



## CSC 120 - Problem Solving and Programming Concepts

### Introductory Java Programming

**4 credit hours**  
**2 days/week + Online work**  
**M/W 10:20-12:15**  
**SHEC 1308**

The field of computer science is one of the more in-demand fields of the present and future. The core of this dynamic and exciting field is the ability to solve problems using technology.

CSC 120 is the introductory Java programming course geared toward computer science majors. In this 4 hour course we will learn how to break a problem up into steps and from there program the solution using the Java programming language. We will create programs that are useful in business applications as well as gaming programs.

Not considering a major in computer science? That's ok! First of all, learning to develop algorithms or programs helps build math, problem solving, and logic skills. Second, by working alongside your classmates you will develop collaboration and synergy skills.

Third, programming helps build confidence and creativity as there are multiple ways we all solve problems. Any of these skills will help you in your future careers!

Most importantly, programming and computer science skills will help you develop content in whatever field you are passionate about. Like art? Think graphic design and game art. Like science? Biotechnology is a fast growing field. Agriculture? Smart farming tools are emerging.

Political Science? App design and platforms to spread your message would be valuable. For any major, there is a need for people with strong technological skills!

For those that worry that programming is too hard, keep in mind that resiliency is also a skill to be learned. Coding can be challenging, but once exposed can be rewarding and addictive! As Code.org always says, "Anyone can learn!"



Java Programming can be used to make websites, apps, games, and more!

## Outcomes

After taking CSC 120, you would have 4 hours of CS credit. This class is the equivalent of AP CSA, which is usually considered a math credit (consult your local school). You could, with some additional study, take Java certification exams that

would serve as a valuable credential. For USA students who are not CS majors, the course would count as an elective.

As far as programming skills, upon completion of the course you will be able to

create games similar to that of the console games of the 1980's and simple games of chance, as well as programs that simulate photoshop features and text manipulation. (Just a few examples)

### Important Info

- Course runs full summer
- Students attend classes in Shelby Hall M, W (mainly lab work)
- Students work asynchronously on assignments/flipped lectures
- 3 in person absences allowed for planned vacations/emergencies
- Prerequisites: MA 113 or 'B' in Precalculus (with Trigonometry) or Math ACT 27
- Must have a computer that meets [SOC requirements](#).
- Textbook Required - Zybooks (\$77)
- Limit of 10 Start South Students
- Questions about the course? [kistacey@southalabama.edu](mailto:kistacey@southalabama.edu)

### Topics Covered/Week

Algorithm Development	1
Expressions	2
Objects and Classes	3
Data Types	4
Branches	5
Loops	6
Arrays	7
Inheritance and Adv. Topics	8