

CONCENTRATION IN COMPUTER ENGINEERING (AST2)(PLAN CODE: EECCEAS, SUBPLAN CODE: COMPTRENGR)

Academic Plans, known as programs, include an overview description and a summary of program requirements. You can search the online catalog via the Academic Plan links on the right for a desired program or a specific course information.

Updated 7/30/24. Please see corrections page (<https://catalog.clark.edu/corrections/degrees-certificate-corrections/>) for further details

Computer Engineering Transfer Degree AST2 requires students to complete minimum of 95 quarter hours of transferable credit with a cumulative grade point average of at least 2.00. In order for a student to be junior ready in Computer Engineering at specific transfer institutions, there are additional credits beyond the AST2 credit requirements for this degree that a student need to consider. Please consult your faculty adviser to learn more and to develop your education plan (www.engrcs.com/schedule).

Code	Title	Credits/ Units
Basic Requirements		
<i>Communication Skills</i>		
ENGL& 101	English Composition I	5
<i>Mathematics</i> ¹		
MATH& 151	Calculus I	5
MATH& 152	Calculus II	5
MATH& 153	Calculus III	5
MATH 215	Linear Algebra	5
MATH 221	Differential Equations	5
<i>Distribution Requirements</i>		
Coursework should be planned with the help of an advisor based on the requirements of the specific discipline at the baccalaureate institution the student selects to attend.		
<i>Humanities</i>		
Course Options (https://catalog.clark.edu/degree-certificate-requirements/transfer-degree-distribution-list/#humanities)		5
<i>Social Sciences</i> ²		
Course Options (https://catalog.clark.edu/degree-certificate-requirements/transfer-degree-distribution-list/#social-sciences)		5
<i>Minimum of additional 5 credits in either Humanities or Social Sciences</i>		
<i>Physics</i> ³		
Complete the following 3-term physics sequence with the required concurrent enrollment:		
Sequence One:		
PHYS& 241 & PHYS& 231	Engineering Physics I and Engineering Phys Lab I	5
Sequence Two:		

PHYS& 242 & PHYS& 232	Engineering Physics II and Engineering Phys Lab II	5
Sequence Three:		
PHYS& 243 & PHYS& 233	Engineering Physics III and Engineering Phys Lab III	5
<i>Chemistry with Lab</i>		
CHEM& 141 & CHEM& 151	General Chemistry I and General Chemistry Laboratory I	5
<i>Required Major Courses</i>		
ENGR& 204	Electrical Circuits	5
CSE 121	Introduction to C	5
Specialization Courses		
Select Minimum of four (4) specialization courses (minimum 15-20 15-20 units) as appropriate for intended major and intended baccalaureate institution:		
CSE 222	Introduction to Data Structures	
CSE 223	Data Structures & Object-Oriented Programming	
CSE 224	Programming Tools	
ENGL& 235	Technical Writing	
ENGR 101	Engineering and Computer Science Orientation	
ENGR 120	Intro to Electrical/Computer Sci & Engineering	
ENGR 252	Electrical Circuits and Signals	
ENGR 250	Digital Logic Design	
ENGR 253	Signals and Systems	
ENGR 270	Digital Systems and Microprocessors	
MATH& 254	Calculus IV	
Total Credits/Units		90-95

¹ MATH 103 and MATH 111/MATH 110 are required prerequisites for MATH& 151 that may be needed if calculus placement is not met
² WS 101, ECON& 202 and HIST& 128 are recommended
³ Requires concurrent enrollment in PHYS 94/PHYS 95/PHYS 96

Program Outcomes

Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:

- Demonstrate progress toward healthier behaviors. (GE)
- Obtain, evaluate, and ethically use information. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)

- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate understanding of the derivative as an instantaneous rate of change and the definite integral as a limit of a sum.
- Apply fundamental principles and relationships from the Natural Sciences to analyze technological or scientific problems.
- Apply scientific and technological knowledge and methodologies to creatively solve technological or scientific problems.
- Acquire scientific and technological information from appropriate sources to examine issues, claims or situations.
- Analyze and solve multi-step problems using techniques through single-variable calculus.

Program maps are a suggested academic plan and should not be used in the place of regular academic advising appointments. Your student entry method, placement, course availability, and program requirements are subject to change and transfer credit(s) may change your map/plan.

To view the current suggested map for your program please visit our website <https://programmap.clark.edu/academics> (<https://programmap.clark.edu/academics/>)