

The Hong Kong University of Science and Technology

UG Course Syllabus

[Course Title] Integrated Production Systems

[Course Code] IEDA4100

[No. of Credits] 3

[Pre-requisites] IEDA 2520 AND IEDA 3010

Instructor: Allen Wu

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Course Description

This course covers fundamental concepts and principles of integrated production systems. Topics range from demand forecasting, aggregate planning, inventory control, production control, operation scheduling to project scheduling. Upon completion of the course, students are trained to use quantitative methods to address various problems that arise in production and manufacturing systems.

Course Outline by Major Topics

1. Forecasting (1.5 weeks)
2. Aggregating Planning (2 weeks)
3. Inventory Control (3.5 weeks)
4. Push and Pull Production Systems: MRP and JIT (1.5 weeks)
5. Operations Scheduling (2 weeks)
6. Project Scheduling (1.5 weeks)

Assessments:

Assessment Task	Contribution to Overall Course grade (%)
Homework and Participation	10%
Mid-term	40%
Final exam	50%

Required Texts and Materials

Steven Nahmias, Production and Operations Analysis, McGraw Hill International Edition, Seventh Edition, 2015.