BS COMPUTER ENGINEERING + MS ELECTRICAL ENGINEERING AP

Program Overview

AP Coordinator	Damodaran Radhakrishnan, (845) 257-3772, damu@newpaltz.edu
Program ID	BS Computer Engineering AP (266), MS Electrical Engineering AP (268)
Credits	120 UG + 30 GR
Program Length	The MS can be completed in one additional year of study if enrolled full-time, but students must complete the degree within 7 years.
Modality	In-person
Full-time/Part-time	Full-time or Part-time
Transfer Credits	6 graduate credits taken as an undergraduate will transfer into the MS
MS Capstone	Project or Thesis

Program Description

This accelerated plan of study provides a pathway to earning a master's degree in Electrical Engineering along with a bachelor's degree in either Computer Engineering or Electrical Engineering. Students enrolled in the BS/MS program complete 6 graduate-level credits during their senior year. These credits are offered at the reduced undergraduate tuition rate and fulfill both undergraduate and graduate program requirements.

How does it work?

Get started as an undergraduate by declaring the Computer Engineering AP major (266):

- **Meet** with AP advisor, Damodaran Radhakrishnan, to declare the Computer Engineering AP major.
- **Work** with your AP advisor to select two graduate courses to take during your senior year.
- **Apply** for the MS Electrical Engineering AP program in your senior year.
- **Transfer** 6 credits of graduate courses taken as an undergraduate into your graduate program.

Graduate Admission Requirements

Graduate admission requires submission of:

- Graduate application - select major 268.
- Your New Paltz transcript indicating a cumulative GPA of at least 3.0
- Grades of B or higher in graduate courses taken as a senior.
- 1 letter of recommendation.

Admission Deadlines

July 31	Fall Admission
January 1	Spring Admission

Accepting on a rolling basis until the program is full. However, applications must at least be started by the deadline or they will not be considered.

Curriculum Requirements

BS Computer Engineering AP (266)

Code	Title	Credits
Math/Science Foundation Courses (40 Credits)		
Mathematics		20
Computer Science		8
Physics		8
Chemistry or Biology		4
Core Engineering Courses (48 Credits)		
By advisement, students may enroll in 6 credits of graduate electives that will fulfill their BS and MS degree programs.		48
Technical Electives (12 Credits)		
Twelve credits of technical electives are required, which must include at least one upper-division electrical (EGE), computer (EGC), and/or mechanical (EGM) engineering lecture course.		12
Total Credits		**100**

MS Electrical Engineering AP (268)

Code	Title	Credits
Transfer Credit	GR courses taken as an undergrad	6
Engineering Coursework		15
Working with your advisor, select five Engineering Courses		
Select the Project Option or Thesis Option		9
Project Option:		
EGE532	Computer Arithmetic	
EGE533	Introduction to Parallel Computing	
EGE534	Fault-Tolerant Design of Digital Systems	
EGE535	Low Power VLSI Design	
EGE536	Computer Architecture	
EGE537	VLSI Design	
EGE543	Antennas and Wave Propagation	
EGE544	Microwave Circuits	
Thesis		
EGE590	Thesis in Electrical Engineering	
EGE593	Engineering Selected Topic	
Total Credits		**30**

Program Requirements

Once admitted to the BS/MS program, students must maintain a 3.0 cumulative GPA in all courses through the senior year. In addition, students must earn a B or better in each of the two graduate courses that they take as undergraduates. Students not satisfying these requirements will be re-evaluated for continuation in the program.

Academic Standing Requirements for Accelerated Pathway Students

A cumulative GPA of less than 3.0 in graduate-level courses taken in the undergraduate portion of an accelerated pathway program precludes the student's good standing. Students with a cumulative GPA between 2.75 to 2.99 are strongly advised to reconsider continuing into the graduate program. Students with a cumulative GPA below 2.75 may not continue and will be de-matriculated from GR program.

Graduate Checklist

- Apply for graduation via my.newpaltz.edu under "Graduation" tab according to the schedule in the academic calendar.
- Resolve any pending admission conditions (outlined in your acceptance letter) and/or missing documents if applicable.
- Review your progress report via my.newpaltz.edu to ensure that you have completed all program requirements.
- Remember that only two grades below a B- may be applied to your plan of study
- Contact your advisor if you need to amend your plan or process transfer credit.
- Ensure that you are in good academic standing with a GPA (Grade Point Average) of 3.0 or higher.
- Pass your capstone or culminating assessment.
- Complete your degree within the specified time limit outlined in the Program Overview.

Undergraduate Program Learning Objectives

Computer Engineering (BS)

The Computer Engineering Program has continued to adopt ABET Criterion 3 (a) - (k) as its guiding outcomes, as specified below.

a) an ability to apply knowledge of mathematics, science, and engineering

b) an ability to design and conduct experiments, as well as to analyze and interpret data

c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability

d) an ability to function on multi-disciplinary teams

e) an ability to identify, formulate, and solve engineering problems

f) an understanding of professional and ethical responsibility

g) an ability to communicate effectively

h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context

i) a recognition of the need for, and an ability to engage in life-long learning

j) a knowledge of contemporary issues

k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

Graduate Program Learning Outcomes

Electrical Engineering (MS)

- Demonstrate a high level of expertise and competence in an area of concentration in electrical engineering.
- Play a meaningful role in research or technical development leading to significant contributions to engineering and technology.
- Demonstrate leadership skills in the workplace, function professionally in a globally competitive world, and communicate engineering results effectively.
- Demonstrate strong interpersonal and teamwork skills.