Associate in Science Degree

Computer Programming & Analysis Pathway

Meta-Major: Science, Technology, Engineering & Mathematics

Intended Program: Computer Programming & Analysis

VALENCIA COLLEGE

Catalog 2024 – 2025

Catalog is valid for 5 years

Planning Your Degree Pathway

This document outlines the courses needed to complete your Associate in Science (A.S.) degree and prepare 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, 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.

Additional Degree Requirements

- **Introductory Coursework:** Admissions requirements and/or placement testing may require completion of preparatory courses
- **Civic Literacy**: Must satisfy with POS 2041, 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):** 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 degree

Sample Term-by-Term Plan | Part Time (6 credits)

See reverse for full General Education course options

←Start Here→

Introductory Coursework	Credits

Term 1	Credits
ENC 1101 Freshman Composition I*+	3
CGS 2100C Computer Fund. & App+	3

Term 2	Credits
Mathematics Core+*	3
CTS 1131C Comp. Maintenance Essentials+	3

Term 3	Credits
CGS 2545C Database Mngt. Systems+	3
Science Core	3

Term 4	Credits
Humanities Core	3
COP 2822C Web Site Development+	3

Term 5	Credits
COP 1000C Intro to Programming Concepts+	3
GEB 1011 Introduction to Business	3

Term 6	Credits
Program Elective	3
Choose one Intermediate Languages*+ • *COP 2220C C Programming* • *COP 2800C Java Programming* • *COP 2360C C# ProgrammingΔ*	3

Term 7	Credits
CTS 1142C IT Project Management*+	3
Choose one Advanced Language*+ • *COP 2224C C++ ProgrammingΔ* • *COP 2805C Adv. Java Programming* • *COP 2362C Adv. C# ProgrammingΔ*	3

Term 8	Credits
COP 2830C Scripting Languages*+	3
POS 2041 US Government **or** AMH 2010 US History to 1877 **or** AMH 2020US History 1877 to Present	3

Term 9	Credits
Program Elective	3
CGS 2091C Social, Legal & Ethical Issues in IT+	3

Term 10	Credits
CIS 2910C IT Capstone*+	3
CIS 2942 Internship in CP&A*+ **or** CGS 2650 Social Networking for Job Search	1
Program Elective	2/3

Term 11	Credits

Key: *Course has a prerequisite + Course requires "C" grade or higher Δ Course not offered every term ask your coach

Pathway-Specific Information

- Starting your math sequence higher than MAT 1033C will save time and money; prepare and test for math level placement.
- CIS 2910C IT Capstone must be taken in last semester and all foundation and Intermediate technical courses must be completed before the Capstone. Email your Student Success Coach via Atlas for override once you have registered for all other classes in the last term.
- Visit Internship office to learn about internship opportunities and/or requirements https://valenciacollege.edu/students/internship/.
- For registration instructions, go to https://valenciacollege.edu/about/support/videos.php.
- This degree does not articulate into UCF's B.S. Computer Science degree, an Associates in Arts Degree [A.A.] is required for transfer.
- This degree may articulate to Valencia College's Bachelor of Applied Science in Computing Technology and Software Development. See course catalog for more information.

Program Electives

Any course with a subject prefix of CAP, CET, CGS (except CGS 1060 or CGS 1060C), CTS, CIS, COP, or COT not already used to satisfy program requirements.
NOTE: The degree requires 8 credits of program electives, due to limited 1-2 credit courses, this may result in 9 credits

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.

General Education Course Options

Courses listed below are 3 credit hours each unless otherwise stated

Communication (4 courses)

SLS 1122 – New Student Experience
ENC 1101 – Freshman Composition I*+
ENC 1102 – Freshman Composition II*+
Pick one:
SPC 1608 – Fundamentals of Speech **or**
SPC 1017 – Interpersonal Communication

Humanities Core (Pick 1)

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 (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*+

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

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
GLY 2010C – 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
HUN 1201 – The Science of Nutrition*
MET 1010 – Introduction to 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)*

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)

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/