FLEMING

Course Outline

Course Title:	Introduction to Cyber Trends and Digital Evidence		
Course Number:	COMP482	**Approval Date:**	2021/9/6
Course Hours:	45 hours	**Academic Year:**	2021
Academic School:	School of Business and Information Technology		
Faculty:	Charles Baker - charles.baker@flemingcollege.ca Mamdouh Mina - Mamdouh.Mina@flemingcollege.ca		
Program Co-ordinator or Equivalent:	Mamdouh Mina - Mamdouh.Mina@flemingcollege.ca		
Dean (or Chair):	Haider Al-saidi - Haider.Al-saidi@flemingcollege.ca		

Course Description

As technology advances, so does cyber security. With exciting new developments in the field over recent years, it's essential that students are familiar with upcoming cyber trends and new avenues of digital evidence. This course will provide a broad overview of the field, introducing students to useful and current fascinating technologies. Students will leave with a greater understanding of cyber security and digital evidence, its terminology, software utilities for security professionals, and the necessary knowledge to tackle more advanced topics.

Prerequisites: None.

Corequisites: None.

Course Delivery Type

Online Synchronous.

All course hours delivered are online synchronously with specified meeting times. Delivery times are specified on the academic timetable.

Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Assess the importance of cyber security measures at every level of digital technologies.
2. Approach cyber security in terms of accepted general concepts and terminology

3. Using the Command Line Interface and other necessary tools to perform basic security-related tasks.
4. Use reliable threat and security resources as references.
5. Effectively execute basic protective measures on hosts and browsers.
6. Assess the impact of current digital trends on the world of cyber security.

Learning Resources

Various Internet and Library Resources

Assessment Summary

Assessment Task	Percentage
Labs	77%
Quizzes	23%

Student Success: Policies and Procedures

Mutually, faculty and learners will support and adhere to college Academic Regulations, and Student Rights and Responsibilities. The following policies and guidelines have been developed to support the learning process.

Please click on the link for information about:

- Academic Integrity (2-201A)
  (https://department.flemingcollege.ca/hr/attachment/7750/download)
- Accessibility for Persons with Disabilities (3-341)
  (https://department.flemingcollege.ca/hr/attachment/5619/download)
- Grading and Academic Standing (2-201C)
  (https://department.flemingcollege.ca/hr/attachment/7752/download)
- Guidelines for Professional Practice: Students and Faculty
  (https://flemingcollege.ca/PDF/guidelines-for-professional-practice-students-faculty.pdf)
- Student Rights and Responsibilities (5-506)
  (https://department.flemingcollege.ca/hr/attachment/269/download)

If you will need academic accommodations (for example if you have a learning disability, mental health condition such as anxiety or depression or if you had an IEP in high school), please contact the Accessible Education Services (AES) department (https://department.flemingcollege.ca/aes/) to meet with a counsellor.

Alternate accessible formats of learning resources and materials will be provided, on request.

Program Standards

The **Ministry of Colleges and Universities** oversees the development and the review of standards for programs of instruction. The **Ministry of Labour Training and Skills Development** oversees the development and the review of standards for programs of instruction for Apprenticeship training in the province of Ontario. Each college is required to ensure that its programs and program delivery are consistent with these standards, and must assist students to achieve these essential outcomes.

This course contributes to Program Standards as defined by the Ministry of Colleges and Universities (MCU). Program standards apply to all similar programs of instruction offered by colleges across the province. Each program standard for a postsecondary program includes the following elements:

- **Vocational standards** (the vocationally specific learning outcomes which apply to the program of instruction in question);
- **Essential employability skills** (the essential employability skills learning outcomes which apply to all programs of instruction); and
- **General education requirement** (the requirement for general education in postsecondary programs of instruction that contribute to the development of citizens who are conscious of the diversity, complexity and richness of the human experience; and, the society in which they live and work).

Collectively, these elements outline the essential skills and knowledge that a student must reliably demonstrate in order to graduate from the program. For further information on the standards for your program, follow the MCU link (www.tcu.gov.on.ca/pepg/audiences/colleges/progstan/).

Detail Plan

Term:	2022 Winter
Faculty:	Charles Baker - charles.baker@flemingcollege.ca Rob Lorenz - Robert.Lorenz@flemingcollege.ca
Program Co-ordinator or Equivalent:	Mamdouh Mina - Mamdouh.Mina@flemingcollege.ca
Dean (or Chair):	Musabbir Chowdhury - Musabbir.Chowdhury@flemingcollege.ca

Learning Plan

Wks/Hrs Units	Topics, Resources, Learning, Activities	Learning Outcomes	Assessment
Week 1	Course Overview: Introduction to how this course relates to the CSI/CTY/CTN programs, including course topics and timeline overview, and introduction to basic terminology.	1	

Wks/Hrs Units	Topics, Resources, Learning, Activities	Learning Outcomes	Assessment
Week 2	Compliance & Security Standards: Introduction to key terms and concepts, the relationship between security and compliance and general security standards.	1,2,4	Lab Activity #1
Week 3	Assets: Value of data and equipment including an introduction to modern network topologies.	1, 2	Lab Activity #2
Week 4	Threats: Common threat taxonomy and overview of attack spectrum.	1, 2	Lab Activity #3
Week 5	Operating Systems: Basic introduction to different types of operating systems.	1, 2, 3, 4, 5	Lab Activity #4
Week 6	Internet Browsing & Home Network Security: Browsing-related threats and preventative measures.	1, 2, 3, 5	Lab Activity #5
Week 7	Quiz #1		Quiz #1
Week 8	*Independent Learning Week*		
Week 9	Social Engineering: Goals, principles and modern examples of social engineering.	1, 2, 4, 6	Lab Activity #6
Week 10	Cryptography: Introduction, history and common modern usages.	1, 2, 3, 5, 6	Lab Activity #7
Week 11	Cloud Computing: Introduction to types, contributing technologies, benefits, drawbacks and big providers with an introduction to the concept of virtualization.	1, 2, 6	Lab Activity #8
Week 12	Hacking: Goals, phases, vulnerabilities and exploits.	1, 2, 5	Lab Activity #9
Week 13	Network Security & the Evolution of Technology: Challenges presented to the security of a network by recent technological advancements.	1, 2, 3, 6	Lab Activity #10
Week 14	Digital Trends	1, 3, 4, 5	Lab Activity #11
Week 15	Final Quiz	1, 2, 3, 4, 5, 6	Final Quiz

Assessment Requirements

Assessment Task	Date/Weeks	Course Learning Outcome	Percentage
11 Labs @ 7% each = 77%	Weeks 2 - 6 & 9 -14	1 - 6	77%
Quiz 1 and 2 @ 10 and 13 % = 23%	Weeks 7 & 13	1 - 6	23%

Many Lab Activities will be demonstrated and executed during synchronous class hours, therefore attendance is necessary to receive the Lab Activity grades for those weeks.

A major component of this course is to learn how to access quality resources to stay current on trends pertaining to computer security, data privacy, and technological advancements. Students may be called on to share news items of interest (along with a brief analysis) that they have discovered with the class during class time. More details on this will be communicated during the Week 2 Introduction session.

All Quizzes and Lab Activities are due on their stated due dates unless the student has made specific arrangements with the professor *at least two days prior to the due date*, or in the case of an emergency, on the student's return to school. Aside from the above conditions, a Quiz or Lab Activity not submitted/performed on the due date will receive a mark of zero.

Note: Transfer of theory and unique skill set learning lessons are delivered throughout the entire class period, attendance is highly recommended for student success.

Turnitin Statement

Students agree that by taking this course all required papers may be subject to submission for textual similarity review to Turnitin.com in support of academic integrity. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of the Turnitin.com service is subject to the Usage Policy posted on the Turnitin.com site.

If students choose to opt out of using the software, they must inform their faculty member at the time of the assignment, of their refusal and meet with the faculty to discuss their options. For further information on the use of Turnitin, please refer to the Operating Procedure 2-201F (https://department.flemingcollege.ca/hr/attachment/10233/download)

Exemption Contact

Your CSI Coordinator, Mamdouh Mina, mamdouh.mina@flemingcollege.ca

or CTN/CTY Program Coordinator, George Seto, george.seto@flemingcollege.ca

Prior Learning and Assessment and Recognition (PLAR)

PLAR uses tools to help learners reflect on, identify, articulate, and demonstrate past learning which has been acquired through study, work and other life experiences and which is not recognized through formal transfer of credit mechanisms. PLAR options include authentic assessment activities designed by faculty that may include challenge exams, portfolio presentations, interviews, and written assignments. Learners may also be encouraged and supported to design an individual documentation package that would meet the learning requirements of the course. Any student who wishes to have any prior learning acquired through life and work experience assessed, so as to translate it into a college credit, may initiate the process by applying through the Registrar's office. For more

information please click on the following link: http://flemingcollege.ca/admissions/prior-learning-assessment-and-recognition

Course Specific Policies and Procedures

It is the responsibility of the student to retain this course outline for future reference. Course outlines may be required to support applications for advanced standing and credit transfer to other educational institutions, portfolio development, PLAR and accreditation with professional associations.

Synchronous sessions may be recorded. As a result, your image, voice, name, personal views and opinions, and course work may be collected under legal authority of section 2 of the Ontario Colleges of Applied Arts and Technology Act, 2002. This information will be used for the purpose of supporting student learning. Any questions about this collection can be directed to the Privacy and Policy Officer at freedomofinformation@flemingcollege.ca or by mail to 599 Brealey Drive, Peterborough, ON K9J 7B1.

Late reports in this course WILL NOT be accepted. All due dates for assignments and labs must be met, as established by the professor. Make up tests and assignments WILL NOT be given and late material may be given a mark of zero (0).

Due to the technical nature of the course, student attendance in the lab is a mandatory component of the learning process. Students who do not attend the lab and complete the practical assessments, under direction and observation by the professor, Will Not be permitted to pass the lab assessment.

Also note that due to the changing nature of forensics and the computing environment, the professor may make changes in content or delivery to better prepare students for success in this area of study. Such changes may be discussed with student learners, but will be introduced at the sole discretion of the professor.

Note* Course outline may change due to Covid-19.

ACADEMIC RESPONSIBILITIES

1. To gain the most possible benefit from this skill developing course, students need to attend classes. Learning takes place when you become engaged in the learning process. Your instructor will be recording attendance data and will report absences, late arrivals, and early departures to your program co-ordinator.

2. All tests and lab assignments have scheduled due/completion dates. Meeting these due dates is key to your success in this course: your instructor’s feedback will add to your learning.

3. Therefore, you must write all tests with the class on the tests' assigned dates. As well, you must complete all lab assignments by the scheduled due date during the schedule lab time.

4. You will receive a grade of zero for any test not written or lab assignment not completed unless you have made arrangements with your instructor PRIOR TO the due date in question.

5. Your instructor will consider a makeup for missed assignments or tests for valid reasons only; for example, documented illness or extenuating personal circumstances. These situations will be discussed on an individual

basis.

6. You, the student, are responsible for making these arrangements; you’re learning and success in this course is a shared goal.

7. Final grades in this course are assigned based on the level of achievement that corresponds to the assessment components as cited in the course outline. It is important to note that faculty member(s) will not offer additional evaluation activities (NO CREDIT RECOVERY) beyond those cited in the course outline.

8. The professor, faculty team in consultation with the program co-ordinator and academic chair reserves the right to modify the course content, sequence based on industry trends, interests, and time constraints in this course.

9. It is the responsibility of the student to exercise proper care and back-up procedures for electronic data files. Corrupted or lost disk files will not constitute a valid excuse for late or non-submission of work.

10. E-mail is a standard mode of communication in the School of Business and Information Technology. You have a responsibility to read your e-mail regularly.

ACADEMIC INTEGRITY

Fleming College opposes any form of academic dishonesty, such as plagiarism, submission of work for which credit has already been received; cheating, impersonation; falsification or fabrication lf data; the acquisition of confidential material, e.g., examination papers; misrepresentation of facts; altering transcripts or other official documents.
Please see Academic Regulations Policy for more information on Academic Integrity.