print. Please check website.					
C15	Robotics for Clinicians: Hands-on Assessment-Driven Rehabilitation Technology						\$417.30	1				23		
<b>WSQ GRADUATE DIPLOMA IN DESIGN AND PROCESSES (PRECISION ENGINEERING)</b>														
C16	WSQ Manage High Vacuum Technology (PDU)						\$1,625.33	4				9-12		
C17	WSQ Geometric Dimensioning & Tolerancing (PDU)						\$1,717.35	4.5					7,8,10,11,14	
C18	WSQ Tolerance Stackup and Analysis in Mechanical Design (PDU)						\$1,809.37	5						
C19	WSQ Design for Assembly in Manufacturing (PDU)						\$1,625.33	4						
C20	WSQ Implement Optical Metrology (PDU)						\$1,625.33	4				26,27,30,2 May	17,18,21,22	
C21	WSQ Apply Statistics for Lean Six Sigma (PDU)						\$1,510.84	3.5				16-19		26-29
C22	WSQ Establish Lean Six Sigma Methodology (PDU)						\$1,717.35	4.5			19-23		21-25	
<b>QUALITY ASSURANCE</b>														
C23	Facilitative Leadership Skills Workshop (PDU)						\$834.60	2	Not available in print. Please check website.					
C24	Lean Advance Training								For in-house arrangements only					
C25	Six Sigma DMAIC Project Team Workshop								For in-house arrangements only					
C26	Applied HAZOP for Engineers (PDU)						\$834.60	2			1-2			
C27	Data Analytics and Market Sensing						\$834.60	2	8-9					
C28	Measurement and Mitigation of Risk in Globalized Supply Chains						\$834.60	2	Not available in print. Please check website.					
C29	Design Thinking Workshop						\$1,510.84	3.5	Not available in print. Please check website.					
C30	Design Thinking in New Product Development						\$834.60	2	Not available in print. Please check website.					

### Legend

CME – Qualify for Continuing Medical Education Unit by SMC

PDU – Qualify for Professional Development Unit by PEB



## Advanced Negotiation Skills

The course trainer has elaborated the seemingly complex negotiation skills in a tremendously interesting manner. Well done!

**Tang Eng Gee**

Manager

W.L Gore & Associates (Pacific) Pte Ltd

## Personal Development

No	Course Title	WSQ	e2i	NSA	UTAP	SFS	Fees	Days	Jan	Feb	Mar	Apr	May	Jun
<b>PERSONAL DEVELOPMENT</b>														
D1	Achieving Peak Performance with Mental Skills, Emotional Strength & Team Approach						\$631.30	2				11-12		11-12
D2	Creative Thinking Made Easy						\$374.50	1				9	11	
D3	Critical Thinking for Innovation and Peak Performance						\$631.30	2						
D4	Capitalising on Productive Emotions						\$374.50	1					23	
D5	Enhancing Wellness & Resilience for Successful Life & Work						\$631.30	2			12-13			13-14
D6	Managing Difficult People						\$374.50	1						
D7	Read faster! Memorise better! Think clearer!						\$631.30	2		20-21		5-6	31-1 Jun	
D8	Secret to Motivating Your Team						\$374.50	1		1				
D9	Stay Calm and Stand Up: Becoming More Assertive in the Workplace						\$631.30	2		27-28			24-25	
D10	Warrior or Worrier? Conflict and Stress Management						\$631.30	2			22-23		31-1 Jun	

## IT & Information Studies

No	Course Title	WSQ	e2i	NSA	UTAP	SFS	Fees	Days	Jan	Feb	Mar	Apr	May	Jun
<b>IT &amp; INFORMATION STUDIES</b>														
E1	Using C Language Effectively for Embedded Systems						\$1,123.50	3	10-12			25-27		
E2	Cloud Computing Security and Compliance 101						\$834.60	2	15-16			5-6		
E3	Cloud Computing - What IT Auditors Need to Know						\$1,048.60	3						20-22
E4	Linux Device Drivers for Embedded Systems						\$1,155.60	3			14-16		9-11	
E5	Using Linux for the Internet of Things						\$1,155.60	3	29-31			11-13		
E6	Developing Object-Oriented Applications in C++						\$1,358.90	4	30,31, 1,2 Feb			10-13		
E7	Real Time Embedded Software for the Real World						\$1,155.60	3		26-28			23-25	
E8	Software Optimisation for Embedded Systems						\$834.60	2			26-27			25-26
E9	Software Development for Embedded Systems								For in-house arrangements only					
E10	Industrial Internet of Things for Advanced Manufacturing						\$834.60	2			28-29			
E11	Neural Networks and Deep Learning						\$1,123.50	3	Not available in print. Please check website.					
E12	Preparing for Cybersecurity						\$834.60	2			7-9		30-1 Jun	
E13	Algorithms - An Introduction with Applications						\$1,123.50	3	17-19					
E14	Intermediate Algorithmic Techniques						\$1,123.50	3	Not available in print. Please check website.					
E15	Advanced Algorithmic Techniques With Applications						\$834.60	2			27-28			
E16	A Practical Introduction to Augmented Reality						\$417.30	1		8				
E17	Essentials of MATLAB: Fundamentals, Statistics and Machine Learning						\$1,809.37	5	Not available in print. Please check website.					



# FUNDINGS AND SUBSIDIES FOR SEMESTER-LONG COURSES

## NATIONAL SILVER ACADEMY (NSA)

NSA aims to encourage and support seniors in lifelong learning by broadening the learning options and breaking down barriers to provide affordable learning. Courses supported by NSA are in areas which are more life skills-oriented.

These courses provide seniors opportunities to participate in tutorials and lectures and have access to course materials together with other students pursuing the courses for credit.

### EXAM-FREE MODULES

- Are You Okay? Mental Health in Singapore
- Directed Readings of Modern Chinese Song Lyrics
- Introduction to Human Resource Management
- Principles of Economics
- Women's Literature and The Contemporary
- Monsters in Literature
- Working in the 21st Century



### Criteria for NSA Subsidy

To be eligible for course fee funding, participants:

- Must be Singaporeans
- Must be at the age of 50 or above during the year of the course
- Must not have attended more than 3 NSA supported courses from NTU per year
- Subsidy placement is on a first-come-first-served basis

Course fee  
as low as

**\$115**

## UNION TRAINING ASSISTANCE PROGRAMME (UTAP)

UTAP is an individual skills upgrading account specially for NTUC members. Under the NTU and NTUC collaboration, all semester-long courses are eligible for UTAP funding support. Union members enjoy UTAP funding at 50% of the unfunded course fees capped at \$250 per year.

Refer to [www.ntuc.org.sg](http://www.ntuc.org.sg) for more details.

Up to

**\$250**

course fee subsidy  
for NTUC  
members

## NTU ALUMNI COURSE CREDIT

Similar to how the NTU Alumni Course Credits can be used for short courses, it can also be utilised for semester-long courses.

Alumni can apply for the courses online via the PaCE College website. Each alumnus can take up to two courses per year restricted to one course per semester.

### Criteria for NTU Alumni Course Credit

To be eligible for course credits, participants:

- Must be an alumnus of NTU or NIE, regardless of nationality

**\$1,600**

credit for all  
NTU/NIE alumni

## SKILLSFUTURE SINGAPORE (SSG)

To encourage lifelong learning, SkillsFuture Singapore provides 70% subsidy for all individual semester-long courses under the following Specialist Certificates:

ENGINEERING	COMPUTING
<ul style="list-style-type: none"> <li>• Manufacturing Engineering</li> <li>• Power and Clean Energy</li> <li>• Civil Infrastructure</li> <li>• Electrical Power Systems</li> </ul>	<ul style="list-style-type: none"> <li>• Software Basics II</li> <li>• Cyber Security</li> <li>• Communication Networks</li> </ul>

## SKILLSFUTURE STUDY AWARD FOR POWER SECTOR

The Power sector offers meaningful careers that help to keep the lights on and gas flowing for Singapore. The sector anticipates many exciting upcoming developments ranging from the expansion of the Liquefied Natural Gas Terminal, the increasing deployment of solar energy and energy storage, to the need to mitigate cyber-security challenges for power systems. These developments make our daily lives possible today.

Early to mid-career Singaporeans in the Power sector/related sectors can apply for the SkillsFuture Study Award to support them in deepening their engineering skills.

Refer to <http://www.skillsfuture.sg/studyawards/power> for more details.

### SUPPORTED COURSES

- Bachelor of Engineering (Electrical & Electronic Engineering)
- Bachelor of Engineering (Mechanical Engineering)
- Specialist Certificate in Electrical Power Systems
- Specialist Certificate in Power and Clean Energy
- Graduate Certificate in Power Engineering

## SKILLSFuture SG

### Criteria for SSG Funding

To be eligible for course fee funding, participants:

- Must be Singaporeans or Permanent Residents of Singapore
- Eligibility acceptance subject to SSG's final approval before course commencement

### Criteria for SkillsFuture Study Award

To be eligible for SkillsFuture Study Award, participants:

- Must be Singaporean
- At least two years of engineering work experience in the Power sector (Electricity & Gas) or related sector
- Is a Licensed Electrical Worker/ Licensed Gas Service Worker/ Licensed Cable Detection Worker OR with at least two years of relevant Power Engineering skillsets in other sectors

Up to  
**\$5,000**  
monetary award

## SKILLSFUTURE (SF) SERIES

The SkillsFuture Series is a series of industry-relevant training programmes that focus on emerging skills which SkillsFuture Singapore Agency (SSG) has identified. There are currently eight emerging areas which SSG has selected under the SkillsFuture Series.

They are namely: (i) data analytics, (ii) finance, (iii) tech-enabled services, (iv) digital media, (v) cyber security, (vi) entrepreneurship, (vii) advanced manufacturing, and (viii) urban solutions.

According to SkillsFuture Singapore, the “new initiative aims to equip working adults with specific skills sets to meet changing job demands in the eight emerging areas, enabling them to stay relevant and competitive for the future. Individuals will gain access to quality industry-relevant programmes starting with over 400 courses catered at beginner, intermediate, and advanced levels”.

### BUSINESS / SCIENCE

- BU8101 Accounting: A User Perspective
- BS3021 Bio Imaging Techniques in EM
- BG3105 Biomedical Instrumentation
- BS4004 Current Topics in Immunology
- ET0001 Enterprise and Innovation
- GC0001 Introduction to Sustainability Multidisciplinary Approaches and Solutions

### COMPUTING / ENGINEERING

- EE2008 Data Structure and Algorithms
- EE3002 Microprocessors
- EE3014 Digital Signal Processing
- EE4208 Intelligent System Design
- EE4266 Computer Vision
- EE4268 Robotics and Automation
- EE6306 Digital IC Design
- EE6307 Analog Integrated Circuit Design
- EE6601 Advanced Wafer Processing
- EE6604 Advanced Topics in Semiconductor Devices
- EE6501 Power Electronic Converters
- EE6508 Power Quality
- EE6510 Power System Operation And Planning
- EE6511 Power System Modelling and Control
- CZ3005 Artificial Intelligence
- CZ4041 Machine Learning
- CZ4042 Neural Networks
- CZ4046 Intelligent Agents
- CZ4032 Data Analytics and Mining
- CZ4071 Network Science
- CZ4062 Computer Security (System Security)
- CZ1007 Data Structures
- CZ1005 Digital Logic
- MA4825 Robotics

## SKILLSFuture Series

### Criteria for SkillsFuture (SF) Series Subsidy

To be eligible for course fee funding, participants:

- Must be Singaporeans or Permanent Residents of Singapore
- Must successfully enroll and be accepted into the training programme

# 70%

fee subsidy for  
Singaporeans and  
PRs aged 21  
and above

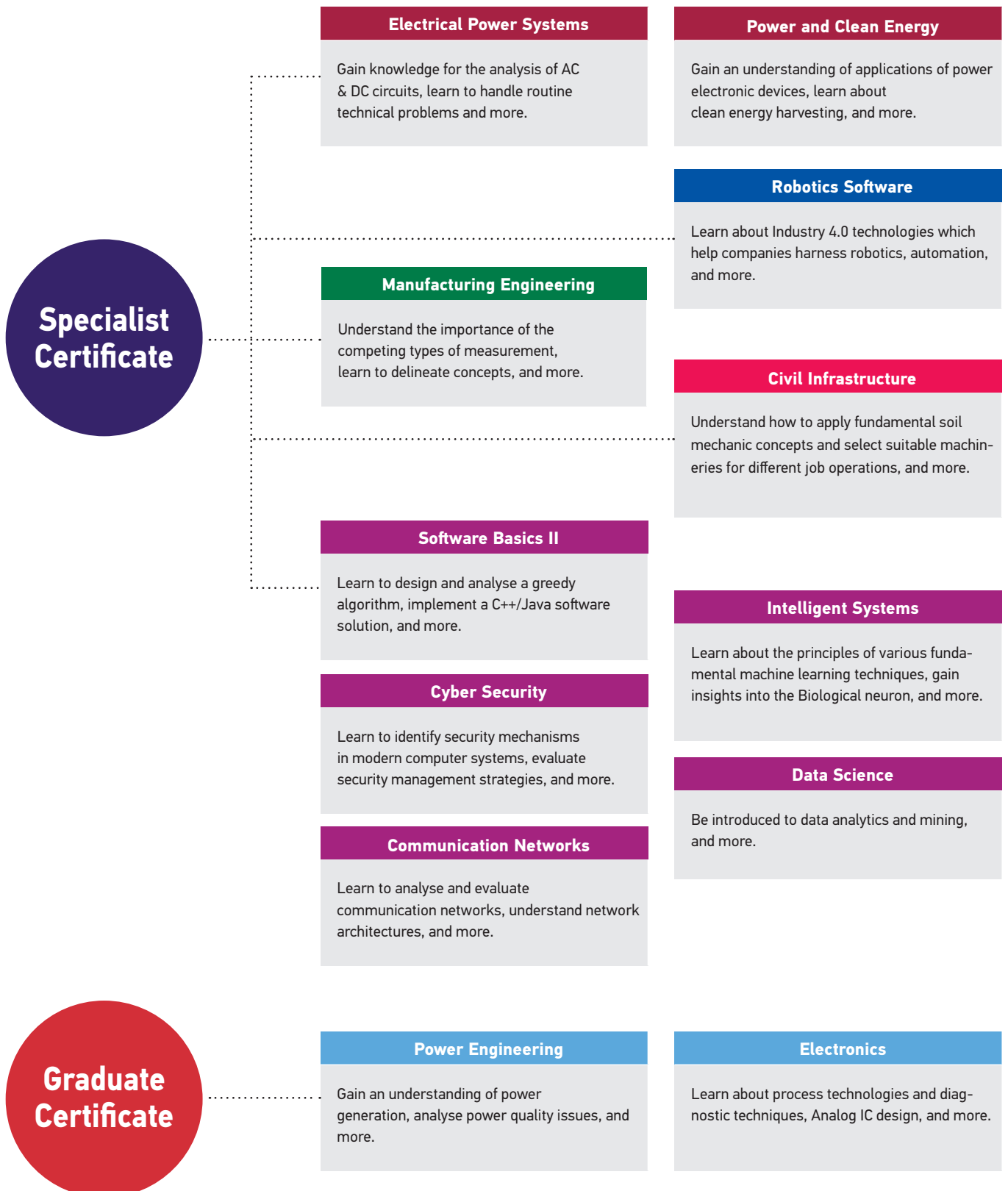
# 90%

fee subsidy under  
Enhanced Training Support  
for SME (ETSS) and  
SkillsFuture Mid-Career  
Enhanced Subsidy  
(MCES)



# SEMESTER-LONG COURSES

NTU offers bite-sized modular courses taken from both the Undergraduate and Graduate Full Degree Programmes in key growth sectors such as Electrical Power System, Power and Clean Energy, Advanced Manufacturing Engineering, Software Basics II, Cyber Security, Communication Networks, Civil Infrastructure, Electronics, and Power Engineering. These modular courses can also be taken individually and each course lasts for one semester of 13 weeks. There will be continuous assessments during course period and a final exam at the end of the course which contribute to a final grade. Each course is credit bearing and can be stackable to the relevant Specialist or Graduate Certificate which in turn can be stackable to the relevant degree.



# SEMESTER-LONG COURSES

Drawn from NTU's existing full qualification programmes, a list of semester long courses are specially selected to serve the local workforce in their professional development and lifelong learning journey by enabling them to update their knowledge and upgrade their skills. Selected courses have also been developed for technology-enhanced learning using the new flipped classroom pedagogy. Each course lasts for one semester of 13 weeks and there will be continuous assessments and a final exam at the end of the course which contribute to a final grade. Each course is credit bearing and can be stackable to the relevant degree.

## APPLICATIONS FOR SEMESTER-LONG COURSES ARE OPEN ALL YEAR ROUND

- **Academic Semester 1:**  
August to December (Process in May)
- **Academic Semester 2:**  
January to May (Process in October)

## Engineering

No	Course Title	SSG	SFS	Specialist Certificate	Graduate Certificate
A1	BG3105 Biomedical Instrumentation				
A2	CH2107 Computational Methods in Chemical Engineering				
A3	EE2002 Analog Electronics				
A4	EE2004 Digital Electronics				
A5	EE2008 Data Structures and Algorithms				
A6	EE3002 Microprocessors				
A7	EE3014 Digital Signal Processing				
A8	MA2001 Mechanics of Materials				
A9	MA2002 Theory of Mechanism				
A10	MA2003 Introduction to Thermo-Fluids				
A11	MA2009 Introduction to Electrical Circuits & Electronic Devices				
A12	MS4014 Nanomaterials: Fundamentals and Applications				
A13	MA2004 Manufacturing Processes			Manufacturing Engineering	
A14	MA4825 Robotics			Robotics Software	
A15	MA4842 Engineering Metrology			Manufacturing Engineering	
A16	MA4853 Manufacturing Systems			Manufacturing Engineering	
A17	EE2001 Circuit Analysis			Electrical Power Systems	
A18	EE3010 Electrical Devices and Machines			Electrical Power Systems	
A19	EE3015 Power Systems and Protection			Electrical Power Systems	
A20	EE4504 Design of Clean Energy Systems			Power and Clean Energy	
A21	EE4532 Power Electronics and Drives			Power and Clean Energy	
A22	EE4534 Modern Distribution Systems with Renewable Resources			Power and Clean Energy	
A23	CV2014 Geotechnical Engineering			Civil Infrastructure	
A24	CV3011 Reinforced Concrete Design			Civil Infrastructure	
A25	CV3012 Steel Design			Civil Infrastructure	
A26	CV3016 Construction Technology & Processes			Civil Infrastructure	
A27	EE6601 Advanced Wafer Processing				Electronics
A28	EE6306 Digital IC Design				Electronics
A29	EE6307 Analog Integrated Circuit Design				Electronics
A30	EE6604 Advanced Topics in Semiconductor Devices				Electronics
A31	EE6501 Power Electronic Converters				Power Engineering
A32	EE6508 Power Quality				Power Engineering
A33	EE6510 Power System Operation And Planning				Power Engineering
A34	EE6511 Power System Modelling and Control				Power Engineering

## Business

No	Course Title	SSG	SFS	Specialist Certificate	Graduate Certificate
B1	AB1201 Financial Management				
B2	AB1202 Statistical and Analysis				
B3	AC1101 Accounting I				
B4	AD1101 Financial Accounting				
B5	BU8101 Accounting: A User Perspective				
B6	ET0001 Enterprise & Innovation				



## Power Electronics and Drives

The course covers in-depth content and I find them very helpful. The knowledge I have gained would definitely be helpful to my work.

**Billy Fok Kam Luen**  
Engineer

## Computing

No	Course Title	SSG	SFS	Specialist Certificate	Graduate Certificate
C1	CZ1005 Digital Logic				
C2	CZ1006 Computer Organisation and Architecture				
C3	CZ1007 Data Structures				
C4	CZ2001 Algorithms			Software Basics II	
C5	CZ2002 Object Oriented Design and Programming			Software Basics II	
C6	CZ2005 Operating Systems			Software Basics II	
C7	CZ2006 Software Engineering			Software Basics II	
C8	CZ3005 Artificial Intelligence			Intelligent Systems	
C9	CZ4041 Machine Learning			Intelligent Systems/Data Science	
C10	CZ4042 Neural Networks			Intelligent Systems	
C11	CZ4046 Intelligent Agents			Intelligent Systems	
C12	CZ4032 Data Analytics and Mining			Data Science	
C13	CZ4071 Network Science			Data Science	
C14	CZ4024 Cryptography and Network Security			Data Science	
C15	CZ4062 Computer Security (System Security)			Cyber Security/Data Science	
C16	CZ4064 Security Management			Cyber Security	
C17	CZ4065 Digital Forensics			Cyber Security	
C18	EE2010 Signals and Systems			Communication Networks	
C19	EE3012 Communication Principles			Communication Networks	
C20	EE3017 Computer Communications			Communication Networks	
C21	EE4188 Wireless Communications			Communication Networks	
C22	EE4718 Enterprise Network Design			Communication Networks	
C23	EE4761 Computer Networking			Communication Networks	
C24	EE4208 Intelligent System Design			Robotics Software	
C25	EE4266 Computer Vision			Robotics Software	
C26	EE4268 Robotics and Automation			Robotics Software	

## Sciences

No	Course Title	SSG	SFS	Specialist Certificate	Graduate Certificate
D1	BG3105 Biomedical Instrumentation				
D2	BG4313 Global Medical Devices Regulatory Systems Overview				
D3	BS3005 Advanced Molecular Genetics				
D4	BS3021 Bio Imaging Techniques in EM				
D5	BS3022 Protein Trafficking				
D6	BS3338 Undergrad. Advanced Experimental Biology Workshop - Effect of anti-mitotic drugs on cancer cells				
D7	BS4004 Current Topics in Immunology				
D8	GC0001 Introduction to Sustainability: Multidisciplinary Approaches and Solutions				



# OTHERS

## IN-HOUSE TRAINING

Our professional development courses can be tailored to meet your organisation and specific training needs.

**Cost Effective**



Organising an in-house programme just for your staff allows our trainer to focus on your training objectives and expected learning outcome. This translates to a more cost effective proposition for your organisation.

**Customisable**



Customising and contextualising of existing course contents to enhance learning of key competency elements and ease of adaptation.

**Cohesive**



Discussions among your staff during the programme will facilitate team-building and project planning as they begin to see and understand each other's perspectives. The value of cohesive team-building is realised when real-life business problems are solved.

**Convenient**



For your convenience, all logistics and course administrations are handled by our team of experienced personnel; freeing you to work on other matters.

**Confidential**



Our customised programme allows for open discussions by your staff relating to specific issues/projects specific to your company.

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## EXECUTIVE PROGRAMME

Our customised Global Executive Programmes create invaluable networking opportunities for industry leaders, senior executives, government leaders and entrepreneurs from all over the world. Come and let your minds be challenged through this unique process of exchanging ideas, cultural perspectives and business practices. We have the ability to deliver high quality training courses with a personal touch that will make your learning experience truly enriching and memorable.

Some of the Global Executive Programmes conducted include:

**Sustainable Urban  
Development and  
Integrated  
Town Planning**

**Sustainable  
Development and  
Environmental  
Management**

**Industrial Park  
Development and  
Industrial Policies**

**Infrastructure Project  
Development, Planning  
and Management**



## Contact Us

For any enquiries, do email us at  
[CoPaCE@ntu.edu.sg](mailto:CoPaCE@ntu.edu.sg)

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of the course calendar