

Planning Your Degree Pathway

This document outlines the courses needed to complete your Associate in Science (A.S.) degree and prepares you for employment in a specialized career upon degree completion. These courses include general education requirements as well as courses specific to your field. Please connect with your Student Success Coach if you need introductory coursework, have earned college credit, have industry certifications, have completed an articulated program at a technical college or would like to modify when you take certain courses and/or how many courses you take in a term. A Student Success Coach can also provide guidance on how to transition or transfer to a bachelor's degree program at Valencia or another Florida state college in case you decide to earn a bachelor's degree in the future.

Common Program Prerequisites (CPP)

- **MAC 2311**^{*+^} • **MAC 2313**^{*+^} • **PHY 2048C**^{*+^} • **CHM 1045C**^{*+^}
- **MAC 2312**^{*+^} • **MAP 2302**^{*^} • **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 (also satisfies Social Science Core) and Florida Civic Literacy Exam or appropriate scores on AP or CLEP exams.
- **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
MAC 2311 – Calc w/Analytic Geom. I ^{*+^}	4
Humanities Core	3

Term 2	Credits
ENC 1102 – Freshman Composition II ^{*+}	3
MAC 2312 – Calc w/Analytic Geom. II ^{*+^}	4
PHY 2048C – General Physics w/Calc. I ^{*+^}	4
EGS 1006C – Intro to the Eng. Profession	1

Term 3	Credits
MAC 2313 – Calc w/Analytic Geom. III ^{*+^}	4
PHY 2049C – General Physics w/Calc. II ^{*^}	4
EGN 1007C – Eng. Concepts and Methods ^{*+}	1

Term 4	Credits
MAP 2302 – Differential Equations ^{*^}	3
CHM 1045C – Gen Chem. w/Qual. Analy. I ^{*+^}	4
EGN 2440 – Probability and Stats for Eng. ^{*+}	3
POS 2041 U.S. Government or AMH 2010 U.S. History 1877 or AMH 2020 U.S. History 1877 to Present	3

Term 5	Credits
Specific Electives ^{*+}	6
SPC 1608 Fundamentals of Speech or SPC 1017 Interpersonal Communication	3
Humanities Institutional ^{*+}	3

Term 6	Credits
Specific Electives ^{*+}	2-3
Social Science Institutional ^{*+}	3

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.
- To declare this major at UCF, students must complete MAC 2311, MAC 2312, PHY 2048C and CHM 1045C with a “C” or better.
- **Specific Electives** are contingent upon engineering specialization - See **Specific Electives** section for details. See a Student Success Coach to create your individualized plan for Valencia coursework to best to prepare for your specialization
https://valenciacollege.edu/academics/programs/as-degree/documents/valencia_ucf_stem_engineering.pdf
- Refer to the **Engineering Advising Guide** for a program-specific student checklist and resources
valenciacollege.edu/engineering-guide
- Due to the order of prerequisite courses you need to take, not all semesters of this plan will qualify you for full-time enrollment.

Specific Electives

- This program requires 8 credits of Specific Electives. Choose from the list below based on your engineering specialization. See a Student Success Coach to create your individualized plan for Valencia coursework to best to prepare for your specialization.

Aerospace, Industrial, and Mechanical Engineering

[EGN 2312](#) – Engineering Analysis-Statics *+

[EGN 2322](#) – Engineering Analysis-Dynamics*+

[EGS 2373](#) – Principles of Electrical Engineering*+

Civil, and Construction Engineering

[EGN 2312](#) – Engineering Analysis-Statics *+

[EGN 2322](#) – Engineering Analysis-Dynamics*+

Computer, and Electrical Engineering

[EGS 2004C](#) – Electrical Networks*+

[EGN 2210C](#) – Numerical Computations & Programming
for Engineers*+

[EGN 2421](#)- Engineering Analysis*+

Environmental Engineering

[EGN 2312](#) – Engineering Analysis-Statics *+

[EGN 2322](#) – Engineering Analysis-Dynamics*+

[CHM 1046C](#) – General Chemistry with Qualitative Analysis II *+

Material Sciences and Engineering

[EGS 2373](#) – Principles of Electrical Engineering*+

[CHM 1046C](#) – General Chemistry with Qualitative Analysis II *+

[EGN2210C](#) – Numerical Computations & Programming for Engineers*+

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 includes the required classes each term.

Communication

[SLS 1122](#) – New Student Experience (if required)
[ENC 1101](#) – Freshman Composition I*+
[ENC 1102](#) – Freshman Composition II*+
 Pick one:
[SPC 1608](#) – Fundamentals of Speech
 or
[SPC 1017](#) – Interpersonal Communication

Humanities Core

[ARH 1000](#) – Art Appreciation
[HUM 1020](#) – Introduction to Humanities
[LIT 1000](#) – Introduction to Literature
[MUL 1010](#) – Music Appreciation*+
[PHI 2010](#) – Philosophy
[THE 1000](#) – Introduction to Theater

Humanities Institutional

[HUM 2220](#) – Humanities - Greek and Roman*+
[HUM 2223](#) – Medieval Humanities *+
[HUM 2232](#) – Humanities Renaissance and Baroque*+
[HUM 2234](#) – 18th and 19th Century Humanities *+
[HUM 2250](#) – 20th and 21st Century Humanities *+
[HUM 2310](#) – Mythology*+
[HUM 2403](#) – Middle Eastern Humanities*+
[HUM 2410](#) – Asian Humanities*+
[HUM 2454](#) – African-American Humanities*+
[HUM 2461](#) – Latin American Humanities*+
[REL 2300](#) – World Religions*+
[ARC 1701](#) – History of Architecture I*+
[ARH 2051](#) – Introduction to Art History II*+
[MUT 1111](#) – Music Theory I~
[PHI 2600](#) – Ethics and Critical Thinking*+

Math Core

[MAC 1105](#) – College Algebra*+
[STA 2023](#) – Statistical Methods*+
[MGF 1106](#) – Liberal Arts Mathematics I*+
[MGF 1107](#) – Liberal Arts Mathematics II*+
[MAC 2311](#) – Calculus with Analytic Geometry I*+

Math Institutional

You may instead select a second course from “Math Core”

[MAC 1114](#) – College Trigonometry*+
[MAC 1140](#) – Precalculus Algebra*+
[MAC 2312](#) – Calculus with Analytic Geometry II*+
[MAC 2233](#) – Calculus for Business and Social Science*+

Locate the name and email of your Career Program Advisor

Log into Atlas - Click on Courses Tab - Under Academic Profile you can view your Advisor's name and email

Social Sciences Core

[POS 2041](#) – U.S. Government
[AMH 2020](#) – U.S. History 1877 to Present
[ANT 2000](#) – Introduction to Anthropology
[ECO 2013](#) – Principles of Economics – Macro
[PSY 2012](#) – General Psychology
[SYG 2000](#) – Introductory Sociology
-POS 2041 or AMH 2020 can satisfy Civic Literacy and Social Sciences Core-

Social Sciences Institutional

[ANT 2410](#) – Cultural Anthropology*+ (Beginning 2023-2024 catalog year)
[ASL 2510](#) – Deaf Culture*+
[EUH 2000](#) – Ancient and Medieval Western Civilization*+
[EUH 2001](#) – Modern Western Civilization*+
[INR 2002](#) – International Politics*+
[POS 2112](#) – State and Local Government*+
[SYG 2010](#) – Social Problems*+ (Beginning 2023-2024 catalog year)
[WOH 2012](#) – World History to 1500*+ (Beginning 2023-2024 catalog year)
[WOH 2022](#) – World History Since 1500*+ (Beginning 2023-2024 catalog year)

Science Core

Complete a minimum of 6 credit hours of total science coursework. 3 credit hours must come from “Science Core.”

[AST 1002](#) – Astronomy
[BSC 1005](#) – Biological Science
[BSC 1005L](#) – Lab in Applied Biology (1 credit)
[BSC 1005C](#) – Biological Science Combined w/ Lab (4 credits)
[BSC 1010C](#) – General Biology I (4 credits)
[CHM 1020](#) – Chemistry in Everyday Life
[CHM 1045C](#) – General Chemistry with Qualitative Analysis I * (4 credits)
[ESC 1000](#) – Earth Science
[EVR 1001](#) – Introduction to Environmental Science
[PHY 1020](#) – Conceptual Physics*
[PHY 2048C](#) – General Physics with Calculus I* (4 credits)
[PHY 2053C](#) – College Physics I with Algebra and Trigonometry * (4 credits)

Science Institutional

[BOT 2010C](#) – Botany (4 credits)
[BSC 1011C](#) – General Biology II* (4 credits)
[BSC 1020](#) – Human Biology
[BSC 1020C](#) – Human Biology Combined (4 credits)
[BSC 1026](#) – Biology of Human Sexuality
[BSC 1421C](#) – Introduction to Biotechnology (4 credits)
[BSC 2093C](#) – Human Anatomy and Physiology I* (4 credits)
[BSC 2094C](#) – Human Anatomy and Physiology II* (4 credits)
[CHM 1025C](#) – Introduction to General Chemistry* (4 credits)
[CHM 1046C](#) – General Chemistry with Qualitative Analysis II* (4 credits)
[GLY 2010C](#) – Physical Geology (4 credits)
[GLY 2160](#) – Geology of National Parks
[HUN 1201](#) – The Science of Nutrition*
[MET 1010](#) – Introduction to Meteorology
[OCB 1000](#) – Introduction to Marine Biology
[OCE 1001](#) – Introduction to Oceanography
[PHY 2049C](#) – General Physics with Calculus II* (4 credits)
[PHY 2054C](#) – College Physics II with Algebra and Trigonometry* (4 credits)
[MCB 2010C](#) – Microbiology* (4 credits)

Career Ready? Let's check!

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|--|---|
| <input type="checkbox"/> Resume and Cover Letter | <input type="checkbox"/> Practice Interview |
| <input type="checkbox"/> Job Shadowing | <input type="checkbox"/> Internships: https://valenciacollege.edu/students/internship/ |
| <input type="checkbox"/> Employment Readiness: https://bit.ly/2Z41XBm | |

This document is an example of a term-by-term plan. Students' specific plans may look different due to multiple factors. For full program details, refer to your governing catalog, which is the catalog in effect at the time you enrolled at Valencia and work with your success coach to customize your plan.