

METROPOLITAN STATE COLLEGE of DENVER
Office of Academic Affairs

REGULAR COURSE SYLLABUS

School of: Professional Studies

Department: Engineering Technology

Prefix & Course Number: EET 3420 Crosslisted With*: _____

Course Title: Electric Power Distribution

Check All That Apply: Required for Major: _____ Required for Minor: _____ Specified Elective: X
Required for Concentration: X Elective: X Service Course: _____

Credit Hours: 3 (3+0)

Total Contact Hours per semester (assuming 15-16 week semester):

Lecture 45 Lab 0 Internship _____ Practicum _____ Other (please specify type and hours): _____

Schedule Type(s): L Grading Mode(s): L

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned**):

** NOTE: This information must be included in the course description.

Restrictions (Variable Topics Course): _____

Prerequisite(s): (EET 2145 or EET 3010), and MTH 2410 with grades of "C" or better

Corequisite(s): _____

Prerequisite(s) or Corequisite(s): _____

Banner Enforced:

Prerequisite(s): (EET 2145 or EET 3010), and MTH 2410 with grades of "C" or better

Corequisite(s): _____

Prerequisite(s) or Corequisite(s): _____

Catalog Course Description:

This course studies techniques and equipment employed in electric power distribution and control.

APPROVED:	<u>Richard Pegg</u>	3/1/2011
Department Chair OR Program Director		Date
<u>B. J. Morgenson</u>	<u>Shelby A. Thompson</u>	3-11-11
Dean OR Associate Dean		Date
Associate VP, Academic Affairs		6/2/11
		Date

*If crosslisted, attach completed Course Crosslisting Agreement Form

Prefix and Course Number: EET 3420

Required Reading and Other Materials will be equivalent to:

Wildi (2005). *Electrical Machines, Drives, & Power Systems*, 6 Edition, or latest edition. Upper Saddle Hill, NJ: Prentice Hall

Specific, Measurable Student Behavioral Learning Objectives:

Upon completion of this course the student should be able to:

1. Calculate short circuit currents
2. Utilize and incorporate protective devices in design to properly provide system protection
3. Measure the effect on the system of to electric motors on the system
4. Design power distribution networks

Detailed Outline of Course Content (Major Topics and Subtopics) or Outline of Field Experience/Internship (experience, responsibilities and supervision):

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| <ol style="list-style-type: none"> I. Review of three phase power systems II. Single Line Diagram <ol style="list-style-type: none"> A. Notation B. Symbols III. Circuit Parameters <ol style="list-style-type: none"> A. Cable B. Lines C. Motors D. Transformers IV. Three-Phase Fault Calculations <ol style="list-style-type: none"> A. Impedance Diagram B. Per Unit System C. Computer Studies | <ol style="list-style-type: none"> V. Voltage Drop and Regulation VI. Load Considerations VII. Power Factor Correction VIII. Overload Protective Devices <ol style="list-style-type: none"> A. Fuses B. Circuit Breakers C. Relays IX. System Considerations <ol style="list-style-type: none"> A. Lightning Arrestors B. Capacitors |
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Evaluation of Student Performance:

1. Written exams
2. Written lab reports
3. Oral Presentations