Polymer and polymer composite materials have many applications in our daily lives. Advantages such as highly-modifiable properties and easy processing imply that polymers and their composites will continue to be used in highly-integrated, customised product solutions for medical-engineering applications as well as in products for the automotive and telecommunication sectors. The objective of this course is to provide participants with advanced practical skills on the processing of polymers and polymer composites. Upon completion of this module, participants will be equipped with the knowledge and application skills require to process advanced polymers and polymer composites.

Why This Course

- Up-to-date technology and practical application on polymer and polymer composites manufacturing processes
- Computer aided engineering simulation of injection moulding process
- Highly practical and intensive course taught by expert trainers in the field with industrial experience
- Case studies highlighting industrial applications

Who Should Attend

This course is for manufacturing professionals, managers, engineers and technicians involved in polymer-based manufacturing processes and product design.

When & Where

Please visit our website at KTO.SIMTech.a-star.edu.sg for the updated course schedule.

Training Venue:
Singapore Institute of Manufacturing Technology
2 Fusionopolis Way, Innovis, Level 8, Singapore 138634
What You Will Learn

**Advanced Thermoplastic Polymer and Polymer Composite Processing Techniques**
- Advanced techniques of polymer and polymer composite processing
- Precision injection moulding process of micro and micro-featured components
- Twin screw extrusion process of fibre-reinforced thermoplastics

**Thermoset Polymer Processing Techniques**
- Thermoset composites processing techniques
- Principles of thermoset processing and methods of defects minimisation

**CAE Simulation of Injection Moulding Process**
- Principles of the finite element method for polymer flow analyses
- Application of finite element in mould-flow analysis and associated softwares
- FEA modelling, mesh manipulation, and results interpretation

About the Course Leaders

**Mr Chen Ge** is a Principal Research Engineer from SIMTech. He received his MSc degree in Smart Product Design from the Nanyang Technological University, Singapore. He has been involved in various types of industrial consultancy projects on CAE simulation for new moulding product development, mould design and moulding process optimisation. Mr Chen has over 20 years of experience in FEM simulation, plastic injection mould design and moulding process development.

**Dr Teo Wern Sze** is a Research Scientist from SIMTech. She received her PhD from the Imperial College of Science, Technology and Medicine, London and has been working on the development of continuous fibre-reinforced thermoset composites and their processing. Her current research interest is in green composites development through the use of natural fibres and/or biobased polymer feedstock to reduce the consumption of non-renewable resources. Her experience involves translating thermoset composite processing know-how to address new material systems.

Course Fee and Funding

- The full course fee for the complete Graduate Diploma Programme is S$15,000 before course fee funding & GST.
- All Singaporeans and Permanent Residents aged 21 years and above can enjoy course fee funding of up to 50% of the course fee (capped at S$15/training hour).
- Singaporean or Permanent Resident employees fully sponsored by SMEs can enjoy course fee funding support of up to 90% of the course fee (capped at S$50/training hour) under the Enhanced Training Support for Small & Medium Enterprises (SMEs) scheme, subject to eligibility criteria.
- Singaporeans aged 40 years and above can enjoy course fee funding of up to 90% of the course fee (capped at S$50/training hour) under the SkillsFuture Mid-career Enhanced Subsidy.
- Singaporeans aged 35 years and above with earnings not more than S$2,000 per month can enjoy course funding for 95% of the course fee under the Workfare Training Support (WTS) scheme.
- Singaporeans aged 25 years old and above are eligible for SkillsFuture Credit which can be used to offset course fee.

For more information about the course fee funding, please visit [www.ssg.gov.sg](http://www.ssg.gov.sg)