

EAS435 Manufacturing Systems

Level: 4

Credit Units: 5 Credit Units

Language: ENGLISH

Presentation Pattern: EVERY JULY

Synopsis:

The course examines the relationship between design and manufacture in a business environment with the use of techniques which enhance the product quality and at the same time reduces manufacturing costs. Additionally, the organisation of manufacturing processes, the concepts underpinning Just In Time (JIT) and optimised production technology are discussed within the context of examining the skills and techniques required to manage and operate a manufacturing system.

Topics:

- Manufacturing system design and modelling
- Control and management of manufacturing systems
- Inventory management
- Planning and scheduling
- Material flow and layout
- Quality issues
- Aerospace Systems Engineering Case Studies

Textbooks:

EAS435 Study Guide
ISBN-13: SG-0734

Fundamentals of Modern Manufacturing: Materials, Processes and Systems 7th Mikell P. Groover John Wiley
ISBN-13: 9781119767022

Learning Outcome:

- Evaluate the core concepts in manufacturing system design and modelling.
- Analyse the principles of control and management of manufacturing systems.
- Compose the functions and applications of inventory management as applied to aerospace manufacturing.
- Select methods of planning and scheduling for case studies on aerospace manufacturing methods.
- Appraise the importance of material flow and layout in aerospace manufacturing processes.
- Formulate the execution of a series of engineering case studies on aerospace manufacturing.

Assessment Strategies - Regular Semester (Evening Class):

Components	Description	Weightage Allocation (%)
Overall Continuous Assessment	PRE-CLASS QUIZ 1	2
	PRE-CLASS QUIZ 2	2
	PRE-CLASS QUIZ 3	2
	QUIZ 1	6
	TUTOR-MARKED ASSIGNMENT 1	18
Overall Examinable Components	Written Exam	70
Total		100

*The information listed is subject to review and change.