Science, Technology, Engineering, and Math

Career Information Session

Computer Science

- Computer Programming and Computer Science
- Web and Mobile Development
- Database Application
- Networking, Information System Management, Cybersecurity
- Cloud Computing

Computer Programming
Computer Science

Degrees and Certificates

Degrees and Certificates
Associate of Science Degree (AS) - Computer Programming
Certificate of Achievement - Computer Programming
Department Certificate - Entry Level Programmer
Associate of Science Degree (AS) - Computer Science
Certificate of Achievement - Computer Science
Certificate of Achievement - Information Systems Management

Many colleges/universities offer bachelor's degrees in this field. Students planning to transfer to a four-year college or university should plan to complete the lower-division major requirements and the general education pattern for the specific transfer institution. SMC has agreements with many UC and CSU campuses, as well as several private and out-of-state institutions.

Academic Planning

For information on the program, assistance creating your educational plan, or exploring options make an appointment with a STEM Counselor:

- http://smc.edu/student-support/academic-support/counseling/contact.php

There are different counselors and programs available to serve all needs. We recommend that you see a STEM counselor in addition to other special programs you are a member of. Once on the web page, to schedule an appointment, select the STEM Counseling button.

STEM

Potential Career Options

Job Title	Typical Education	Median Wage
Entry Level Software Developer	Associate's Degree	$67,177
Computer Programmer	Bachelor's Degree	$86,000
Software Developer	Bachelor's Degree	$107,000
Data Scientist	Bachelor's Degree	$116,447
Full Stack Developer	Bachelor's Degree	$91,001
Software Engineer	Bachelor's Degree	$91,469

For additional career ideas and current salary information, we encourage you reach out to an SMC Career Counselor at the Career Services Center. They can be reached at (310) 434-4337.

Starter Class

- **Computer Science 3, Introduction to Computer Systems**
  This is a beginning course intended for students who plan to take additional computer programming or computer science courses. Emphasis in the course is divided between a broad survey of the field of computer information systems and the acquisition of computer skills necessary for more advanced classes. Such skills would involve use of the operating system, file management techniques, use of an editor, and an introduction to programming.

- **Computer Science 7, Programming for Non-Computer Science Majors**
  This introductory course covers programming concepts and techniques applicable to those with no computer science background. The course is designed to assist those in non-computer science fields to develop small-scale projects. Topics covered include computer organization, data representation, variables, branching, loops, procedures, external access and the web. Tools used include HTML5, CSS3, Javascript, and JQuery

Web Development & Mobile Development

Degrees and Certificates

Degrees And Certificates
Associate of Science Degree (AS) - Web Developer
Certificate of Achievement - Web Developer
Certificate of Achievement - Mobile Apps Development - Android
Certificate of Achievement - Mobile Apps Development - iPhone

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Potential Career Options

Job Title	Typical Education	Median Wage
Entry Level Web Developer	Associate's or higher	$35,000
Web Developer	Bachelor's Degree	$62,189
Software Developer	Bachelor's Degree	$105,000
Application Developer	Bachelor's Degree	$70,000
Full Stack Developer	Bachelor's Degree	$91,001
Backend Developer	Bachelor's Degree	$92,942
Frontend Developer	Bachelor's Degree	$83,183

Database Application Developer

Degrees and Certificates

Degrees and Certificates
Associate of Science Degree (AS) - Database Applications Developer
Certificate of Achievement - Database Applications Developer

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Potential Career Options

Job Title	Typical Education	Median Wage
Entry Database Administrator	Bachelor's Degree	$73,121
Database Administrator	Bachelor's Degree	$84,669
Database Architect	Bachelor's Degree or more	$108,278
Oracle Database Architect	Bachelor's Degree or more	$108,278
Database Developer	Bachelor's Degree	$73,506
SQL Database Developer	Bachelor's Degree	$73,506

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Networking and Cybersecurity

Degrees and Certificates

Degrees and Certificates
Department Certificate - Networking
Department Certificate - Cybersecurity

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Potential Career Options

Job Title	Typical Education	Median Wage
Network Help Desk	Associate's Degree	$44,512
Network and Systems Administrator	Bachelor's Degree	$87,432
Cybersecurity Analyst	Bachelor's Degree	$75,915
Information Security Analyst	Bachelor's Degree	$71,977
Network Engineer	Bachelor's Degree	$79,965
Security Architect	Bachelor's Degree or more	$114,146

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Cloud Computing

Degrees and Certificates

Degrees and Certificates
Department Certificate - Cloud Computing - Amazon Web Services
Department Certificate - Cloud Computing - Microsoft Azure

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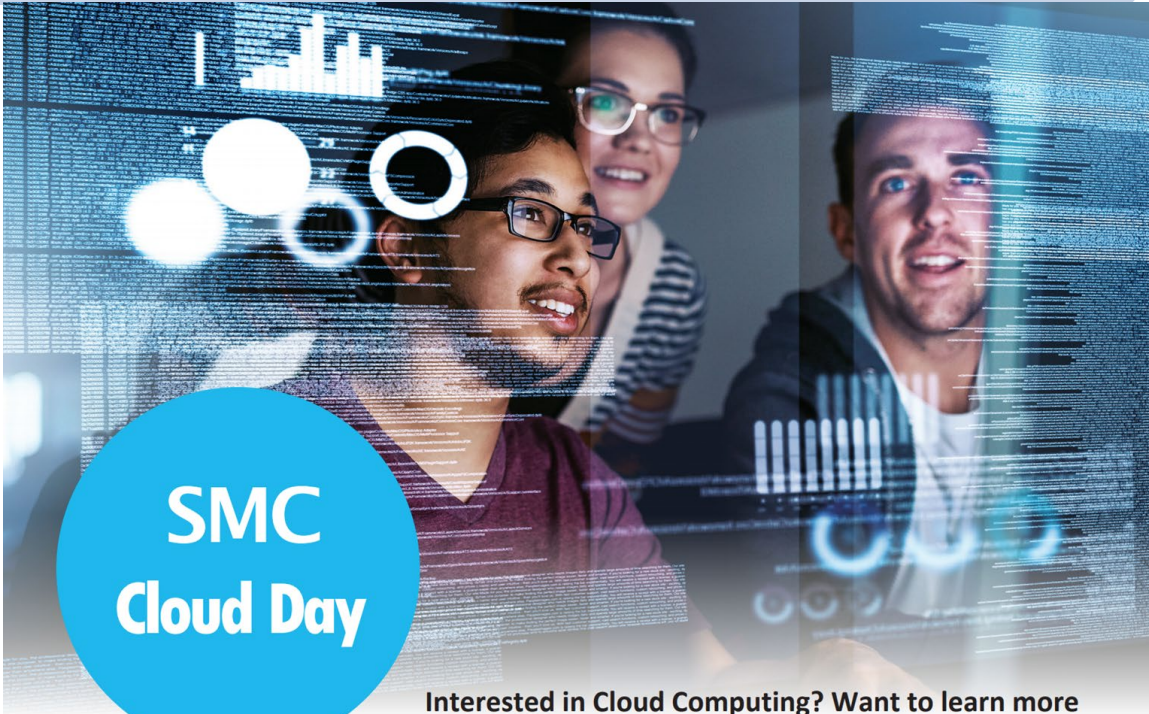
STEM

Potential Career Options

Job Title	Typical Education	Median Wage
Solution Architect	Bachelor's Degree	$97,000
Cloud Support Associate	Bachelor's Degree	$70,819
Cloud Practitioner	Bachelor's Degree	$113,000
Cloud Engineer	Bachelor's Degree	$112,000
Systems Engineer	Bachelor's Degree	$77,768
Network Cloud Engineer	Bachelor's Degree	$72,362

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COMPUTER SCIENCE EVENTS

Interested in Cloud Computing? Want to learn more about the world of Cloud Computing? JOIN US FOR CLOUD DAY!

- **Twitter Page: @SMC_CSIS**

- **Cloud Day Typical Activities**
  - Introduction to Amazon Web Services
  - Introduction to Azure Cloud
  - Industry speakers
  - Industry lead workshops
  - Student cloud computing competition with cash prizes

Starter Class

- **COMPUTER SCIENCE 79A: Introduction to Cloud Computing**
This course introduces cloud computing which shifts information systems from on-premises computing infrastructure to highly scalable internet architectures. The course provides a solid foundation of cloud computing technologies and provides students with the understanding required to effectively evaluate and assess the business and technical benefits of cloud computing and cloud applications. Students analyze a variety of cloud services (storage, servers and software applications) and cloud providers. Case studies will be used to examine various industry cloud practices and applications. The course also surveys cloud careers and discusses industry demand for cloud skills.

Student Clubs

- **Office of Student Life - Student Clubs (www.smc.edu/icc)**

  - **COMTECH**
    SMC's Student Chapter of the ACM, Association for Computing Machinery, the largest computing organization in the world. Message them on Instagram to see how to get involved. For more information contact, clubcomtech@yahoo.com or visit www2.smc.edu/clubs/comtech/

  - **Computer Programming**
    Fosters group projects and collaboration. For more information, contact smcporgramming@gmail.com

Student Clubs

- **Office of Student Life - Student Clubs (continued)**

  - **Robotics**
    Develops student interest in Science, Technology, Engineering and Math (STEM) through robotics competitions and other projects. For more information, contact roboticsclub.smc@gmail.com

  - **Game Developers Unite**
    Open to students looking to develop video games For more information, contact gamedevesmc@gmail.com

Campus Resources

- **Computer Science**
  - **Website:**
  - http://smc.edu/academics/academic-departments/csis/index.php
  - http://smc.edu/academics/areas-of-interest/stem/csis/computer-science.php
  - Phone: (310) 434-8015

- **STEM Program**
  - **Website:** http://smc.edu/stem
  - **Contact Information:**
    Phone: (310) 434-43988

- **Career Services Center**
  - **Website:** http://smc.edu/careercenter
  - **Contact Information:**
    Email: careerservices@smc.edu
    Phone: (310) 434-4337

STEM Program

STEM Resources

- **STEM Program**
  Academic support program designed to help traditionally underrepresented students, interested in STEM careers successfully complete their studies at SMC, transfer to a 4-year research-oriented baccalaureate program, and enter the STEM workforce. Programs also has STEM Program reserved courses. For more information and for application deadlines, visit http://smc.edu/stem

- **STEM Lab Tutoring**
  Free tutoring in select STEM courses. For the tutoring schedule visit http://smc.edu/student-support/academic-support/counseling/special-support-programs/stem/stem-tutoring.php

- **Science Learning Resource Center**
  Learning facility for Earth, Life, and Physical Sciences students. Students come to do their required Lab Hours in Anatomy, Physiology and Chemistry 10. http://smc.edu/student-support/academic-support/tutoring-centers/science-lrc.php

STEM Resources

- **Peer Mentor Support**
  Collaborative involvement with fellow students and the STEM/SRI program team
  http://smc.edu/student-support/academic-support/counseling/special-support-programs/stem/peer-mentor-program.php

- **STEMinars (workshops)**
  Workshops designed specifically for STEM students

- **Supplemental Instruction (SI)**
  Participate in free sessions involving interactive group activities to help understand course concepts, prepare for exams, and learn effective study skills.
  http://smc.edu/student-support/academic-support/supplemental-instruction/index.php

- **STEM Counseling**
  STEM counselors are available to help you plan your academic goals.
  http://smc.edu/student-support/academic-support/counseling/contact.php

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STEM ProgramApplying as a New Incoming SMC Student

- **Incoming SMC Student STEM Program Application Requirements**
  - Complete SMC Application and interest in one of the STEM fields
  - Minimum of 2 years of high school science
  - Math 20-ready (Intermediate Algebra or higher)
  - Recommended 2.50 High School GPA

- **Incoming SMC Student STEM Program Dates and Deadlines**
  - The application is typically available in May and the deadline to apply is in May
  - http://smc.edu/student-support/academic-support/counseling/special-support-programs/stem/sri-application-information.php

- **STEM Program Mailing/Interest Card**
  - http://smc.edu/student-support/academic-support/counseling/special-support-programs/stem/science-research-initiative.php

STEM ProgramApplying as a Current SMC Student

- **Currently Enrolled SMC Student STEM Program Application Requirements**
  - Math 20-ready (Intermediate Algebra or higher)
  - 2 years of Science Research Initiative (SRI) program commitment
  - Interest in one of the STEM fields
  - Planned enrollment in Math and Science courses

- **Currently Enrolled SMC Student STEM Program Dates and Deadlines**
  - Application typically available in May and the deadline to apply is in May
  - http://smc.edu/student-support/academic-support/counseling/special-support-programs/stem/sri-application-information.php

- **STEM Program Mailing/Interest Card**
  - http://smc.edu/student-support/academic-support/counseling/special-support-programs/stem/science-research-initiative.php

Don't forget to explore the additional videos on Programs and Careers in STEM

- **Astronomy**
- **Geography**
- **Geology**

- **Automotive Technology**
- **Environmental Science**
- **Sustainable Technologies**

- **Chemistry**
- **Biological Science**
- **General Science**

- **Math**
- **Physics**
- **Engineering**