Career Guide:

SOFTWARE ENGINEERING

Software engineers are the creative force behind computer programs. Some develop applications to do specific tasks on a computer, phone or tablet. Others develop the systems that run the devices or control computer networks. Software development is growing exponentially as a field.

INDUSTRY GROWTH TIED TO AN INCREASING:

- Desire for new mobile apps for phones and tablets.
- Need for software to handle healthcare enrollment and policies.
- Number of products that use software.
- Number of computer security threats.

17% JOB GROWTH THROUGH 2024

MUCH HIGHER THAN AVERAGE
GROWTH TOTALING NEARLY 186,000 NEW JOBS

2016 MEDIAN SALARY: $102,280

WHY PURSUE A CAREER IN SOFTWARE ENGINEERING

- Job security
- Diversity of work
- Constant challenges
- Evolving industry
- High starting salaries
- Creative
- Future proof

JOB TASKS AND DUTIES

- Design, develop and test software to meet user needs.
- Recommend software upgrades for existing programs.
- Create models that show programmers how to write code.
- Ensure a program functions normally through regular maintenance and testing.
- Document every aspect of a program as reference.
- Collaborate with other computer specialists to create software.

SOFTWARE ENGINEERS ARE:

- Analytical
- Skilled with computers and programming
- Creative
- Problem-solvers
- Both detail-oriented and team-oriented

Sources: https://www.bls.gov/ooh/Computer-and-Information-Technology/Software-developers.htm

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WHAT TO EXPECT IN A SOFTWARE ENGINEERING PROGRAM

Software engineering students learn to design and engineer innovative software programs. They take classes in building software and computer programming while also developing communication, project management and critical-thinking skills. Software engineering is a constantly evolving field, so students will need to keep up with new tools and computer languages.

SOFTWARE ENGINEERING MAY BE A GOOD FIT IF YOU…

- Like working with computers and solving problems.
- Are creative and have an eye for detail.
- Like designing your own software or programs.
- Have an aptitude for math and science classes.
- Want to think of new ways to do things.
- Like puzzles and challenges.

CLASSES MAY INCLUDE:

- Software design and development
- Data structures and design
- Digital systems
- Web engineering
- Computer security
- Project management
- Web design
- Graphical interface programming
- Operating systems
- Database management systems

LOOK FOR A PROGRAM THAT OFFERS:

- Opportunities to work in real-world settings through internships, part-time jobs and state-of-the-art computer labs.
- Faculty who bring professional computer information systems and software development experience to the classroom.
- Academic partnerships with companies like Adobe, Microsoft, Oracle and IBM.

To learn about the Software Engineering program at the University of Northern Colorado, visit us at **UNCO.EDU/PROGRAMS/BUSINESS/SOFTWAREENGINEERING-BS/**

Before you declare your major in software engineering:

- Talk with or shadow software engineers to see what they enjoy about their jobs and what they do on a daily basis.
- Learn programming languages and start coding your own applications or websites.

"Software is a great combination between artistry and engineering."
—Bill Gates

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