



CAMOSUN COLLEGE
Trades and Technology
Electronics and Computer Engineering

ELEX 160
DIGITAL and MICROPROCESSORS

Fall 2019

COURSE OUTLINE

The calendar description is available on the web @

www.camosun.ca

Students will be introduced to digital logic systems, microprocessor fundamentals and computer programming in this course. Students will study topics that include the construction and troubleshooting of combinatorial and sequential logic circuits, an overview of various microprocessor and microcontroller systems, an introduction to programming, and the construction of microcontroller-based circuits.

This course is only open to students enrolled in the Computer Network Electronics Technician Program.

1. Instructor Information

| | | |
|------------------|--|--------------------|
| (a) Instructor | Trevor Curtis | |
| (b) Office hours | | |
| (c) Location | CBA 122 | |
| (d) Phone | | Alternative: _____ |
| (e) E-mail | curtis@camosun.bc.ca | |
| (f) Website | Camosun.ca | |

2. Intended Learning Outcomes

(If any changes are made to this part, then the Approved Course Description must also be changed and sent through the approval process.)

Upon successful completion of this course a student will be able to:

- 1. describe combinatorial and sequential digital systems;*
- 2. construct and troubleshoot small digital logic circuits;*
- 3. demonstrate the ability to read and interpret circuit schematic diagrams;*
- 4. describe the characteristics of microprocessor systems; and*
- 5. construct, and test the operation of small microcontroller-based circuits.*

3. Required Materials

- (a) Texts - None
- (b) Access to Camosun D2L online course materials.

4. Course Content

Provided via Camosun Online (D2L).

5. Basis of Student Assessment (Weighting)

| | | |
|-------------------------|---|------|
| (a) Quizzes/assignments | = | 35% |
| (b) Exams | = | 40% |
| (c) Labs | = | 25% |
| | = | 100% |

Assignments and Quiz evaluation is a combination of D2L assignments and Seminar Quizzes from the course curriculum.

Laboratory evaluation will be based on attendance, cleanliness, deportment, group work, completion of lab activities based on demonstration and/or journal work.

You are encouraged to keep a bound journal for any information relating to this course such as terminology, lab exercises, observations, and procedures.

Please note the following:

1. A grade of 50% or better is required in all assessment items above to be able to pass the course.
2. A grade of 60% or better is required in all assessment items above for this course to qualify as a prerequisite.
3. Labs are due at the end of the lab period. A grade of 0% will be awarded to late labs.
4. No late materials will be accepted past midnight of the last day of the course.
5. No opportunity will be available to write missed quizzes.
6. A student is required to inform the instructor prior to being late or missing a class, or as soon as possible.

6. Grading System

(If any changes are made to this part, then the Approved Course description must also be changed and sent through the approval process.)

(Mark with "X" in box below to show appropriate approved grading system – see last page of this template.)

Standard Grading System (GPA)

Competency Based Grading System

7. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College Calendar, Student Services or the College web site at <http://www.camosun.bc.ca>

STUDENT CONDUCT POLICY

There is a Student Conduct Policy. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, Registration, and on the College web site in the Policy Section.
<http://www.camosun.bc.ca/policies/policies.html>

A. GRADING SYSTEMS <http://www.camosun.bc.ca/policies/policies.php>

The following two grading systems are used at Camosun College:

1. Standard Grading System (GPA)

| Percentage | Grade | Description | Grade Point Equivalency |
|------------|-------|--------------------------------------|-------------------------|
| 90-100 | A+ | | 9 |
| 85-89 | A | | 8 |
| 80-84 | A- | | 7 |
| 77-79 | B+ | | 6 |
| 73-76 | B | | 5 |
| 70-72 | B- | | 4 |
| 65-69 | C+ | | 3 |
| 60-64 | C | | 2 |
| 50-59 | D | | 1 |
| 0-49 | F | Minimum level has not been achieved. | 0 |

2. Competency Based Grading System (Non GPA)

This grading system is based on satisfactory acquisition of defined skills or successful completion of the course learning outcomes

| Grade | Description |
|-------|---|
| COM | The student has met the goals, criteria, or competencies established for this course, practicum or field placement. |
| DST | The student has met and exceeded, above and beyond expectation, the goals, criteria, or competencies established for this course, practicum or field placement. |
| NC | The student has not met the goals, criteria or competencies established for this course, practicum or field placement. |

B. Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy at <http://www.camosun.bc.ca/policies/E-1.5.pdf> for information on conversion to final grades, and for additional information on student record and transcript notations.

| Temporary Grade | Description |
|-----------------|---|
| I | <i>Incomplete:</i> A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family. |
| IP | <i>In progress:</i> A temporary grade assigned for courses that are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course. |
| CW | <i>Compulsory Withdrawal:</i> A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement. |