



## MASTER COURSE OUTLINE

Prepared By: Jim Lucas/Bill Autry/James Ayers

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## COURSE TITLE

Industrial Electricity II

## GENERAL COURSE INFORMATION

Dept.: IST

Course Num: 208

(Formerly: )

CIP Code: 46.0302

Intent Code: 21

Program Code: 784

Credits: 5

Total Contact Hrs Per Qtr.: 77

Lecture Hrs: 33

Lab Hrs: 44

Other Hrs:

Distribution Designation:

## COURSE DESCRIPTION (as it will appear in the catalog)

This course concentrates on the electrical theory, operation and set-up of motor controllers, variable frequency drives (VFD's), soft start devices. Coverage includes 4-20 mA control loops, control networks and grounding issues associated with electronic devices used in industrial automation.

## PREREQUISITES

IST 207 or Instructor Permission

## TEXTBOOK GUIDELINES

Appropriate textbook as determined by faculty

(Example: *Motors & Drives A Practical Technology Guide*, by Polka)

## COURSE LEARNING OUTCOMES

*Upon successful completion of the course, students should be able to demonstrate the following knowledge or skills.*

- 1) Demonstrate the setup of proper operating perimeters for individual devices
- 2) Demonstrate comprehension of manufacturers installation & operating instructions, safety protocols
- 3) Demonstrate knowledge of operating principles of Industrial controllers and control automation networks.

## INSTITUTIONAL OUTCOMES

### COURSE CONTENT OUTLINE

1. Power connections
2. Disconnecting methods or means
3. Switching circuits
4. Electronic motor control dynamics
5. System troubleshooting
6. Device electrical measurements
7. Control system grounding principles and problems

**DEPARTMENTAL GUIDELINES** *(optional)*

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**DIVISION CHAIR APPROVAL**

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**DATE**