Associate in Science Degree

Science, Technology, Engineering and Math

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

Specialization: Computer Science



Catalog is valid for five years

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)

- STA 2023*+^
- MAC 2311*+^
- PHY 2048C*+^

- COP 2220C*^
- MAC 2312*+^
- PHY 2049C*^
- Pick one Science Sequence:
- BSC 1010C[^] and BSC 1011C*[^]
 or CHM 1045C*[^] and CHM 1046C*[^]
 or BSC 1010C[^] and CHM 1045C*[^]

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, AMH 2010, 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 | Part Time (6-10 credits)

Term 1	Credits
ENC 1101 Freshman Composition I*+	3
SLS 1122 New Student Experience	3

Term 3	Credits
Science Sequence Listed in CPP's	4
SPC 1608 Fundamentals of Speech or	3
SPC 1017 Interpersonal Communication	

Term 5	Credits
STA 2023 – Statistical Methods*+^	3
Social Science Institutional*+	3
COP 1000C Intro to Programming+	3

Term 7	Credits
MAC 2312 Calc w/Analytic Geom II*+^	4
COP 2800C Java Programming*^	3

Term 9	Credits
PHY 2049C – General Physics w/Calc. II*^	4
Elective	1-3

See reverse for all General Education course option	
Term 2	Credits
ENC 1102 Freshman Composition II*+	3
Humanities Core	3

Term 4	Credits
Science Sequence Listed in CPP's	4
Humanities Institutional	3

Term 6	Credits	
MAC 2311 Calc w/Analytic Geom I*+^	4	
POS 2041 U.S. Government or	3	
AMH 2020 U.S. History 1877 to Present		
COP 2220C C Programming*^	3	

Term 8	Credits
PHY 2048C General Physics w/Calc I*+^	4
COP 2805C Advanced Java Programming*^	3

Term 10	Credits

Electives and Pathway-Specific Information

The AS degree requires 24 credits of specialized electives. Some electives may have been pre-filled into the term-by-term plan based on your pathway.

- Starting your math sequence lower than MAC 2311 will require additional coursework. See a Student Success Coach to discuss math sequence and options.
- Students must take both COP 2800C and COP 2805C to receive substitution for UCF COP 3330 Object Oriented Programming
- Additional UCF requirements offered at Valencia: MAC 2313, MAP2302

Financial Aid Notice

Federal Financial Aid will only pay for courses for the required Associates in Science Degree. Work closely with your assigned Student Success Coach to verify the degree on your record and to develop a customized plan that includes the required classes each term.

General Education Course Options

Courses listed below are 3 credit hours each unless otherwise stated

Communication (4 courses)

Ctudent Evnerience

SLS 1122 – New Student Experience ENC 1101 – Freshman Composition I*+

ENC 1102 - Freshman Composition II*+

Pick one:

SPC 1608 – Fundamentals of Speech <u>or</u>

SPC 1017 – Interpersonal Communication

Humanities Core (Pick 1)

A D LL 1000 _	Art Appreciation
AKH IUUU —	ALL ADDITECTATION

HUM 1020 – Introduction to Humanities

LIT 1000 – Introduction to Literature

MUL 1010 - Music Appreciation*+

PHI 2010 - Philosophy

THE 1000 - Introduction to Theater

Humanities Institutional (Pick 1)

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 (Pick 1)

MAC 1105 - College Algebra*+

STA 2023 - Statistical Methods*+

MGF1130 – Mathematical Thinking*+

MAC 2311- Calculus with Analytic Geometry I*+

Math Institutional (Pick 1)

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*+

MGF1131 - Mathematics in Context*+

Key:

- * Class has a prerequisite
- + Class requires "C" grade or higher
- ^ 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)

Social Sciences Core (Pick 1)

POS 2041 – U.S. Government

AMH 2010 – United States History to 1877

AMH 2020 – U.S. History 1877 to Present

ANT 2000 - Introduction to Anthropology

ECO 2013 - Principles of Economics - Macro

PSY 2012 - General Psychology

-POS 2041, AMH 2010 or AMH 2020 can satisfy Civic Literacy

Social Sciences Institutional (Pick 1)

ANT 2410 - Cultural Anthropology*+

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 2000 – Introductory Sociology

SYG 2010 - Social Problems*+

WOH 2012 - World History to 1500*+

WOH 2022 - World History Since 1500*+

Science Core (Pick at least 1)

You must 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

<u>GLY 2010C</u> – Physical Geology (4 credits)

OCE 1001 – Introduction to Oceanography

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 (Pick 1)

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 2160 - Geology of National Parks

<u>HUN 1201</u> – The Science of Nutrition*

 $\underline{\mathsf{MET}\ 1010} - \ \mathsf{Introduction}\ \mathsf{to}\ \mathsf{Meteorology}$

OCB 1000 – Introduction to Marine Biology

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!

Resume and Cover Letter

Employment

Readiness: https://bit.ly/2Z41XBm

Practice Interview and Job Shadowing

• Internships: https://valenciacollege.edu/students/internship/