1. Course Title:

Active Linear Circuits
EET 323 – 4 Credits

EET Program Requirement
Prerequisite: EET 312, Math 172
This is a Technical content course under ABET Criterion 5

2. Faculty Member Information:

Instructor:
Office: Hebeler 101A
Phone: 509-963-1763
E-mail: gumaerj@cwu.edu

3. Course Description:

Analysis and design of operational amplifier circuits including amplifiers, comparators, active filters, controls, and instrumentation devices.

4. Textbook and other required materials for the course:

Coghlin, & Driscoll, *Electronic Operational Amplifiers and Linear Integrated Circuits* 6th Ed, Prentice Hall, 2001

5. Specific Learner and Expressive Outcomes and Assessment Strategies:

ABET Outcome Criteria #	Learner Outcomes	Assessment
3.d. 3.f. 9.A.5.	1. The student will be able to design, analyze, and implement electronic circuits containing operational amplifiers and other active linear devices.	The student will complete homework assignments, a written test, laboratory work, and write reports on laboratory work.
9.A.1.	2. The student will be able to explain the behavior of typical amplifier and comparator circuits using active linear devices.	The student will complete homework assignments and a written test.
9.A.4.	3. The student will be able to use electronic test instruments and software tools to evaluate electronic circuits.	The student will complete laboratory assignments and write reports on laboratory work
3.a.	4. The student will be able to use manufacturer's data sheets to select appropriate electronic components.	The student will complete homework assignments, a written test, laboratory work, and write reports on laboratory work.
3.g.	5. The student will communicate their development process, work, assumptions, and evaluations to their peers and instructor	The student will write lab reports with a purpose, objective, results and appendices that contain the design and development process used in the laboratory.
3.c.	6. Determine a hardware development process for analog design	The student will complete homework assignments, a written test, laboratory work, and write reports on laboratory work.

6. Course Topics and Schedule:

The following schedule represents the intended sequence of study and is subject to adjustment to meet the needs of the class. The readings are from the Coughlin text.

Week of	Topic	Reading
	Introduction, Inverting and Non-inverting Amplifiers	Ch. 1,3
	Comparators and Controls	Ch. 4
	Linear and Switching Power Supplies	Ch. 16
	Op-Amps with Diodes	Ch. 7
	Instrumentation	Ch. 8
	Op-Amp Performance, Exam 1	Ch. 9,10
	Waveform Generators	Ch. 6
	Active Filters	Ch. 11
	A/D	Ch. 14
	D/A, Review	Ch. 15
	Final Exam 12:00-1:50 PM (Comprehensive)	

7. Grading:

Your EET323 grade will be based upon the number of points earned during the quarter. There will be a total of 500 points possible. The point breakdown and grading scale are shown below.

Mid-term Exam	50
Final Exam	100
Assignments	350
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Total Points	500

The grading scale is as follows:

A = Over 464	B = 415-434	C = 365-384	D = 315-334	
A- = 450-464	B- = 400-414	C- = 350-364	D- = 300-314	
	B+ = 435-449	C+ = 385-399	D+ = 335-349	F = 299 and below

8. ADA Statement:

Students who have special needs or disabilities that may affect their ability to access information and or material presented in this course are encouraged to contact me or Robert Harden, ADA Compliance Officer, Director, ADA Affairs and Students Assistance on campus at 963-2171 for additional disability related educational accommodations.