

Master Syllabus

EGR 2278 - Automation & Control Capstone

Division: Science, Mathematics and Engineering

Department: Automation and Control Technology

Credit Hour Total: 3.0

Lecture Hrs: 1.0 **Lab Hrs:** 4.0

Prerequisite(s): EGR 2231 AND EGR 2252 AND EET 2282

Date Revised: October 2012

Course Description:

Project-based review of robotic workcell system design, layout and integration of related industrial systems, and skills from the following areas: robots and programming languages, electronic systems, component installation, troubleshooting, mechanical repair and preventative maintenance. Additional focus on graphics, work processing, analytical and simulation tools, assembly, testing, troubleshooting and repair of a functional robot workcell. One classroom, four lab hours per week.

General Education Outcomes:

- Critical Thinking/Problem Solving Competency

Course Outcomes:

Design and document robotic workcell

Solve a problem through design and documentation using robotics.

Assessment Method: Performance appraisals

Performance Criteria: Score "17.5" or higher on five by five rubric

Communicate in a technical environment

Report on project process and results.

Assessment Method: Performance appraisals

Performance Criteria: Score "17.5" or higher on a five by five rubric

Construct and troubleshoot robotic system

Construct robotic system as designed and modify to function as needed.

Assessment Method: Performance appraisals

Performance Criteria: Score "17.5" or higher on a five by five rubric

Outline:

Project design and documentation
Project construction and troubleshooting
Testing and prove-in
Reporting