Manufacturing System and Supply Chain Design

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Class Format and Protocols

- Part of Singapore-MIT alliance program in manufacturing; distance ed experiment
- At MIT: 15.763/1.274J/ESD.268J !!!
- 15.760/761 or 15.770J as pre req
- Web access for MIT students
- Use mike's to talk
- Two Seminars on Friday
Intent and learning goals

• Develop your understanding of phenomena and challenges in supply chains and manufacturing systems
• Develop your modeling skills and tool kit, applicable to system or network design
• Learn tactics, concepts and countermeasures for system improvement
Topics

• Manufacturing system design
• Supply chain design: network optimization, sourcing, pricing
• Flexibility and capacity planning
Approach

• Models, frameworks and general principles for conceptualization: how to think about supply chain or system challenges?
• Specific tools and software: how to develop a solution plan?
• Cases and applications: how to apply in practice?
Primary challenge

• Given uncertainty and constraints, how to design and plan a manufacturing system or supply chain to meet certain goals?
• Types of uncertainty and constraints will vary with context
• Applicable counter-measures and tactics will vary with context
Requirements and Expectations

• Come to class prepared
• Group assignments: three written assignments & four small assignments
• Group size: 3 or 4 students, ideally from a mix of programs
• Your feedback
• Syllabus