

NETWORK SECURITY ADVANCED CERTIFICATE

Purpose

The purpose of this program is to prepare students for entering the field of network security as an information systems security professional, network security analyst/architect, computer forensic investigator, network defense technician, and security operator. This program can also help individuals with prior industry experience to enhance their skills and knowledge in information technology (IT).

Students will develop skills in using platforms for implementing network operation and security tools, threat mitigation, digital forensics analysis, systems analysis, and decision-making in computer security operations.

Courses in this program will help prepare students to write certain industry certification exams from CompTIA (<https://www.comptia.org/home/>), Linux Professional Institute (<https://www.lpi.org/>), and EC-Council (<https://www.eccouncil.org/>).

Duration

Students may complete the program within 1 to 2 years on a part-time basis. The program must be completed within 3 years.

Learning Outcomes

Upon successful completion of this program, graduates will be able to:

- Design, implement, maintain, and monitor a networked virtual environment using Windows and Linux operating systems
- Implement IT system security
- Operate and maintain IT system performance and security
- Identify vulnerabilities of a computer network infrastructure
- Investigate cyber events and digital evidence and engage in computer forensic investigation
- Collect and evaluate cybersecurity information for operations planning
- Conduct tests and perform security and quality controls
- Assess physical and technical security risks/threats to data, software and hardware
- Develop policies, procedures and back up plans to minimize the effects of security breaches

Admission Requirements

- A diploma or a degree in an information technology (IT) specific field, or a combination of education and industry experience/certifications in IT.
 - Examples of relevant diplomas include Computer Systems Technology, Computer Information Technology, Computer Network Administrator, and Computer Information Systems Administration.
- International students must demonstrate English Language Proficiency through *one* of the following:
 - VCC ELA (English Language Assessment) with minimum scores of: Listening 25/30, Speaking 27/30, Reading 50/70 and Essay 16/20, *or*

- TOEFL iBT with a minimum score of 84 (minimum score of 21 in each section), *or*
- Academic IELTS with a minimum score of 6.5 (no band less than 6.0)

Program Requirements

Courses may be taken in any order as long as course prerequisites are met.

Term One		Credits
ITOP 2411	Advanced Network Systems	4.5
ITOP 2413	Network Optimized Monitoring	4.5
Credits		9
Term Two		Credits
ITOP 2412	Computer Forensics	2
ITOP 2414	Encryption, PKI Archit & Admin	3.5
ITOP 2415	NetworkExploits-Vul-PenTesting	4.5
Credits		10
Total Credits		19

[This guide is intended as a general guideline only. The College reserves the right to make changes as appropriate.](#)

Evaluation of Student Learning

Students will be assessed through a wide range of activities such as assignments, quizzes, projects, presentations, and exams.

To achieve the Network Security Advanced Certificate, students must successfully complete all of the five courses shown below.

Prior Learning Assessment and Recognition (PLAR)

Students may request formal recognition of prior learning attained through current industry certification, informal education, work, or other life experience, including Indigenous ways of knowing. Credits may be granted to students who are able to sufficiently demonstrate the learning outcomes of specific courses.

PLAR is available for all courses in the program. However, a maximum of 50% of the program credits can be accessed through PLAR.

Methods for assessing prior learning may include exams, a review of relevant work experience and/or recent industry certifications, and other evaluations.

Please contact the program area for details.

See Prior Learning Assessment and Recognition Policy and Procedures for more information.

Transcript of Achievement

The evaluation of learning outcomes for each student is prepared by the instructor and reported to the Student Records Department at the completion of semesters.

The transcript typically shows a letter grade for each course. The grade point equivalent for a course is obtained from letter grades as follows:

Grading Standard

Grade	Percentage	Description	Grade Point Equivalency
A+	96-100		4.33
A	91-95		4.00
A-	86-90		3.67
B+	81-85		3.33
B	76-80		3.00
B-	71-75		2.67
C+	66-70		2.33
C	61-65		2.00
C-	56-60		1.67
D	50-55		1.00
F	0-49	Failing Grade	0.00
S		Satisfactory – student has met and mastered a clearly defined body of skills and performances to required standards	N/A
U		Unsatisfactory – student has not met and mastered a clearly defined body of skills and performances to required standards	N/A
I		Incomplete	N/A
IP		Course in Progress	N/A
W		Withdrawal	N/A
Course Standings			
R		Audit. No Credit	N/A
EX		Exempt. Credit Granted	N/A
TC		Transfer Credit	N/A

Grade Point Average (GPA)

1. The course grade points shall be calculated as the product of the course credit value and the grade value.
2. The GPA shall be calculated by dividing the total number of achieved course grade points by the total number of assigned course credit values. This cumulative GPA shall be determined and stated on the Transcript at the end of each Program level or semester.
3. Grades shall be assigned to repeated courses in the same manner as courses taken only once. For the purpose of GPA calculation of grades for repeated courses, they will be included in the calculation of the cumulative GPA.