IEEM5366 Manufacturing Systems and Automation
Spring 2008

Instructor: Dr. Chih-Hsing Chu, Associate Professor
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Class Time: Mo 9:00AM – 12:00PM

Class Room: First Engineering Building, Room 703

Course Website: E-Learning

TA: Ya-Chun Chen （陳雅君）42937, Room 714, g9534528@oz.nthu.edu.tw

Required Textbook

Automation, Production Systems, and Computer-Integrated Manufacturing, M.P. Groover, 2nd Edition, Prentice Hall, 2000.

Reference Books:

1. *Computer-Aided Manufacturing*, T.C. Chang, R.A. Wysk, and H.P. Wang, 2nd Edition, Prentice Hall, 1998.
2. *Computer Integrated Manufacturing*, J.A.A. Rehg, and H.W. Kraebber, Prentice Hall, 2004.
3. SME *Manufacturing Engineering Series*.

Course Description:

IEEM 5366 concerns with automation technologies in modern manufacturing and computer-integrated manufacturing (CIM). It is designed for engineering students at graduate levels and is a qualification test subject for the current IEEM PhD students. There will be one midterm and one final exam given formally. This course will introduce important automation technologies, software and hardware, as well as their applications in manufacturing processes and production systems. Major topics include control technologies, sensors, actuators, numerical control, robotics, inspection technologies, material handling technologies, FMS, and CIM. There will be supplement materials that help students better understand each topic. The class will be conducted by lectures, video-watching, material reading, and discussions. Students are expected to have fundamental knowledge of traditional manufacturing processes, production systems, and information technologies.

Grading:

Homework	20%
Class participation	5%
Midterm	35%
Final	40%