Program Requirements Guide 2020 - 2021

CyberSecurity AAS DEGREE

Program Overview
CyberSecurity professionals work in a wide variety of information technology positions, but have a focus on information assurance, cyber ethics, and incident detection, investigation and response. Students completing this degree will be able to investigate and defend computer systems against cyber-attacks, unauthorized use or modification, and exploitation.

Students entering into this program of study should have excellent communication, reading and math skills. Throughout the program students will experience coursework that will help them develop skills such as critical thinking, performance monitoring, decision making and evaluating systems and organizations.

The CyberSecurity program at Saint Paul College is 60 credits in length. The program provides 16 credits specifically related to CyberSecurity which will aid students in the field and in potential certifications.

Career Opportunities
CyberSecurity professionals will find a growing need in both public and private employment sectors. Graduates will find excellent opportunities as systems administrators, network engineers, system programmers, and systems specialists.

Program Outcomes
1. Graduates will have knowledge and skills in system design, analysis and maintenance.
2. Graduates will have the skills to gather, monitor, and analyze multiple sources of data to identify changes in circumstances or events.
3. Graduates will have the skills to evaluate information to determine compliance with security standards.
4. Graduates of the CyberSecurity program will be prepared for employment as information Security Analysts or Computer Systems Analysts.

Transfer Opportunities
Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below.

For more information please go to saintpaul.edu/Transfer.

CyberSecurity AAS
BA Individualized Studies
Metropolitan State University
BS Information Technology
Saint Mary’s University,
Twin Cities Campus
BS Operations Management
Minnesota State University, Moorhead

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Program Requirements
☐ Check off when completed
Course
☐ CSCI 1410 Computer Science & Information Systems ........................................ 4
☐ CSCI 1423 Computer Networking 1 – Client ................................ 4
☐ CSCI 1440 Networking Fundamentals ........................................ 4
☐ CSCI 1523 Intro to Computing and Programming Concepts .......................... 4
☐ CSCI 2420 Computer Security ....................................................... 4
☐ CSCI 2461 Computer Networking 3 – Linux ........................................ 4
☐ CSCI 2465 Computer Networking 4 – Infrastructure ................................ 4
☐ CSCI 2480 Network Security and Penetration Prevention .......................... 4
☐ CSCI 2482 Security Incident Handling, Response and Disaster Recovery ....... 4
☐ CSCI 2484 Ethical Hacking & Countermeasures .................................... 4
☐ CSCI 2570 Machine Architecture and Organization .................................. 4
Subtotal .................................................................. 44

General Education/MnTC Requirements Cr
Refer to the Minnesota Transfer Curriculum Course List for each Goal Area
☐ Goal 1: Communication ........................................................... 7
☐ ENGL 1711 Composition 1 – 4 cr
☐ COMM 17XX – 3 cr
☐ Goal 3 or Goal 4 ................................................................. 3
☐ Goal 3: Natural Sciences
☐ OR Goal 4: Mathematical / Logical Reasoning ............................... 3
☐ MATH 1730 or proficiency required
☐ Goal 5: History, Social Science and Behavioral Sciences ...................... 3
☐ Goal 6: Humanities and Fine Arts ............................................. 3
☐ (PHIL 1720 Ethics is recommended)
General Education Requirements ........................................ 16

Total Program Credits ........................................ 60

Program Start Dates
Fall, Spring, Summer

Course Sequence
This course sequence is recommended for a full-time student; however, this sequence is not required. Not all courses are offered each semester; a selection of courses is offered summer term. Students should consult with the Program Faculty each semester.

First Semester
CSCI 1410 Computer Science & Information Systems ................................. 4
CSCI 1423 Computer Networking 1 – Client ........................................ 4
CSCI 1440 Networking Fundamentals ....................................................... 4
Goal 1: ENGL 1711 Composition 1 .......................................................... 4
Total Semester Credits .................................................................. 16

Second Semester
CSCI 1523 Intro to Computing and Programming Concepts ....................... 4
CSCI 2461 Computer Networking 3 – Linux ......................................... 4
Goal 3: Natural Sciences
☐ OR Goal 4: Mathematical / Logical Reasoning ................................... 3
☐ MATH 1730 or proficiency required
Goal 6: Humanities and Fine Arts ....................................................... 3
☐ (PHIL 1720 Ethics is recommended)
Total Semester Credits .................................................................. 14

Third Semester
CSCI 2420 Computer Security ............................................................... 4
CSCI 2465 Computer Networking 4 ....................................................... 4
Goal 3: Natural Sciences
☐ OR Goal 4: Mathematical / Logical Reasoning ................................... 3
☐ MATH 1730 or proficiency required
Total Semester Credits .................................................................. 16

Fourth Semester
CSCI 2480 Network Security and Penetration Prevention .......................... 4
CSCI 2484 Ethical Hacking and Countermeasures .................................. 4
Goal 1: COMM 17XX ................................................................... 3
Goal 5: History, Social Science and Behavioral Sciences .......................... 3
Total Semester Credits .................................................................. 14
Total Program Credits ........................................ 60

See back of this guide for Course Chart

Information is subject to change.
This Program Requirements Guide is not a contract.
Minimum Program Entry Requirements
Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 250+ or grade of "C" or better in READ 0722

Writing: Score of 250+ on Reading Comprehension or grade of "C" or better in ENGL 0922

Adv. Algebra & Functions: Score of 250+ or grade of "C" or better in MATH 0920

Assessment Results and Prerequisites:
Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.