CONCENTRATION IN CIVIL ENGINEERING (AST2/MRP) (PLAN CODE: MEEMCAS, SUBPLAN: CIVILENGR)

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.

Code	Title	Credits/Units
Basic Requirements		
Communication Skills		
ENGL& 101	English Composition I	5
Mathematics [1]		
MATH& 151	Calculus I [1]	5
MATH& 152	Calculus II	5
MATH& 153	Calculus III	5
MATH 215	Linear Algebra	5
MATH 221	Differential Equations [2]	5
Distribution Requirements		
Humanities		5
Course Options (https://catalog.clark.edu/degree-certificate-requirements/transfer-degree-distribution-list/#humanities)		
Social Sciences [3]		5
Course Options (https://catalog.clark.edu/degree-certificate-requirements/transfer-degree-distribution-list/#social-sciences)		
Additional Credits in either Humanities or Social Sciences		5
Physics [4]		
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
Chemistry with Lab		
CHEM& 141 & CHEM& 151	General Chemistry I and General Chemistry Laboratory I	5
CHEM& 142 & CHEM& 152	General Chemistry II and General Chemistry Laboratory II	5
Additional Requirements		
ENGR& 214	Statics	5
ENGR& 215	Dynamics	5
ENGR& 225	Mechanics of Materials	5
Math/Engineering Electives		**15-20**
Select a minimum of 4 specalization courses in consultation with an Engineering Advisor as appropriate for intended transfer institution		
BIOL& 100	Survey of Biology	
BIOL& 222	Majors Cell/Molecular	
BIOL& 260	Microbiology	
ENGL& 235	Technical Writing	
ENGR 105	Wheeler Innovation Lab Qualifications	
ENGR 109	Introduction to Engineering	
ENGR 113	Engineering Sketching and VIsualization	
ENGR 121	Field Survey I	
ENGR 140	Basic Autocad	
ENGR 150	Basic Solidworks	
ENGR 221	Materials Science	
ENGR& 224	Thermodynamics	
ENGR 240	Applied Numerical Methods for Engineers	
MATH& 254	Calculus IV	
Total Credits/Units		**100-105**

[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] Clark requires concurrent enrollment or completion of MATH& 254 with a grade of "C" or higher.

[3] ECON& 201 or ECON& 202 is recommended, but not required.

[4] 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:

- 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)

- Obtain, evaluate, and ethically use information. (GE)

- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)

- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)

- Analyze patterns of power, privilege, and inequity in the United States. (GE)

- Demonstrate progress toward healthier behaviors. (GE)

- Apply communication theory to demonstrate effective oral communication skills.(GE)

- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)

- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)

- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)

- Analyze and solve multi-step problems using techniques through single-variable calculus.

- Demonstrate understanding of the derivative as an instantaneous rate of change and the definite integral as a limit of a sum.

- Acquire scientific and technological information from appropriate sources to examine issues, claims or situations.

- 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.

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/)