

Postgraduate Certificate in Engineering (Plastics)

2012 Block Course Details

March 5-9:

CHEMMAT 740 Advanced Polymer Materials.

Learning Outcomes:

To understand the structure, properties, and processing inter-relationships of materials used in the plastics industry and how these impinge on material selection and processing.

Course Content Includes

- Microstructure and morphology of semi-crystalline and amorphous polymers, including alloys and thermoplastic elastomers.
- The study of structure/property/processing inter-relationships for plastics materials.
- Characterisation of plastics materials, including spectroscopic, thermal and rheological analysis.
- Mechanical testing.

July 23-27:

CHEMMAT 741 Processing of Plastics.

Learning Outcomes:

To understand how materials used in plastics behave under processing conditions. This includes the effects of additives on the processing and degradation of plastics and the major mixing and forming techniques.

Course Content Includes

- In-depth coverage of advanced processing techniques including associated rheology considerations.
- The study of additives, degradation processes and the prevention of degradation.
- Formulation of products and the mixing of materials.