

nanyang polytechnic

# LIFELONG LEARNING

#becausewecan



## Specialist Diploma in Precision Engineering (Additive Manufacturing)

Apply Now



[www.nyp.edu.sg/egqp09](http://www.nyp.edu.sg/egqp09)

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The information in this brochure is accurate at time of print (November 2019). NYP reserves the right to amend any information without prior notice.

Driven by today's need to innovate and stay competitive by leveraging current industry trends, government and precision engineering enterprises are harnessing the potential of additive manufacturing (AM), also known as 3D printing. This course provides comprehensive application training in AM technologies, design optimisation and metrology.



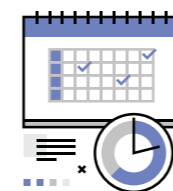
## Course Objectives

- Design complex components and products through use of computer-aided design (CAD) tools
- Apply design topology optimisation methods for AM
- Assess, identify and implement various AM technologies
- Manage AM processes and technologies for various applications
- Fabricate designs through AM
- Apply advanced metrology and quality assurance techniques

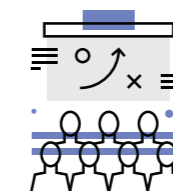
## Course Structure

A Statement of Attainment (SOA) is awarded by SkillsFuture Singapore (SSG) upon successful completion of each module. The WSQ Specialist Diploma in Precision Engineering (Additive Manufacturing) is awarded when participants attain competencies in the 6 modules:

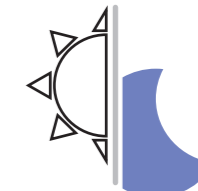
- **Apply AM technology (30 hours)**  
Learn the concept and applications of various additive manufacturing
- **Apply CAD techniques for AM – SSG skills competency: Review Feasibility of AM (45 hours)**  
Create solid models for AM, improve and optimise AM data format translation and verification
- **Manage advanced additive manufacturing technologies and applications (45 hours)**  
Apply the skills rapid tooling with conformal cooling, medical AM and material classification to management of advanced AM projects
- **Apply advanced design for AM (45 hours)**  
Apply advanced design concepts and analysis methodologies like design topology optimisation prior to additive manufacturing
- **Apply advanced metrology & quality assurance – SSG skills competency: Manage advanced metrology and quality assurance (45 hours)**  
Learn to interpret and measure using various types of precision dimensional metrology equipment and apply quality assurance knowledge to analyse a process
- **Manage innovative product development projects using additive manufacturing (30 hours)**  
Execute projects by applying concepts and skills acquired during the course by material selection, data preparation and AM



**240 HOURS**  
over 10 Months



- Lectures
- Tutorials
- Workshops
- E-learning



Part-time

## Entry Requirements

Applicants should have a degree, polytechnic diploma or WSQ diploma in relevant disciplines or equivalent. Applicants who do not meet the entry requirements may be considered for admission to the course based on:  
(i) Evidence of at least 2 years of relevant working experience; OR  
(ii) Supporting evidence of competency readiness.

The polytechnic reserves the right to shortlist and admit applicants.

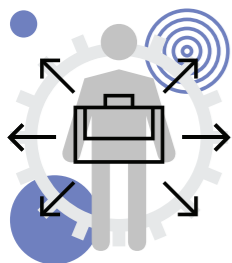
## Course Fees

|  | Total Fees for Specialist Diploma in Precision Engineering (Additive Manufacturing) | Fees per Competency Unit (30-hour module) | Fees per Competency Unit (45-hour module) |
|--|---|---|---|
| SC / PR under SME (after subsidy)*#      | \$888.00  | \$111.00                                  | \$166.50                                  |
| SC >= 40 yrs (after subsidy)#            | \$888.00  | \$111.00                                  | \$166.50                                  |
| SC < 40 yrs / PR (after subsidy)*        | \$2,664.00  | \$333.00                                  | \$499.50                                  |
| Foreigners / Full Fee (without subsidy)* | \$8,880.00  | \$1,110.00                                | \$1,665.00                                |

SC: Singapore Citizen | PR: Permanent Resident | SME: Small Medium Enterprise

\* Applicable to Singapore citizens and Singapore PRs who are sponsored by an SME company. For more information on absentee payroll funding for company-sponsored participants, please visit [enterprisejobskills.gov.sg](http://enterprisejobskills.gov.sg)

# prevailing GST applies (fees stated are before GST)



### FUTURE-PROOF YOUR CAREER

- Grow a career as an advanced manufacturing practitioner
- Increase your chances of career progression and promotions at work



### GAIN NEW SKILLS

- Keep up with latest industry demand and trends
- Become a professional techno-strategist



### OPEN MORE DOORS

- New avenues for networking
- Be sought after by a wide spectrum of industries