MAJOR IN COMPUTER ENGINEERING

(100 credits)

- *Students majoring in Engineering follow a modified General Education program based on the New Paltz GE program in effect at the time of matriculation. In all cases, modifications meet or exceed SUNY's minimum General Education requirement and are reflected in students' progress reports.*
- *A minimum of 124 credits is required to complete the Bachelor's degree in Computer Engineering.*
- *Students may not enroll in any engineering course unless all prerequisites have been met with a grade of C- or better.*
- *Students are required to earn a grade of C- or better in any course that is used to satisfy Computer Engineering major requirements.*

Code	Title	Credits
Math/Science Foundation Courses (40 Credits)		
Mathematics (20 credits):		
MAT251	Calculus I	4
MAT252	Calculus II	4
MAT320	Discrete Mathematics for Computing	3
MAT359	Ordinary Differential Equations	3
MAT362	Linear Algebra	3
MAT380	Applied Probability and Statistics	3
Computer Science (8 credits):		
CPS210	Computer Science I: Foundations [1]	4
CPS310	Computer Science II: Data Structures	4
Physics (8 credits):		
PHY201 & PHY211	General Physics 1 and Physics 1 Laboratory	4
PHY202 & PHY212	General Physics 2 and General Physics 2 Lab	4
Chemistry or Biology (4 credits):		
Select one of the following:		4
CHE201 & CHE211	General Chemistry I and General Chemistry I Lab	
BIO201 & BIO211	General Biology I and Gen Bio 1 Lab	
Core Engineering Courses (48 Credits)		
EGG101	Introduction to Engineering Science	3
EGC251	C/C++ Programming	3
EGC220	Digital Logic Fundamentals	3
EGC221	Digital Logic Lab	1
EGE200	Circuit Analysis	3
EGE201	Circuits Laboratory	1
EGC331 & EGC332	Microcontroller System Design and Microcontroller Laboratory	4
EGC320	Digital Systems Design	3
EGE320	Electronics I	3
EGE322	Electronics I Laboratory	1
CPS353	Software Engineering	3
EGC433	Embedded Systems	3
EGC442	Introduction to Computer Architecture	3
EGC445 & EGC446	VLSI Design and VLSI Design Lab	4
EGC455	Design and Verification of System on Chip	3
EGG321	Technical Communication	3
EGG408	Senior Design Project I [2]	2
EGG409	Sr Design Project 2 [2]	2
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. [3]		12
Total Credits		**100**

1. A grade of B- or better in CPS210 Computer Science I: Foundations is required to progress to CPS310 Computer Science II: Data Structures .
2. Seniors must register for EGG408 Senior Design Project I and EGG409 Sr Design Project 2 during each of the last two semesters preceding their graduation. A single project under the direction of a single faculty member will be spread over the two semesters. This project should provide a meaningful engineering design experience and should draw on the student's cumulative technical background.
3. Technical electives may also include any 300/400/500-level computer science, physics, and math courses. Students must obtain the approval of their advisor prior to registering for the courses. Pre-approved engineering graduate courses may be used as undergraduate technical electives.