

METROPOLITAN STATE COLLEGE of DENVER
Office of Academic Affairs

REGULAR COURSE SYLLABUS

School of: Professional Studies

Department: Engineering Technology

Prefix & Course Number: EET 3670 Crosslisted With*: _____

Course Title: Measurements for Communications Systems

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

Credit Hours: 3 (1+4)

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

Lecture 15 Lab 60 Internship _____ Practicum _____ Other (please specify type and hours): _____

Schedule Type(s): B 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 2340, EET 3620 and MTH 2410 with grades of "C" or better

Corequisite(s): _____

Prerequisite(s) or Corequisite(s): _____

Banner Enforced:

Prerequisite(s): EET 2340, EET 3620 and MTH 2410 with grades of "C" or better

Corequisite(s): _____

Prerequisite(s) or Corequisite(s): _____

Catalog Course Description:

Students learn to perform measurements on communication circuits including SNR, noise figure, impedance, admittance, phase, power, frequency, spectrum analysis, and fields at high frequencies.

2B	APPROVED: <u>Ruband Pozzi</u>	<u>3/1/2011</u>
	Department Chair OR Program Director	Date
	<u>R. R. Mergenezz</u>	<u>3-1-11</u>
	Dean OR Associate Dean	Date
	<u>Shala A. Thompson</u>	<u>6/2/11</u>
	Associate VP, Academic Affairs	Date

*If crosslisted, attach completed Course Crosslisting Agreement Form

Prefix and Course Number: EET 3670

Required Reading and Other Materials will be equivalent to:

NO TEXT

Instructor supplied labs

Specific, Measurable Student Behavioral Learning Objectives:

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

1. Perform and record measurements using effective techniques with: frequency counters, impedance meters, bridges, semi-automatic microwave network analyzers, time domain reflectometers, spectrum analyzers, and vectorscopes
2. Perform measurements on laser and fiber optic communication systems using proper techniques

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

- I. Time Measurements
- II. Frequency Measurements
- III. Impedance and Admittance Measurements
 - A. Meters
 - B. Bridges (including RF and VHF)
- IV. Semi-automatic Microwave Network Analyzer Measurements (using computer)
- V. Time Domain Reflector
- VI. Delay Time Measurements
- VII. Microwave Measuring Techniques
- VIII. Vectorscope
- IX. Laser and Fiber Optic Measurements

Evaluation of Student Performance:

1. Lab reports
2. Final Oral Presentation