

Course Syllabus	EECS 3440 - Electronics Laboratory
Credits & Contact Hours	1 credit hour and three 50-minute lecture contact per week
Instructor's Name	Dr. Mansoor Alam
Textbook	"Electronics Lab II," rev. 2, January 2002, R. King, ed. (lab manual). Available on-line (without the component data sheets), or from bookstore. The manual from EECS 3400 lab is supplemental; students will have this from the prereq course.
Course Information	<p>Laboratory experiments and projects in the testing and design of analog and mixed-signal electronic circuits.</p> <p>Corequisite: EECS 3420</p> <p>Required course for EE students</p>
Specific Goals-Student Learning Objectives (SLO)	<p>The student will be able to</p> <ol style="list-style-type: none"> 1. Experimentally measure incremental gains and resistances of analog amplifiers at midband 2. Experimentally measure and plot frequency response curves of analog amplifiers 3. Produce a written lab report in a standard format, which includes a brief discussion of relevant theory 4. Make meaningful evaluations of the degree of experimental correlation with the results of SPICE simulations and/or calculations based upon simplified models 5. Correctly use the basic analog laboratory instruments
Topics	<ol style="list-style-type: none"> 1. SPICE Modeling the '741 Op-Amp 2. 741 Op-Amp Circuits 3. SPICE Simulation of a JFET Common-Source Amplifier 4. JFET Common-Source Amplifier 5. Small-Signal CC and CB Amplifiers 6. Bypass and Coupling Capacitor Effects 7. BJT High-Frequency Performance 8. Differential Amplifiers 9. Complementary-Symmetry Push-Pull Amplifier 10. Negative Feedback 11. Voltage Regulators 12. Wien Bridge Oscillator