

# CONCENTRATION IN CHEMISTRY (AST1)(PLAN CODE: LRST1AS, SUBPLAN CODE: CHEMISTRY)

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
<b>General Education Requirements</b>		
<i>Communication Skills</i>		
ENGL& 101	English Composition I	5
<i>Quantitative Skills</i>		
MATH& 151	Calculus I <sup>1</sup>	5
MATH& 152	Calculus II	5
<i>Health &amp; Physical Education</i>		
Course Options ( <a href="https://catalog.clark.edu/degree-certificate-requirements/transfer-degree-distribution-list/#health-physical-education">https://catalog.clark.edu/degree-certificate-requirements/transfer-degree-distribution-list/#health-physical-education</a> )		
<i>Humanities (HA)(HB) &amp; Social Sciences (SS) Courses</i> <sup>2</sup>		
Humanities (HA) Courses ( <a href="https://catalog.clark.edu/degree-certificate-requirements/transfer-degree-distribution-list/#humanities">https://catalog.clark.edu/degree-certificate-requirements/transfer-degree-distribution-list/#humanities</a> )		5
Social Sciences (SS) Course ( <a href="https://catalog.clark.edu/degree-certificate-requirements/transfer-degree-distribution-list/#social">https://catalog.clark.edu/degree-certificate-requirements/transfer-degree-distribution-list/#social</a> )		5
Select an additional five credits/units from Humanities (HA) or (HB) or Social Science (SS) course ( <a href="https://catalog.clark.edu/degree-certificate-requirements/transfer-degree-distribution-list/#humanities">https://catalog.clark.edu/degree-certificate-requirements/transfer-degree-distribution-list/#humanities</a> )		5
<b>Pre-Major Program Requirements</b>		
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
CHEM& 143 & CHEM& 153	General Chemistry III and General Chemistry Laboratory III	6
CHEM& 241 & CHEM& 251	Organic Chemistry I and Organic Chemistry Laboratory I	6
CHEM& 242 & CHEM& 252	Organic Chemistry II and Organic Chemistry Laboratory II	6
CHEM& 243 & CHEM& 253	Organic Chemistry III and Organic Chemistry Laboratory III	6
<b>Science Electives</b>		
PHYS& 241 & PHYS& 231	Engineering Physics I and Engineering Phys Lab I	5
PHYS& 242 & PHYS& 232	Engineering Physics II and Engineering Phys Lab II	5
PHYS& 243 & PHYS& 233	Engineering Physics III and Engineering Phys Lab III	5
<b>Additional Math Course</b>		

MATH& 153	Calculus III	5
	or MATH& 146 Introduction to Stats	
<b>Other Electives</b>		
Additional electives to meet min. credit requirements		3
Foreign Language <sup>3</sup>		
<b>Total Credits/Units</b>		<b>90</b>

<sup>1</sup> Calculus I (MATH& 151) requires the successful completion of both Trigonometry (MATH 103) and College Algebra (MATH 110/MATH 111), or recommending score on an approved placement test prior to registration.

<sup>2</sup> CMST& 230 would count as a social science; otherwise, the third course needs to be a social science.

<sup>3</sup> Please check with the transfer institution regarding world language requirements.

## 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:

- Apply scientific methodologies to develop and answer questions about the natural world.
- Demonstrate understanding of the derivative as an instantaneous rate of change and the definite integral as a limit of a sum.
- Analyze and solve multi-step problems using techniques through single-variable calculus.
- Acquire scientific information from appropriate sources to analyze issues, claims or situations.

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)/unit(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/>)