As a computer science student at Missouri S&T, you will take courses in the design and implementation of various aspects of computer systems (i.e., operating system, database system, software system, computer organization ...) and the algorithms (problem-solving techniques) used to solve "real world" problems in business, industry, and engineering or as preparation for graduate study.

Computer science is an exciting, dynamic field with a critical demand throughout the world today. This degree may suit you if your interests lie in: computer security, networking, databases, high performance computing, software development, and the hardware and software implementations.

While instruction and research at Missouri S&T are on the leading edge of computing, class sizes are small to facilitate interaction between students and faculty. Each graduate’s senior capstone gives students actual experience working with teams comprised of fellow students and practicing computer scientists. These teams design, implement, test, and maintain viable software systems. Students are given both the depth and breadth of computer science necessary to keep them competitive in today’s fast-changing world.

The computer science faculty has a broad range of scholarly interests which include computer security and networking, high performance computer architectures and algorithms, parallel and distributed processing, databases and data mining, artificial intelligence, software engineering, scientific visualization, and algorithms. The research being done in these areas involves both undergraduates and graduates and supports the department’s major areas; software lifecycle, critical infrastructure protection, and pervasive and mobile computing. Faculty is not only actively doing research in these areas, but also integrates their research experiences into their classrooms.

The department holds frequent seminars, giving students the opportunity to learn about leading-edge advances in computing from experts. Seminar speakers range from lecturers in the latest internet computing technology to attorneys discussing intellectual property issues.

The Computer Science department is accredited by ABET, CNSS, the U.S. Department of Homeland Security, the National Security Agency, and IAD.

Degree Options and Minors
- Bachelor of Science, Computer Science
- Master of Science, Computer Science
- Doctor of Philosophy, Computer Science
- Minor, Computer Science

Student Organizations and Undergraduate Research
Undergraduate research opportunities are available through Missouri S&T’s OURE, NSF, and REU programs. Computer Science students can join student organizations such as the Association for Computing Machinery (ACM), Association for Computing Machinery-Women (ACM-W), the Institute for Electrical and Electronic Engineers Computer Society, Upsilon Pi Epsilon National Computer Honorary Society, and the Computing Research Association.

Each year the department has a programming team that competes at regional and international programming contests. Past teams have won high recognition at both levels. Students also participate in an Artificial Intelligence tournament.

Entry-Level Job Titles
Software Designer
Entrepreneur
Research Assistant
Various IT Positions
Troubleshooter
Computer Programmer
Writer
Teacher

Co-op and Internship Availability
Co-op and summer intern programs are available to students. These programs provide students with the opportunity to integrate their classroom studies with learning through productive work experiences in a field related to a student's academic or career goals.

Scholarship Information
The department provides several scholarships to both freshmen and upper level students. Scholarships are based on need and scholastic standing. Some may require a separate application.

Departmental Contact Information:
1.573.341.4491  325 Computer Science Building
http://cs.mst.edu  csdept@mst.edu
Department Chair: Dr. Frank Liu
Faculty
Professors:
- Fikret Ercal, Ph.D., Ohio State
- Ali Hurson, Ph.D., Central Florida
- Thomas Weigert, Ph.D., Illinois
- Bruce McMillin, Ph.D., Michigan State
- Chaman Sabharwal, Ph.D., Illinois
- Frank Liu, Ph.D., Texas A&M
- Donald Wunsch, Ph.D., Univ. of Washington
- Jagannathan Sarangapani, Ph.D., Texas

Associate Professors:
- Sanjay Madria, Ph.D., Indian Institute of Technology
- Jennifer Leopold, Ph.D., Kansas
- Daniel Tauntz, Ph.D., Leiden University
- Maggie Cheng, Ph.D., Minnesota
- Zhaozheng Yin, Ph.D., Pennsylvania State University
- Dan Lin, Ph.D., National University of Singapore
- Chaman Sabharwal, Ph.D., Illinois
- Bruce McMillin, Ph.D., Michigan State
- Thomas A&T

Assistant Professors:
- Sriram Chellappan, Ph.D., Ohio State
- Wei Jiang, Ph.D., Purdue University
- Dan Lin, Ph.D., National University of Singapore
- Zhaozheng Yin, Ph.D., Pennsylvania State University
- Marouane Kessentini, Ph.D., University of Montreal

Associate Teaching Professor/Freshman and Transfer Advisor
- Clayton Price, M.S., Missouri S&T

Assistant Teaching Professor
- Ricardo Morales, Ph.D., Texas Tech University

Teaching Associate:
- David M. Mentis, M.S., Missouri S&T

Adjunct Faculty:
- William E. Bond, Ph.D., Rensselaer
- Randy Canis, JD, Missouri-Columbia
- Chris Merz, Ph.D., California-Irvine
- William Van Stoecker, M.D., Missouri-Columbia
- Karl Lutz, Information Security Officer, Missouri S&T
- Tim Doty, Information Security Officer, Missouri S&T

Facilities and Technology
- Instructional Workstation Laboratory that provides Unix/Linux workstations
- Instructional PC Laboratory consisting of PC computing platforms
- McDonnell Douglas Software Engineering Laboratory
- Pervasive and Mobile Computing Laboratory
- Experimental Computation Laboratory
- Information Security and Privacy Laboratory
- Web and Wireless Computing (W2C) Laboratory
- Natural Computation Laboratory
- Network Research Laboratory
- Computer Learning Centers around campus provide around-the-clock access

Facilities and Techno

Bachelor of Science
Computer Science ........................................ 128 credit hours

FIRST YEAR
- Cmp Sc 1010-Intro to Computer Science ...................... 1
- Cmp Sc 1570/1580-Intro to Programming w/ Lab .............. 4
- English 1120-Exposition ........................................ 3
- Math 1208-Calculus I w/ Analytic Geometry .................. 5
- Elective/Hum or Social Science ................................ 3
- Cmp Sc 1510-Data Structures I ................................ 3
- Cmp Sc 1200-Discrete Math for Cmp Sc ......................... 3
- Math 122T-Calculus II w/ Analytic Geometry .................. 5
- Elective/Science w/ Lab ......................................... 5

SECOND YEAR
- Cmp Eng 2210-Intro to Computer Engineering ................ 3
- Cmp Sc 2300-File Struct & Intro Database Sys ................. 3
- Cmp Sc 2500-Algorithms ......................................... 3
- Math 3108-Linear Algebra I ..................................... 3
- Phys 2135-Engineering Physics I ................................ 4
- Speech 1185-Intro to Speech .................................... 3
- Stat 3115-Engineering Statistics ................................ 3
- Phys 2135-Engineering Physics II ................................ 4
- Elective/Hum or Social Science .................................. 3
- Elective/Literature .................................................. 3

THIRD YEAR
- Cmp Eng 3550-Digital Systems Design ........................... 3
- Cmp Sc 2200-Theory of Computer Science ..................... 3
- Cmp Sc 3100-Software Engineering I ............................. 3
- Cmp Sc 3500-Programming Languages & Translators .......... 3
- Cmp Sc 3800-Intro Operating Systems ......................... 3
- Cmp Sc 3200-Intro to Numerical Methods ...................... 3
- Elective/Free ......................................................... 3
- English 1160-Writing and Research .............................. 3
- Elective/Hum or Social Science .................................. 3
- Constitutional Requirement ....................................... 3

FOURTH YEAR
- Cmp Sc 4096-Software Systems Development I ............... 3
- Cmp Sc Elective .................................................... 3
- Cmp Sc Elective .................................................... 3
- Elective/Engineering or Science ................................ 3
- Elective/Engineering or Science ................................ 3
- Elective/Free ......................................................... 4
- Cmp Sc Elective .................................................... 3
- Cmp Sc Elective .................................................... 3
- Elective/Engineering or Science ................................ 3
- Elective/Ethics ..................................................... 3

Notes
Detailed information on course equivalencies, acceptable credits for elective coursework, grade requirements and prerequisites is available from Missouri S&T’s Registrar’s Office at http://registrar.mst.edu.