EGE 340-01 Applied Electromagnetics
COURSE SYLLABUS

1. **Course number and name:** EGE 340-01 Applied Electromagnetics

2. **Credits and contact hours:** 3 credits and 3 contact hours

3. **Instructor's Name:** Dr. Mohammad R. Zunoubi **Office:** REH205/EIH210

4. **Office Hours:** Monday/Thursday 12:30PM – 2:00PM Friday 10:00AM – 11:00AM

5. **Textbook(s), title, author and year**
   Fawwaz T. Ulaby, U. Ravaioli, Fundamentals of Applied Electromagnetics, 7th Edition, Pearson Education, New Jersey, 2015.

a. Other supplemental materials
   Class notes created by the instructor
   Site: http://www.engr.newpaltz.edu/~zunoubm/S20/emag/emag.htm

6. **Specific course information**

a. Brief description of the content of the course (catalog description)
This course contributes to the category "engineering topics".
Transmission line theory. Graphical solutions using Smith Chart. Impedance matching. Transients on lossless lines. Electrostatis, capacitance and electric energy. Magnetostatic, Inductance and magnetic energy. Maxwell's equations, the wave equation, and uniform plane waves.

b. Prerequisites or co-requisites
   Prerequisite: EGE200 (Circuit Analysis), MAT353 (Calculus III)

c. Required, elective or selected elective
   Required

7. **Course Learning Outcomes:**

a. Specific outcomes of instruction
   Students will demonstrate an ability to use analytical/graphical techniques to analyze transmission lines and matching networks, analyze transient (Time Domain) wave propagation, and grasp fundamentals of static and dynamic electric and magnetic fields.

b. Relationship to student outcomes

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

Student Outcome	Course Desired Learning Outcome	Level of Contribution 3/3 = strong; 2/3 = moderate; 1/3 = marginal
(1) an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	I	3/3

8. Topics covered

Introduction to the waves, review of phasors and complex theory, analysis of transmission lines: incremental model, telegraphic equations, wave equations, reflection and standing waves, special line lengths and terminations and their applications, time-average power, Smith chart: fundamentals, applications including single-stub matching, transient Analysis of Transmission Lines: bounce diagram, time-domain reflectometry (TDR), fundamentals of electrostatic, capacitance, and electric energy, fundamentals of magnetostatic, inductance, and magnetic energy. Maxwell's Equations: Wave equations and plane-wave propagation.

9. Grading policy

Grading weights:

Homework:	10%	90%	93%		A^-	A	
2 Hourly Exams:	45%	80%	83%	87%	B^-	B	B^+
Quizzes:	15%	70%	73%	77%	C^-	C	C^+
Final Exam:	30%	Below 70%			F		

Total:	100%						

10. Return of graded papers: The hourly exams are returned the second lecture after the test is taken. Quizzes are returned the next lecture after the quiz is taken.

11. Class attendance: Attendance to classes is strongly encouraged.

Final Exam: 12:30 PM - 2:30 PM on Thursday May 14, 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;**