THE **FIRST 15**

THE **NEXT 30**

PATHWAY TO PROMISE

THE **LAST MILE**

Computer Science Advising Guide

VALENCIACOLLEGE

Table of Contents

Advisor Responsibilities

- My goal is to make sure you understand all you need to know about your degree requirements at Valencia College.

- I will provide a safe space for you to discuss your concerns and I will listen, be present, respectful, and genuine.

- Our resources are endless! I will always point you in the right direction if you connect with me.

- I will help you with your questions about colleges and universities you are thinking about transferring to and what it takes to get there.

- Helping you find a major and a career that is right for you is my goal. I will provide you with information and support you along the way.

- This is your journey, but you are not alone! I will help you select your courses, understand your prerequisites, create your plans and set goals.

Student Responsibilities

- I will connect with my **advisor** every semester.

- When I schedule an appointment, I will start thinking about what I want to talk about.

- I will bring my "note-taking tools" with me to my appointments (e.g., phones, tablets, or good old paper and pen).

- We will be going over important information, so I will keep all of it handy and refer to it often.

- If my advisor refers me to any resources, I will be sure to follow through and I will stay in touch.

- I will take responsibility, know the deadlines, ask questions, stay on track and be the one to know what to do.

Who is My Advisor?

Students 0 - 12 credit hours can seek advising from their new student experience professor, visit the **Advising Center**, virtually or in-person for assistance.

Students who have completed 12+ credit hours can find their advisor through their Atlas account!

Follow the steps below:

• Log on to your Atlas account

• Click on "Courses" on the left-hand side

• Look under the "Academic Profile" Box

• Find your Advisor's name under the "Advisor's" section

Other Valencia College Programs of Interest

Computing Technology and Software Development Bachelor of Applied Science

The **Computing Technology and Software Development Bachelor of Applied Science (B.A.S) degree** at Valencia College will prepare you for an advanced career in software development.

Requirements for this degree may differ from a computer science bachelor's degree. Speak with an advisor for more information about course requirements.

The Bachelor of Applied Science in Computing Technology and Software Development provides students the opportunity to earn a degree which prepares students to analyze software problems, plans, and solutions to design a logical plan for program requirements; implement software solutions and communicate effectively in writing and orally regarding the solutions; demonstrate collaborative skills in team settings to plan and accomplish software solutions; and apply ethical concepts to design solutions. The curriculum emphasizes practical, real-world problems.

A.S. STEM, Computer Science Specialization

The Associate in Science (A.S.) degree in Science, Technology, Engineering and Math (A.S. STEM) at Valencia College is a two-year program that prepares students to successfully transfer to a baccalaureate program. Students will complete the required 36 hours of general education credits for the bachelor's degree along with the elective courses geared towards a specific major.

This specialization prepares students academically with the Computer Programming, Physics, and Mathematics courses needed for transfer to a Bachelor's in Computer Science program. Upon graduating from this specialization, Valencia students are eligible to enter the Computer Science bachelor's degree at the University of Central Florida, with junior standing, and seek a career in industry. Other universities may have additional requirements, so it is important to consult with both your transfer institution's catalog and a Valencia advisor.

Careers in Computer Science

To learn more about the computer science field and career outlook, click on the links below.

Valencia's Career Center provides resources to help you explore major and career options that are right for you.

Dr. Kit is a resource you can use to watch career videos with people who work in different careers. You can learn what it is like to be a computer scientist, including a typical day, qualifications, and best and worst parts of the job.

STEM Rising, at the U.S. Department of Energy, shares resources and events from the National Labs, National Nuclear Security Administration, and program offices.

Computer Science Careers is a resource to explore the different careers offered within the Computer Science field. You can review salary information and also search for jobs in this career field.

Below are some job search sites to help you gain insight into experience, skills, and qualifications that employers in the engineering field are seeking. Examples of some local employers include Lockheed Martin, Siemens, and NASA.

Indeed is a job search tool you can use to search for computer science jobs, salary information, and job market trends.

STEM Jobs is a resource to search for science, technology, engineering and math jobs.

LinkedIn is a social network for job seekers, professionals, and businesses and helps you build your professional community.

What Can I do with a Computer Science Degree?

Computer Science is an area that is always evolving and changing, and here are just a few of those career options:

➢ Software Engineer

➢ Software Developer

➢ Data Administrator

➢ Computer System Analyst

➢ Computer Hardware Engineer

➢ Information Security Analyst

➢ Computer & Information Systems Managers

➢ Network Architect

Common Questions asked about Computer Science

1. What can I learn from a Computer Science degree?

a. Different programming languages such as: Java, C, C++, and Python
b. Knowledge of designing, coding, and testing software.
   You'll troubleshoot issues on a software level
c. Data structures, algorithms. How to run, maintain,
   and fix Linux and Windows operating systems
d. Basic cybersecurity and cryptography
e. How networks work and how to manage them

2. What type of courses are involved?

a. Heavy Sciences
b. A lot of math, must like and be good at math

3. What should advisors be telling students?

a. Computer Science is a theoretical degree that allows for you to solve
   scientific problems using computer-based solutions, which is why math
   is important
b. A Computer Engineer is not the same as a Computer Scientist. Computer
   Engineers have a complete understanding of how the computer hardware
   and architect works. If you love building computers, learning hardware, or
   designing interfaces, then you might prefer a Computer Engineering degree
c. If you're not great at math, consider Valencia's **Associate of Science (AS)
   Computer Programming and Analysis degree**. Valencia also offers an **AS
   Cybersecurity & Network Engineering Technology degree** with three
   specialization options
d. Valencia College also offers a **Bachelor's of Applied Science in Computing
   Technology & Software Development degree**. If you're interested in
   becoming a Software Developer, this might be the degree for you

4. What are some resources I can utilize going into this degree?

a. Join a local library to access "LinkedIn Learning" and watch YouTube videos
   about the areas you are interested in
b. Access information through local communities to develop your
   networking circle
c. Start a portfolio of projects/coding work you've completed
d. Consider joining **HackerRank.com** so you can test and verify your skills

Math, Science, and Programming Course Sequences

To provide you with an overview of all of the math, science, and programming courses required in the computer science pathway, see the lists below.

Math Pathway for Computer Science Majors
MAT 1033C Intermediate Algebra
MAC 1105   College Algebra
MAC 1140   Precalculus Algebra
MAC 1114   Trigonometry
MAC 2311   Calculus with Analytical Geometry I
MAC 2312   Calculus with Analytical Geometry II

*** Please Note: additional placement testing is available for students wanting to begin in a higher-level math course.

Consider utilizing **Math Help 24/7**, which provides online videos from math professors. Use this resource to successfully complete your math requirements.

Science Pathway for Computer Science Majors
CHM 1045C General Chemistry with Qualitative Analysis I
CHM 1046C General Chemistry with Qualitative Analysis II or
BSC 1010C General Biology I
BSC 1011C General Biology II
PHY 2048C General Physics with Calculus I
PHY 2049C General Physics with Calculus II

*** Please Note: there may be additional options to begin in general chemistry, please see an advisor.

*** Please Note: Check in with your advisor about lab science course options.

Programming Pathway for Computer Science Majors
COP 1000C and COP 2220C Intro to Programming and C Programming
COP 2800C Java
COP 2805C Advanced Java

** Please Note: Check in with your advisor about programming course options and requirements to transfer

Computer Science Degree Pathways

The **Computer Science Degree Pathways** provide an ideal educational/term-by-term plan for the AA degree. To view computer science courses offered at Valencia, see the "Electives and Pathway-Specific Information" section on the first page.

Your Checklist

0–12 Credit Hour Checklist

☐ Check your **Atlas** email daily. ∞

☐ Check if your meta-major matches your career of interest and change it if necessary.∞

☐ Learn about the resources available to you, such as the Learning Support Center, Tutoring, Counseling, Career Advising and Atlas. For more information and locations, go to the **Student Services** page on the Valencia College website.

☐ Consider utilizing **Math Help 24/7**, which provides online videos from math professors. Use this resource to successfully complete your math requirements. ∞

☐ Explore and research your career interests by visiting the **Career Center website** or connecting with a career advisor.

☐ Research colleges and universities of interest and the admission requirements.

☐ Run your **degree audit** and use your **catalog** to help you choose the right classes each term. For assistance, connect with an **academic advisor**. ∞

☐ Register for **SLS 1122 New Student Experience** course within your first two terms at Valencia College.

☐ Register for a STEM algebra math pathway course each semester. Additional **placement testing** is available for students to begin in a higher-level math course ∞

☐ Check Important Dates & Deadlines by visiting the **Academic Calendar** on the Valencia College website. ∞

☐ Apply for scholarships by visiting the **Financial Aid Services** website. ∞

☐ **Get Involved** on campus by joining student clubs and organizations, attending campus **events** and participating in health and wellness activities. ∞

☐ Visit the **Career Center website** to learn how to create your resume and connect with a career advisor for feedback.

∞ This symbol represents actions that you
   should take at every credit hour benchmark.

12-30 Credit Hour Checklist

☐ Check your **Atlas** email daily. ∞

☐ Confirm that your meta-major matches your career of interest and change it if necessary. ∞

☐ Explore your major and career interests by considering volunteering, employment, **internships**, job shadowing and service learning.

☐ Decide on a major and your transfer university of interest. If you are still undecided, meet with an **academic or career advisor**.

☐ Run your **degree audit** and use your **catalog** to help you choose the right classes. For assistance, **connect with your advisor**. ∞

☐ Consider registering for COP 1000C Introduction to Programming Concepts, for a better understanding of the Computer Science field.

☐ Register for a STEM algebra math pathway course each semester. ∞

☐ Consider utilizing **Math Help 24/7**, which provides online videos from math professors. Use this resource to successfully complete your math requirements. ∞

☐ Check Important Dates & Deadlines by visiting the **Academic Calendar** on the Valencia College website. ∞

☐ Apply for scholarships by visiting the **Financial Aid Services** website. ∞

☐ **Get Involved** on campus by joining student clubs and organizations, attending **campus events** and participating in health and wellness activities. ∞

☐ Keep your resume current by reviewing it every semester and consider scheduling a mock interview. For assistance, visit the **Career Center website** or connect with a career advisor.

∞ This symbol represents actions that you should take at every credit hour benchmark.

30-45 Credit Hour Checklist

☐ Check your **Atlas** email daily. ∞

☐ Confirm that your meta-major matches your career of interest and change it if necessary. ∞

☐ Decide on your educational goals by the time you complete 45 credit hours.

☐ Research colleges and universities of interest, including the admission requirements, application deadlines, housing options, campus tours and connect with the academic departments.

☐ Consider exploring graduate school (e.g. master's degree, medical or law school), advanced training, certifications and licenses.

☐ Run your **degree audit** to confirm you are on track for graduation.

☐ Register for a STEM algebra math pathway course each semester ∞

☐ Consider utilizing **Math Help 24/7**, which provides online videos from math professors. Use this resource to successfully complete your math requirements.

☐ Check Important Dates & Deadlines by visiting the **Academic Calendar** on the Valencia College website. ∞

☐ Apply for scholarships by visiting the **Financial Aid Services** website. ∞

☐ **Get Involved** on campus by joining student clubs and organizations, attending **campus events** and participating in health and wellness activities. ∞

☐ Enhance your work experience and skills by volunteering, employment, **internships**, service learning and job shadowing.

☐ Keep your resume current by reviewing it every semester and consider scheduling a mock interview. For assistance, visit the **Career Center website** or connect with a career advisor.

∞ This symbol represents actions that you should take at every credit hour benchmark.

45-60 Credit Hour Checklist

☐ Check your **Atlas** email daily. ∞

☐ Confirm that your meta-major matches your career of interest and change it if necessary. ∞

☐ Register for a STEM algebra math pathway course each semester ∞

☐ Run your **degree audit** to confirm you are on track for graduation. For assistance, connect with your **advisor**. ∞

☐ If you are ready, submit your **graduation application** by the deadline.

☐ Explore housing options, develop a financial plan, schedule campus tours and connect with the academic departments.

☐ Submit your admissions applications early to your colleges/universities of interest (and any other materials, such as transcripts and recommendation letters, if required).

☐ Check Important Dates & Deadlines by visiting the **Academic Calendar** on the Valencia College website. ∞

☐ Apply for scholarships by visiting the **Financial Aid Services** website. ∞

☐ **Get Involved** on campus by joining student clubs and organizations, attending campus **events** and participating in health and wellness activities. ∞

☐ Enhance your work experience and skills by volunteering, part-time employment, **internships**, service learning and job shadowing.

☐ Keep your resume current by reviewing it every semester and consider scheduling a mock interview. For assistance, visit the **Career Center website** or connect with a career advisor.

∞ This symbol represents actions that you should take at every credit hour benchmark.

Computer Science Resources

Computer Science and STEM clubs at Valencia:

VALENCIA TECH CLUB

Visit the website for more details

VALENCIACOLLEGE

STEM Club (Osceola)

STEM Club (West)

VMC

Math Club
Meets Thursdays from
12:45 to 2:15 in Building 8, room 119

VALENCIACOLLEGE

WiSTEM: Women in Science, Technology, Engineering, and Mathematics

Visit the website for more details

Other Computer Science and STEM Resources

Louis Stokes Alliance for Minority Participation (LSAMP)

Pathways to Science

Valencia College Undergraduate Research

NASA Community College Aerospace Scholars (NCAS)

Valencia College Resources

Need more information? Check these out!

VALENCIACOLLEGE

Internship and Workforce Services

**Find an internship and
be ready for the job**

ENGAGE

**Engage in about over
150 clubs and organizations**

**VALENCIA
VOLUNTEERS**

**Learn more about over 150 clubs
and organizations**

VALENCIACOLLEGE

Learning Support

Get help with your studies

Let's Talk

**Build academic and
emotional fitness**

VALENCIACOLLEGE

Veterans Affairs

**Essential resources
and support for veterans**

U FIT @VALENCIA

**Free fitness and
recreational sports**

BayCare

Get help with behavioral health
and more by calling **800-878-5470**
Student Support Resources

VALENCIACOLLEGE

Career Center

**Explore careers and prepare
for what's next**

VALENCIACOLLEGE

Office for Students with Disabilities

**Information on resources, support,
or academic accommodations**

Questions to Ask Your Advisor

• What's the difference between dropping a class and withdrawing from a class, and how does this impact me?

• What are some things I should consider before withdrawing from a class?

• What are some important academic policies that I should be aware of? (e.g., grade forgiveness, academic probation)

• What are some resources that I should be using at Valencia College if I'm struggling in my classes?

• What are some resources that will help me explore different majors and careers?

- How can I raise my GPA?

- What are some things I should consider when creating my class schedule?

- What are the prerequisites for my major?

- What are the admission requirements for my program at my transfer college/university of interest?

- How do I choose my electives?

- Is my major limited or restricted access? If so, what does that mean?

- How do I know that I'm on track for graduation?

- How do I know that I've met all my graduation requirements for my major?

- How do I apply for graduation?

- How do I apply to my college/university of interest?

- How do I request/submit my college transcripts?

How Do I Run My Degree Audit?

The degree audit is a great tool to help you plan out your courses. It is a summary or audit of your degree. It will show you the classes that you have completed and the ones you have yet to complete. Here are the steps on running a degree audit. We encourage you to consult with your advisor.

1. Log in to **Atlas**.
2. Click on Students on the left hand side.
3. Look for the Path to Graduation box and click on My Academic Progress (Degree Audit).
4. Click on Generate New Degree Audit.
5. Select the term you are currently in, click submit.
6. Click on the button next to the name of your degree.
7. Click on Generate Request.

The path

to promise

takes you

from

"what is"

to

"what can be."

WHAT'S NEXT?