	National University of Sciences and Technology	
	Course Description	
Course Title Design for Manufacturing	**Course Code** **ME 824**	**Credit Hours** **3 – 0**

Textbook:

- "Product Design for Manufacture and Assembly" by Geoffrey Boothroyd, Peter Dewhurst and Winston A. Knight
- "Making It: Manufacturing Techniques for Product Design" by Chris Lefteri

Reference Books:

- "Process: 50 Product Designs from Concept to Manufacture" by Jennifer Hudson

Course Objective:

- Students will be taught a broad range of topics to enable them to link the product design process to the final manufacturing. Selection of the appropriate manufacturing process and its constraints are to be considered during the design phase of the product.

Course Outline:

- knowledge and skill required to transform the design into manufacturable entity by the choice of the appropriate manufacturing process, engineering materials and manufacturing facilities, ideas and techniques of design for assembly though an integrated approach to product development, through the design process and into manufacturing. Principles of standardization, mass customization, design for assembly, methodology for manual and automatic assembly, design for manufacturing processes and their corresponding design rules. Systematic approaches to design and assembly, cost analysis, factorial analysis are also studied. This course will increase the student's knowledge of the role of product design for manufacturing easement, the process of design to manufacture, and the role of design for assembly methods.

ASSESSMENTS

Description	Percentage Weightage (%)
Assignments	05-10%
Quizzes	10-15%
Mid Semester Exams	30-40%
End Semester Exam	40-50%