- 1. Course number and name: EGE 323-01 Electronics II Laboratory
- 2. Credits and contact hours: 1 credits and 3 contact hours

3.	Instructor's Name: Dr. Mohammad R. Zunoubi	Office: REH205
4.	Office Hours: Monday/Thursday 12:30PM – 2:00PM	Friday 10:00AM – 11:00AM

5. Lab Manual(s), title, author and year

Up-to-date lab handouts provided by the instructor.

a. Other supplemental materials

Class notes created by the instructor

Web Site: http://www.engr.newpaltz.edu/~zunoubm/S20/electronics2lab/electronics2lab.htm

#### 6. Specific course information

a. Brief description of the content of the course (catalog description)

Laboratory exercises covering the multistage amplifier, direct coupled amplifier, difference amplifier, op-amp applications, frequency response, oscillator, waveform generator, power amplifier, and frequency response.

- b. Prerequisites or co-requisites Co-requisite: EGE321 (Electronics II)
- c. Required, elective or selected elective Required

# 7. Course Learning Outcomes

a. Specific outcomes of instruction

Students working in teams will demonstrate their ability to:

- I. <u>Perform and design simulation and hardware experiments</u> on operational amplifier applications, multi-stage amplifiers, amplifiers frequency response, circuits with feedback, power amplifiers, and <u>interpret experimental results</u>.
- II. <u>Write reports</u> on laboratory experimentation that effectively convey the outcomes of experimental results and address the accuracy of theoretical/simulation expectations to predict experimental results.
- III. Become proficient in the use of modern engineering software such as PSpice or Electronic Workbench and the lab equipment (power supplies, multi-meters, function generator and oscilloscope), including assembling, troubleshooting and measurement.

# b. Lab Contribution to Program Student Learning Outcome:

Program Student Outcome	Course Desired Student Outcome	Level of Contribution 3/3 = strong:			
		2/3 = moderate:			
		1/3=marginal			
(5) an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	Ι	2			
(6) an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	I, II, III	3			

This course contributes to the Program Student Outcomes as explained in the following table:

#### 8. Tentative Lab schedule: 1 session/week; 2hr 40 min/session

Week	Торіс
1,2	Single-stage amplifier Frequency behavior: Low and high frequency
	measurements and designs
3	High-Frequency Common-Emitter Common-Base Cascode Amplifier
4	Differential Amplifiers: analysis and measurements.
5	Active Loaded Differential Amplifier
6	Multi-Stage Amplifiers: analysis and design.
7,8	Design of a BJT op-amp
9	Design of an Oscillator
10	Feedback principles and designs
11	Power Amplifiers: analysis and measurements

# 9. Topics covered

Amplifier Frequency behavior: low and high frequency measurements and designs, differential and multi-stage amplifiers, BJT op-amps, feedback topologies, power amplifiers, wave-shaping circuits,

# **10. Grading policy**

<u>Grading weights</u> :							
Lab/Project Reports:	80%	90%	93%		A	А	
Overall Performance (Professor's discretion):	20%	80%	83%	87%	B-	В	$B^+$
		70%	73%	77%	C	С	$C^+$
Total:	100%	Below	v 70%		F		

**11.** Lab attendance: Attendance to laboratory sessions is <u>required</u> and your absence will result in <u>a zero</u> for the lab you don't attend.

Spring 2020

#### **Campus-wide Policy Statements**

**1. Academic integrity policy statement:** Students are expected to maintain the highest standards of honesty in their college work. Cheating, forgery, and plagiarism are serious violations of academic integrity. Students found guilty of any violation of academic integrity are subject to disciplinary action, up to and including expulsion. New Paltz's policy on academic integrity (rev. October 2017) is found in the Undergraduate Catalog. Sojourner Truth Library's website contains several excellent resources to help with avoiding plagiarism; see especially lib.newpaltz.edu/assistance/plag.html.

**2. Reasonable accommodation of individuals with disabilities statement:** *Students needing classroom and/or testing accommodations related to a disability should contact the Disability Resource Center (Student Union, Room 210, 845-257-3020) as close as possible to the beginning of the semester. The DRC will then provide students' instructors with an Accommodation Memo verifying the need for accommodations. Specific questions about services and accommodations may be directed to Deanna Knapp, Assistant Director (knappd@newpaltz.edu) or Jean Vizvary, Director (vizvaryj@newpaltz.edu).* 

**3. Veteran & Military Services statement:** New Paltz's Office of Veteran & Military Services (OVMS) is committed to serving the needs of veterans, service members and their dependents during their transition from military life to student life. Student veterans, service members or their dependents who need assistance while attending SUNY New Paltz may refer to OVMS's website; call 845-257-3120, -3124 or -3074; e-mail np-vms@newpaltz.edu; or stop by the Student Union, Room 100 South.

**4. Computer and network policies statement:** Users of New Paltz's computer resources and network facilities are required to comply with the institutional policies outlined in the Acceptable Uses and Privacy Policy and other technology policies, available at www.newpaltz.edu/itpolicy.

**5.** *Identity verification policy statement for online courses:* New Paltz's Online Identity Verification Policy is designed to verify that students enrolled in our online courses and/or programs are the ones who take the courses, complete the programs, and receive the academic credit. The complete policy is published in the Undergraduate Catalog.

**6. Title IX and related policy statement:** *Gender discrimination, sexual harassment, sexual assault, sexual violence, stalking, and power-imbalanced sexual/romantic relationships between faculty and students are strictly prohibited within the SUNY New Paltz community. We encourage students to report, confidentially discuss, or raise questions and concerns regarding potential violations. Reports can be made to the Title IX Office, the department chair and/or the dean of your school. For information on Title IX reporting and support, visit www.newpaltz.edu/titleix/. The College's Consensual Relationship Policy can be found at www.newpaltz.edu/hr/policies.html.* 

# **Information on electronic SEIs**

You are responsible for completing the Student Evaluation of Instruction (SEI) for this course. I value your feedback and use it to improve my teaching and planning. Please complete the form during the open period on line [8:00 a.m. April 23, 2020 through Midnight May 07, 2020].

# **Important dates**

Last day of the semester to withdraw from a course without receiving a penalty grade is **March 30, 2020;**