

FLEMING

Course Outline

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|--|---|-----------------------|-----------|
| Course Title: | Computer Hardware | | |
| Course Number: | COMP191 | Approval Date: | 2025/6/12 |
| Course Hours: | 45 hours | Academic Year: | 2025 |
| Academic School: | School of Business and Information Technology | | |
| Program Co-ordinator or Equivalent: | Mamdouh Mina - Mamdouh.Mina@flemingcollege.ca | | |
| Dean (or Chair): | Allison MacGregor - Allison.MacGregor@flemingcollege.ca | | |

Course Description

Today, computers can take on a variety of forms, including household appliances, vehicles, and even human implants. Regardless of the devices shape, size, or complexity, however, a common factor between them all is the computer hardware. During this course students will obtain a foundational understanding of the core hardware components that makeup modern computers. Through experiential-learning exercises and involved experimentation, students will leave the course prepared for in-demand industry certifications and having taken their first steps into the information technology landscape.

Prerequisites: None.

Corequisites: None.

Course Delivery Type

Face to face.

All course hours are delivered in person at the delivery location specified on the academic timetable.

Learning Outcomes

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

1. Identify the fundamental principles of using personal computers.
2. Install, configure, optimize and upgrade personal computer components.
3. Identify tools, diagnostic procedures and troubleshooting techniques for personal computer components.
4. Perform Preventative maintenance on personal computer systems.
5. Install, configure, optimize and upgrade Operating Systems

6. Install, configure, optimize, upgrade and diagnose networks
7. Install, configure, upgrade and diagnose security
8. Use critical thinking to solve basic computer problems for the typical consumer.

Learning Resources

1) CompTIA A+ Guide to IT Technical Support (w/ MindTap, 2 terms Printed Access Card), 11th, Jean Andrews, ISBN-13: 9780357012802

Students to provide their own tools. Tool List will be supplied at the start of the course.

Costs for learning resources can be found on the Campus Store website, using the links below, or by visiting the Campus Store location at your campus.

- Sutherland: <https://www.bkstr.com/sfleming-sutherlandstore/home>
- Frost: <https://www.bkstr.com/sfleming-froststore/home>

Assessment Summary

| Assessment Task | Percentage |
|-----------------|------------|
| Labs | 70% |
| Tests | 30% |

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)
(<https://department.flemingcollege.ca/hr/attachment/7750/download>)
- [Accessibility for Persons with Disabilities \(3-341\)](https://department.flemingcollege.ca/hr/attachment/5619/download)
(<https://department.flemingcollege.ca/hr/attachment/5619/download>)
- [Grading and Academic Standing \(2-201C\)](https://department.flemingcollege.ca/hr/attachment/7752/download)
(<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)
(<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)
(<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 \(AES\)](https://department.flemingcollege.ca/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

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|--|--|
| Term: | 2025 Fall |
| Program Co-ordinator or Equivalent: | Mamdouh Mina - Mamdouh.Mina@flemingcollege.ca |
| Dean (or Chair): | Allison MacGregor - Allison.MacGregor@flemingcollege.ca |

Learning Plan

| Wks/Hrs Units | Topics, Resources, Learning, Activities | Learning Outcomes | Assessment |
|--------------------------|--|------------------------------|-----------------------------------|
| Week 1 | Course Intro | | |
| Week 2 | Chapter 1 - Taking apart a computer | 1-3, 8 | |
| Week 3 | Chapter 2 - All about motherboards | 2, 3 | Lab 1 |
| Week 4 | Chapter 3 - Processors | 2, 3, 8 | Lab 2 |
| Week 5 | Chapter 3 - Memory | 2, 3, 8 | Lab 3 |
| Week 6 | Chapter 4 - Supporting Power Systems | 2-4, 8 | Test 1 |
| Week 7 | Chapter 5 - Supporting Hard Drives | 1, 2, 4, 8 | Lab 4 |
| Week 8 | Independent Learning Week | 1, 2, 4, 8 | On going independent study |
| Week 9 | Chapter 6 - I/O Devices | 1-3 | Lab 5 |
| Week 10 | Chapter 7 - Connecting & setting up Networks | 1, 2, 6, 8 | Lab 6 |
| Week 11 | Review | All | Lab 7 |
| Week 12 | Chapter 8 - Supporting Network Hardware | 1, 3, 6, 8 | Test 2 (Chapters 4-7 |
| Week 13 | Chapter 9 - Supporting Mobile Devices | 1, 3, 7, 8 | Lab 8 |
| Week 14 | Chapter 10 - Virtualization & Cloud | 1, 5, 7 | Lab 9 |
| Week 15 | Test | All | Lab 10, Final Exam (all chapters) |

Assessment Requirements

| Assessment Task | Date/Weeks | Course Learning Outcome | Percentage |
|--------------------------------------|-------------------|--------------------------------|-------------------|
| Labs 1 - 10 Due by end of lab period | Weeks 3-14 | All | 70% |
| Test 1 (chapters 1-3) | Week 6 | 1,2,3,4,8 | 8% |
| Test 2 (chapters 4-7) | Week 12 | 1-4,6,8 | 10% |
| Final Test (all chapters) | Week 15 | 1-8 | 12% |

Artificial Intelligence (AI) Statement

NO USE. Use of generative AI tools (like ChatGPT) is not permitted in this course.

It is the responsibility of students to maintain a history of records and supporting documentation to demonstrate their efforts in all academic submissions, even if submission of these is not part of the final academic deliverable.

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 2-201E](https://department.flemingcollege.ca/hr/attachment/10233/download) (<https://department.flemingcollege.ca/hr/attachment/10233/download>)

Respondus Monitor Statement

This course will use Respondus Monitor as a remote proctoring tool to support the administration of electronic examinations and assessments. Fleming College has an institutional license to use Respondus Monitor, a cloud-based service and software that captures video, audio, and other data during student assessment sessions for use in monitoring students. This data is accessible to, and may be used by, authorized individuals at the college to administer student assessments and manage the academic integrity of such assessments. The Student Terms of Use for Respondus Monitor must be agreed to by users (e.g. students) prior to each use of the Respondus Monitor, available at: <https://web.respondus.com/tou-monitor-student/>

By accessing and using Respondus Monitor, you agree to the collection, use, disclosure and retention of your personal information (including personal images) by Respondus Inc. in accordance with its Privacy Policy, available at: <https://web.respondus.com/privacy-policy/>

If you have questions about the collection of your personal information, please contact the Privacy and Policy Officer at freedomofinformation@flemingcollege.ca, or visit Fleming College's [Privacy Statement](https://flemingcollege.ca/privacy-statement) (<https://flemingcollege.ca/privacy-statement>) for more information.

If students choose to opt out of using Respondus Monitor, they must inform their faculty member prior to the scheduled assessment, of their refusal and meet with the faculty to discuss their options.

Exemption Contact

CTN/CTY and CSI Coordinator: Mamdouh Mina mamdouh.mina@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.

ACADEMIC RESPONSIBILITIES

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

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 scheduled 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.

LATE ASSIGNMENT POLICY

You must submit/present all written/oral assignments on their assigned dates unless you make specific arrangements in writing/voice mail/E-mail with your professor at least 24 hours prior to the due date in question. In the case of any emergency, make arrangements (in writing, if necessary) immediately upon your return.

Your professor will make special arrangements for valid reasons only. In the case illness, you may be required to provide a medical note. Other extenuating circumstances will be discussed on an individual basis.

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 of 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.