Associate in Science Degree

Science, Technology, Engineering and Math

Meta-Major: Science, Technology, Engineering, and Mathematics (STEM)

Specialization: Biological/Chemical Sciences



Catalog 2024 - 2025

Planning Your Degree Pathway

This document outlines the courses needed to complete your AS degree (which requires 64 eligible credits) based on your degree pathway and specialization for transfer purposes. These courses include general education requirements as well as courses that may be used to meet our elective requirements and common program prerequisites (CPPs), which are courses required to earn your intended bachelor's degree from a public Florida college or university. Please connect with your Student Success Coach if you need introductory coursework, have previously earned college credit (such as AP, CLEP, military, or transfer), or would like to modify when you take certain courses and/or how many courses you take in a term.

Common Program Prerequisites (CPP)

- BSC 1010C*^
- CHM 1046C*^
- STA 2023*+^
- PHY 2053C*+^ and PHY 2054C*+^

- BSC 1011C*^
- CHM 2210C*^
- MAC 2311C*+^

- CHM 1045C*^
- CHM 2211C*^

PHY 2048C*+^ and PHY 2049C*+^

Additional Degree Requirements

- **Introductory Coursework:** Placement testing may require completion of preparatory coursework.
- Foreign Language: Required for students that plan to transfer and enroll in a bachelor's program at another institution.
- Civic Literacy: Must satisfy with POS 2041, or AMH 2010, or AMH 2020 or appropriate scores on AP or CLEP exams (also satisfies Social Science Core).
- Grade Point Average (GPA): Need to maintain 2.0 or higher for both Overall GPA and Valencia GPA.
- Valencia Residency: Complete at Valencia at least 25% of the college-level credits required for the AS degree.

Sample Term-by-Term Plan | Full Time (12+ credits)

See reverse for all General Education course options

Term 1	Credits
SLS 1122 – New Student Experience	3
ENC 1101 – Freshman Composition I*+	3
CHM 1045C – Gen. Chem. w/ Qual Analysis I*^	4
SPC 1608 Fundamentals of Speech or	3
SPC 1017 Interpersonal Communication	

Term 3	Credits
CHM 2210C – Organic Chemistry I*^	4
MAC 2312 – Calculus with Analytic Geo. II*+^	4
BSC 1010C – General Biology I*^	4

Term 5	Credits
Social Science Institutional	3
PHY 2049C – General Physics w/Calc. II*^ or PHY 2054C – College Physics II w/Alg. & Trig.	4
Humanities Institutional	3

i erm 2	Credits
ENC 1102 – Freshman Composition II*+	3
MAC 2311 – Calculus with Analytic Geo. I*+^	4
CHM 1046C – Gen. Chem. w/ Qual Analysis II*^	4
Humanities Core	3

1erm 4	Credits
CHM 2211C – Organic Chemistry II*^	4
PHY 2048C – General Physics w/Calc. I*+^ or	4
PHY 2053C-General Physics I w/Alg. & Trig*+	
POS 2041 U.S. Government or	3
AMH 2010 – U.S. History 1877 or	
AMH 2020 U.S. History 1877 to Present	

Term 6	Credits

Electives and Pathway-Specific Information

- Starting your math sequence lower than MAC 2311 will require additional coursework. See a Student Success Coach to discuss math sequence and options.
- It is strongly recommended to complete both parts of a science sequence at the same institution.
- Biology and Biomedical majors must take STA 2023 instead of MAC 2312
- Biology and Biomedical majors can take PHY 2053C and PHY 2054C instead of PHY 2048C and PHY 2049C
- Biochemistry and Chemistry majors take MAC 2313, Biology; Biomedical and Forensic Science majors take BSC 1011C
- Due to the order of prerequisite courses you need to take, not all semesters of this plan will qualify you for full-time enrollment.

Financial Aid Notice

Federal Financial Aid will be calculated based on the courses required for your Associate in Science Degree. Work closely with your assigned Student Success Coach to verify your degree on record and to develop a customized plan that include the required classes each term. Foreign Language is required for students that plan to transfer to a bachelor's program at a public college or University but is not covered under this AS program.

General Education Course Options Courses listed below are 3 credit hours each unless otherwise stated **Communication (4 courses)** Social Sciences Core (Pick 1) SLS 1122 - New Student Experience POS 2041 – U.S. Government ENC 1101 - Freshman Composition I*+ AMH 2010 - United States History to 1877 ENC 1102 - Freshman Composition II*+ AMH 2020 – U.S. History 1877 to Present ANT 2000 - Introduction to Anthropology Pick one: SPC 1608 – Fundamentals of Speech or ECO 2013 - Principles of Economics - Macro PSY 2012 - General Psychology SPC 1017 - Interpersonal Communication -POS 2041, AMH 2010 or AMH 2020 can satisfy Civic Literacy **Humanities Core (Pick 1)** Social Sciences Institutional (Pick 1) ARH 1000 - Art Appreciation ANT 2410 - Cultural Anthropology*+ **HUM 1020** – Introduction to Humanities ASL 2510 - Deaf Culture*+ LIT 1000 – Introduction to Literature EUH 2000 - Ancient and Medieval Western Civilization*+ MUL 1010 - Music Appreciation*+ EUH 2001 - Modern Western Civilization*+ PHI 2010 - Philosophy INR 2002 - International Politics*+ THE 1000 - Introduction to Theater POS 2112 - State and Local Government*+ SYG 2000 - Introductory Sociology SYG 2010 - Social Problems*+ WOH 2012 - World History to 1500*+ WOH 2022 - World History Since 1500*+ **Humanities Institutional (Pick 1)** Science Core (Pick at least 1) HUM 2220 - Humanities - Greek and Roman*+ You must complete a minimum of 6 credit hours of total science HUM 2223 - Medieval Humanities *+ coursework. 3 credit hours must come from "Science Core." HUM 2232 - Humanities Renaissance and Baroque*+ AST 1002 – Astronomy HUM 2234 - 18th and 19th Century Humanities *+ BSC 1005 – Biological Science HUM 2250 - 20th and 21st Century Humanities *+ BSC 1005L – Lab in Applied Biology (1 credit) HUM 2310 - Mythology*+ BSC 1005C - Biological Science Combined w/ Lab (4 credits) HUM 2403 - Middle Eastern Humanities*+ BSC 1010C – General Biology I (4 credits) HUM 2410 - Asian Humanities*+ CHM 1020 - Chemistry in Everyday Life HUM 2454 - African-American Humanities*+ CHM 1045C – General Chemistry with Qualitative Analysis I * (4 credits) HUM 2461 - Latin American Humanities*+ ESC 1000 - Earth Science REL 2300 - World Religions*+ EVR 1001 - Introduction to Environmental Science GLY 2010C - Physical Geology (4 credits) ARC 1701 - History of Architecture I*+ OCE 1001 – Introduction to Oceanography ARH 2051 - Introduction to Art History II*+ PHY 1020 - Conceptual Physics* MUT 1111 – Music Theory I~ PHI 2600 - Ethics and Critical Thinking*+ PHY 2048C - General Physics with Calculus I* (4 credits) PHY 2053C - College Physics I with Algebra and Trigonometry * (4 credits) Science Institutional (Pick 1) Math Core (Pick 1) MAC 1105 - College Algebra*+ BOT 2010C - Botany (4 credits) STA 2023 - Statistical Methods*+ BSC 1011C - General Biology II* (4 credits) MGF1130- Mathematical Thinking*+ BSC 1020 - Human Biology MAC 2311- Calculus with Analytic Geometry I*+ BSC 1020C - Human Biology Combined (4 credits) BSC 1026 - Biology of Human Sexuality Math Institutional (Pick 1) BSC 1421C - Introduction to Biotechnology (4 credits) You may instead select a second course from "Math Core" BSC 2093C – Human Anatomy and Physiology I* (4 credits) MAC 1114 - College Trigonometry*+ BSC 2094C - Human Anatomy and Physiology II* (4 credits) MAC 1140 - Precalculus Algebra*+ CHM 1025C – Introduction to General Chemistry* (4 credits) MAC 2312 - Calculus with Analytic Geometry II*+ CHM 1046C – General Chemistry with Qualitative Analysis II* (4 credits) MAC 2233 - Calculus for Business and Social Science*+ GLY 2160 - Geology of National Parks MGF1131 - Mathematics in Context*+ HUN 1201 - The Science of Nutrition* MET 1010 - Introduction to Meteorology OCB 1000 - Introduction to Marine Biology Key: PHY 2049C – General Physics with Calculus II* (4 credits) * Class has a prerequisite PHY 2054C - College Physics II with Algebra and Trigonometry* (4 credits) + Class requires "C" grade or higher MCB 2010C - Microbiology* (4 credits) ^ Course may require a specific grade for transfer institution ~ Must be paired with MUL 1010 to earn Humanities credit **Bold** – Common Program Prerequisite (included in sample plan) Career ready? Let's check! ☐ Resume and Cover Letter ☐ Practice Interview and Job Shadowing ☐ Internships: https://valenciacollege.edu/students/internship/ ☐ Employment Readiness: https://bit.ly/2Z41XBm