

## Computer Science - (Grades 8-12)

Offered by: Central Mass. Christian Homeschoolers (2017-2018)

Teacher: Ann Barndt (former Software Engineer)

Time: Friday 9:15 – 10:15

Location: Grace Baptist Church, Hudson, MA

Class & Material Cost: \$120 non-members/FREE for members (\$20 CS50 t-shirt for any student who completes the entire course – optional)

Online Content: edX course, HarvardX CS50x Introduction to Computer Science (students must create an edX account and have access to a computer with internet connection)

Prerequisite: None

**This is a 1 hour class that meets on Friday only (meets twice a month on regular co-op days with the possibility of meeting two more times as needed).** The students will be expected to work on the assignments in the online class at home. Class time will be spent showing off students' work, debugging, troubleshooting, answering questions and discussing upcoming assignments. The online course is self-paced and each student can move along at his/her own pace with the teacher available for guidance whenever it is needed. Ann successfully used this class to teach her older son basic programming concepts. He just finished his sophomore year in college as a computer science major.

**Syllabus [from edX website]: Introduction to the intellectual enterprises of computer science and the art of programming. This course teaches students how to think algorithmically and solve problems efficiently. Topics include abstraction, algorithms, data structures, encapsulation, resource management, security, software engineering, and web development. Languages include C, Python, SQL, and JavaScript plus CSS and HTML. [We may not get through all the problem sets. I will focus on the ones involving the C language. -amb] Problem sets inspired by real-world domains of biology, cryptography, finance, forensics, and gaming. Designed for majors and non-majors alike, with or without prior programming experience.**

## *Comments or Questions?*

Ann Barndt [ann@barndt.org](mailto:ann@barndt.org)

For additional information on HarvardX CS50, please visit the following:  
<https://www.edx.org/course/introduction-computer-science-harvardx-cs50x>