MECH 411 Planning and Control of Production Systems
Instructor: Dr. Yin Jack Wang (Dr. Zuomin Dong)

• Course Description
Introduction to manufacturing and production system; process engineering and process planning; group technology; forecasting; inventory control; aggregate production planning; material requirements planning; production scheduling; applications of linear programming and artificial intelligence in production process organization.

• Course Website: http://www.me.uvic.ca/~mech411/

• Reason to bring this course back: needs of reviving mfg. industry: marine and aerospace eng.

• Course Outline

Part I Introduction to Manufacturing and Production System
• Basic Taxonomy of Manufacturing
• Types of Production Process
• Components of a Production System

Part II Production Process Planning
• Experience-Based Process Planning
• Decision Tables and Decision Trees
• Process Capability Analysis
• Group Technology
• Computer-Aided Process Planning

Part III Planning and Control of Production Systems
• Forecasting
• Inventory System
• Aggregate Production Planning
• Material Requirements Planning
• Operation Sequencing and Scheduling
• Advanced Topics
• Project Planning

Part V Case Studies