Computer Science – BA or BS

General summary: "*Computer Science is no more about computers than astronomy is about telescopes, biology about microscopes, or chemistry is about beakers and test tubes. Science is not about tools. It is about how we use them, and what we find out when we do.*" - Michael Fellows and Ian Parberry

In computer science we "look under the hood," so to speak, and try to understand how both hardware and software work. Computer science is the study of *algorithms*, sequences of well-defined instructions that are realized as code running on physical computers. Computer science is not just writing computer programs, it's about writing *good* computer programs and knowing *why they are good*. Computer science as a discipline is challenging because as you learn to solve problems you also are forced to sharpen your thinking skills. And while there is the frustration of trying to debug a program, there is also the satisfaction of finally getting it to run correctly. Like climbing a mountain, there is a lot of sweat and hard work in making the climb, but the view from the top is worth it!

Average number of majors graduating per year: 3+ (but growing)

Strengths of the department/program:

1) A successful program of internships and research experiences, with wide participation from our majors

2) Privileged access to high-end computing lab (The WARP-II cluster, with 12 Intel quad-core CPUs, 144 GB of memory, and 20 TB of storage)

3) Small classes facilitating close contact with faculty and much personal attention

4) Combined mathematics / computer science department: access to computer scientists, mathematicians, and statisticians

5) Computational science minor as possible add-on to major, for additional applied skills

6) The Geek House – A technology rich living and learning environment for students interested in applications of science, technology, engineering and mathematics (STEM).

7) The department has received funding from the National Science Foundation to integrate leading-edge accelerated and parallel computing into the computer science curriculum.

Associated major/minor programs:

1) Many computer science majors also minor in mathematics and/or computational science

2)   Option of double majoring! Historically, computer science majors have doubled majored in mathematics, economics, and physics.

3)   Option for 3-2 program in Computer Engineering

Student opportunities to participate in:

Internships and research experiences: Primarily through Wittenberg's computational science program there are many opportunities for internships and research experiences. NextEdge, a high-tech industrial/research park located on US 40 just east of Springfield, is home to a number of high tech in companies. Wright-Patterson Air Force Base and the high tech industry which has grown up around it also offers many opportunities for internships and research experiences.

Programming and mathematics contests: Our students regularly participate in various regional academic contests.

What can a computer science graduate do with the degree?

In the United States, there continues to be a very strong and growing need for highly trained people in computer science:

- The Bureau of Labor Statistics has released a list of the 30 fastest growing jobs through 2014. Among the top 10 salary jobs listed, 5 are computing jobs!

- Software engineers top the list of best jobs according to a Money Magazine and Salary.com survey based on "strong growth prospects, average pay of $80,500, and potential for creativity."

Even in this economy, there are not enough skilled workers to fill the high demand for computer science jobs in this country! And because Wittenberg is a liberal arts college, computer science graduates receive a broad education, making them more attractive to potential employers looking for well-rounded graduates with technical expertise.

Business Titles of Recent Computer Science Major Graduates

- Software Engineer
- Business Forecaster
- Kernel Developer
- Forensic Analyst
- Programmer (Wal-Mart Corporate HQ)
- Support Desk Analyst I
- Software Developer