

MnE 601 – Automated Manufacturing Systems

Fall 2013

Dr. Kevin McDermott

Text: Groover, *Automation, Production Systems and Computer Integrated Manufacturing*, Prentice Hall Second Edition (Only)

Text: *The Machine That Changed the World* Womack, Jones, Roos MIT Press

| <u>Week</u> | <u>Subject</u> | <u>Chapter</u> |
|-------------|--|----------------|
| 1 | Flexible Manufacturing Systems | 16 |
| 2 | Introduction to Automation | 3 |
| 3 | Industrial Robotics | 7 |
| 4 | Material Handling in Automation | 9 |
| 5 | Programmable Logic Controllers | 8 |
| 6 | Automatic Data Capture (Term Project Proposal due) | 12 |
| 7 | Product Design & CAD/CAM | 24 |
| 8 | <i>Mid-Term Exam</i> | |
| 9 | Lean Production Womack Text | 27 |
| 10 | Lean Manufacturing Womack Text | 27 |
| 11 | Group Technology & Cellular Manufacturing Term Projects 1 | 15 |
| 12 | Process Planning & Concurrent Engineering Term Projects 2 | 25 |
| 13 | Production Planning & Control Systems Term Projects 3 | 26 |
| 14 | Term Projects 4 | |
| 15 | <i>Final Exam</i> | |
| | Midterm Exam | 25% |
| | Final Exam | 25% |
| | Group Lab Experiments | 15% |
| | Technical Presentation | 10% |
| | Term Project | 25% |