Bachelor of Science

Computer Science & Engineering

College of Engineering

Computer science and engineering (CSE) has two faces: technological (practical) and philosophical (intellectual). The practical focus is on solving problems with the aid of computers in order to "turn dreams into reality" in support of improved human health, happiness, and safety. The intellectual focus is on the study of a variety of systems and languages and their use in the design and construction of precise and understandable artifacts of all kinds. Fundamentals studied in the CSE curriculum include algorithms and data structures, programming languages, computer architecture, computer graphics, operating systems, software engineering, systems analysis, database and information retrieval systems, artificial intelligence, and human-computer interfaces.ⁱ

Career Areas/Job Titles:

Management and Industry

- Consultant Entrepreneur Project Manager Lawyer **Communication, Media, and** Entertainment Technical Writer Computer Animator Game Developer
- Science and Technology Software Engineer Systems Operator Programmer Researcher Systems Analyst Data Analyst Systems Maintenance Manager Systems Developer IT Administrator
- Network Administrator Software Developer Web Developer Database Developer Education K-12 Teacher Professor Librarian

*Some careers may require licensure, certification, or further education. Talk to an advisor about specific requirements.

Transferable Skills:

- Computer Programming Computer Troubleshooting Engineering Fundamentals Mathematic Skills Listening Skills Written Communication Skills Technical Writing
- Teamwork Conceptualization Creativity/Imagination Defining Needs Attention to Detail Administrative Skills Organization Skills

Adaptability/Flexibility Prioritizing Tasks Strategic Planning Creating Innovative Solutions Quantitative Reasoning Analytical/Critical Thinking Problem Solving

*This is not an extensive list of transferable skills. See larger list of skills you might develop here: <u>http://ccss.osu.edu</u>

Professional Links:

Association for Computing Machinery: <u>http://www.acm.org/</u> Computer Science Teachers Association: <u>http://www.csta.acm.org/</u> Institute for Electrical and Electronics Engineers: <u>http://www.ieee.org/index.html</u> Computing Research Association: <u>http://www.cra.org/</u>