

Cyber Security at SRJC, beyond the catalog description

Catalog Description:

The Cybersecurity: Network and Systems Security Administration Major provides a course of study that prepares students to implement and administer a secure Information Technology (IT) environment. As a significant upgrade to the traditional IT Administrator role, it is foundational to further study in the cybersecurity field. This major focuses on the requisite Knowledge, Skills, and Abilities (KSAs) to securely maintain Microsoft Systems and Cisco networks, including the ability to learn and manage other vendor platforms.

See the attached Excel sheet for the semester-by-semester course sequence.

Beyond:

As a community college, we develop two-year CTE programs to prepare students for the workforce. Our programs also assist incumbent workers to advance and improve their KSAs, thereby allowing them to increase their earning potential. The NSSA program certainly does this.

What we often do not up-front communicate to our students is just how rigorous and time-consuming some programs are, AND just how worthwhile is the commitment to those programs. The NSSA program certainly is this.

New students may initially be surprised at the “lack” of cyber security related courses in the program. That perceived “lack” is only a result of not understanding 1. the importance of knowing what you are securing and 2. when learning Networking and Operating Systems (OS) you will learn about securing them at the same time.

In addition to being ready for entry-level positions, the NSSA program lays the foundation for a variety of cyber security career options the students may pursue afterwards. Students will have to garner a few years of experience and take additional trainings to delve deep into specific cyber careers.

Note: The Project Management for IT Professionals course in the series, CS 84.26, is the program capstone and serves to help students develop and expand their resumes with relevant and practical experience. This is accomplished by having the students complete a project, of their own choice, such as: building an application and deploying virtual machines in a Cloud infrastructure, securing a network in a Cloud infrastructure, designing and configuring a secure network, exposing and then mitigating security weaknesses in other students’ projects. These projects will “live on” after the course and program, allowing the students to use them during interviews and in their resumes, as real work experience examples. Students can and should continue to add to these projects throughout their careers.

There are some advanced degrees in cyber security, the best of them require a BA or BS in Computer Science. My favorite is the Naval Postgraduate School’s <https://nps.edu/> Information Sciences department, <https://nps.edu/web/is> . The school and program are both open to civilians. One of our department colleague’s son attended and started his career at a salary higher than dad’s, who had been here over 25 years! Other advanced educational options can be found through Scholarship for Service programs. See <https://sfs.opm.gov/>

Private sector training is expensive but also effective. The best is from SANS. See <https://www.sans.org/> Two of my previous students asked me, what do I do next? I suggested SANS and they took a course, found they could get scholarships and completed a track there. They were both “head-hunted” and landed fantastic jobs.

I also recommend SANS cyber security roadmap to help students understand the sequence of KSAs to build and to see and explore some of the subspecialties. See <https://www.sans.org/cyber-security-skills-roadmap/> .

Please let me know what I can do to help you better serve our inquiring students.