About the Computing Program

The Computer Science Department at Slippery Rock University is home to the Computing Degree where students can select an emphasis in Computer Science or Information Technology. Many high school graduates are interested in Computing, but some have difficulty in choosing a specialization. Students do not have to decide on a direction within computing until the fourth semester. Both interest areas have nine shared courses including databases, Javascript, C++, networking, security, and ethics. Computer Science concentration emphasizes the theory of computing and the design of computing systems. Graduates learn about algorithms, hardware, theory, operating systems, and software engineering; they can select to focus on mobile applications and graphics or robotics, AI, and machine learning. Information Technology is an Internet-centric concentration emphasizing the development of appealing, interactive web sites. Graduates learn about both client and server side technologies and both the Windows and Linux environment. Students can decide to focus on the artistic design, managerial, or marketing aspects of web design. Our major offers flexibility you won’t find elsewhere!

The minor in computing prepares students from other disciplines to be computing savvy and prepare themselves for using databases, introductory programming, web technologies and the societal issues of computing. Students will be well prepared for utilizing computing in their chosen major.

Student Organizations

Student organizations include the Computer Technology Club and the local chapter of the national honorary society for computing sciences, Upsilon Pi Epsilon. SRU sponsors student-programming teams at the state, regional, and international levels.

Majors/Concentrations

- Computing (BS)
- Information Technology
- Computer Science
- Cybersecurity
  (optional) Bioinformatics

Minors

- Computing
- Cybersecurity

Graduate

- Health Informatics (MS)
State-of-the-Art Technology
The second floor of the $14.5 million, 87,000 square foot Advanced Technology and Science Hall is the home for the Computer Science Department.

• Innovative technology laboratory for students to explore creating application for devices such as 3D printers, Raspberry Pis, Ipads, Smartphones, VR goggles, 3D scanners and more.

• Artificial Intelligence/Robotics laboratory that has a full complement of AI software and tools, along with Lego robots, NAO robots, hardware and software support for remote control of devices, hardware and software for exploring facial recognition.

• Three fully-wired “smart classrooms” where each student has access to a work-station so the courses may seamlessly move from lecture mode to laboratory mode as we study computing.

• Classroom access to both the Windows environment and the Linux operating system supporting most courses in our curriculum, hosting a wide range of specialty software used by the computing courses.

• Several file and web servers, hardware with parallel processing capabilities such as GPUs, clustered machines, and multiple processors for students to explore both shared-memory and distributed memory parallelism.

• Network laboratory features virtualized servers for course use. Students will configure servers for a variety of services (HTTP, HCP, DNS, etc.) using both Unix and Windows operating systems.

• Undergraduate Research Projects laboratory is set up for those students collaborating with faculty members on current research projects. Every year some of our students have their research projects published.

Career Opportunities
The National Center for Women and Information Technology reports that by 2020, there will be 1.4 million computer-related job openings in the US and the US will only produce enough computer science graduates to fill 32 percent of them. The SRU computing degree will prepare you for this market. Currently, our department has more requests from local businesses for computer internships than we have students to supply. We believe the employment prospects are excellent for students entering our program.

Student Opportunities
• Internships with area businesses. We regularly place students with companies ranging from the Bayer Corporation to US Steel, from the Pittsburgh Pirates to McKesson Robotics. Internships let you gain valuable work experience along with academic credit. You may elect to apply three credits of internship toward graduation.

• Our board of visitors is comprised of a dozen area business leaders who advise the department on curricular matters. Each year, the board conducts career entrance workshops that include mock interviews, phone interviews, and group interviews. Students also have the opportunity to shadow a professional for a day.

• Undergraduate research with faculty member mentors that result in publications and presentations at the state, national and international levels.