



A. JAMES CLARK SCHOOL OF ENGINEERING

Course: ENPM 808P Manufacturing and Automation

Instructor: Mahesh Mani

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Overview

This course will cover manufacturing automation and product realization, digital factories, and disruptive manufacturing technologies. The role of additive manufacturing, sustainability, and performance simulation in selected manufacturing scenarios will be explored alongside automation strategies for rapid product development. This course will also have invited presentations from experts in the field.

Grading

- Home works such as technology review assignments (30% of the overall grade)
- In class quizzes (20% of the overall grade)
- Final project (50% of the overall grade) – includes written report, presentation Q/A

Recommended Textbooks

- Groover, Mikell P. Automation, production systems, and computer-integrated manufacturing. Prentice Hall Press, 2007.
- Gibson, Ian, David W. Rosen, and Brent Stucker. Additive manufacturing technologies. New York: Springer, 2010.

Course Outline

- Overview of manufacturing automation
- Industrial Robotics
- Smart manufacturing- rapid production development strategies
- Additive manufacturing technologies and capabilities
- Digital manufacturing
- Modeling and simulation in manufacturing
- Sustainability aspects in automation
- Standards in manufacturing

Code of Academic Integrity

The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity of the Student Honor Council, please visit <http://shc.umd.edu/SHC/HonorPledgeInformation.aspx>.