This module introduced participants to tool design and manufacture. For this purpose, the module essentially covers various design approaches and also part fabrication and finishing techniques.

**Injection Mould Design by R G W Pye. Longman Scientific & Technical.**

**Lecture and Project**

**English**

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Introduction: tool terminology, mould cavities and cores, bolsters, use of inserts, parting line, line of draw, draft angle. Prototype moulds. Tool Design Methods: Rapid Tooling; Design for Injection Moulding’. The Two Plate Mould; Multiplate Moulds; Undercut Moulds Tool Design Methods: Runner and gate design, ejector systems, venting mould shrinkage, methods of location and aligning each half, mould venting; Runnerless Moulds. Internal and external undercuts, splits, side cores/cavities, hydraulics, internal threads, etc. Design of cooling methods for various core/cavity shapes. Tool Part Fabrication techniques: Machine tools, die sinking, spark erosion, hobbing, castings etc. General Mould Construction. Standard Mould Parts