# *ESE-3002 Project Preparation*

## Computer Studies

| Course Number: | Co-Requisites: | Pre-Requisites: |
|---|---|---|
| ESE-3002 | ESE-3005 and ESE-3014 and ESE-3025 | N/A |
| **Prepared by:** | Jay Nadeau, Outline Creator | |
| **Approved by:** | Chris Slade, Dean School of Business | |
| **Approval Date:** | Tuesday, May 26, 2020 | |
| **Approved for Academic Year:** | 2020-2021 | |
| **Normative Hours:** | 30.00 | |

## Course Description

This course prepares students for the work required in the Embedded Systems Design Project course. Students will work with faculty advisors and professors to obtain the guidance necessary to complete the project. Students will be shown the proper techniques used for performing research and project planning. Practical experience will be developed in setting goals, milestones and tracking project progress.

## Course Learning Outcomes/Course Objectives

1. **Review research processes and current state of the art practices for embedded systems technology.**
   - 1.1 Research Internet sources.
   - 1.2 Review technology literature sources.
   - 1.3 Apply the process of evaluating and choosing a hardware platform.
   - 1.4 Review the steps of a project proposal.
   - 1.5 Submit a project proposal.

2. **Work effectively in a team enviroment and complete required documentation.**
   - 2.1 Discuss a work breakdown structure.
   - 2.2 Explain critical path management.
   - 2.3 Review program evaluation techniques.
   - 2.4 Explain Gantt charts.
   - 2.5 Use project documentation.

3. **Use common Project Management Tools**
    - 3.1 Use project scheduling tools.
    - 3.2 Use project tracking tools.
    - 3.3 Use of resource assignment tools.
    - 3.4 Use a variety of collaboration software.

4. **Define common Project Implementation Methods.**
    - 4.1 Define project management implementation.
    - 4.2 Explain the the waterfall model.
    - 4.3 Discuss extreme programming.
    - 4.4 Explain test driven development.
    - 4.5 Explain agile project management.

5. **Explain the process of using a varity of testing and verification methods and plans.**
    - 5.1 Explaing the process of testing and test plans.
    - 5.2 Explain the process of verification and verification plans.
    - 5.3 Discuss the use of project retrospectives.

## Relationship to Vocational Learning Outcomes

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This course provides the opportunity for you to achieve the following Program Vocational Learning Outcomes (VLO) which will be taught and evaluated at an taught (T), assessed (A) or culminating peformance (CP) level:

**EMBT - Embedded Systems Engineering Design**

| | |
|---|---|
| VLO 1 | Select appropriate design tools to meet quality standards and customer requirements when developing embedded systems products. (T, A) |
| VLO 2 | Solve systems design problems through integration of hardware, software, sensors and actuators. (T, A) |
| VLO 3 | Design, develop, test, configure and maintain embedded systems. (T, A) |
| VLO 5 | Communicate effectively with diverse teams to disseminate ideas, requirements, implementations, findings and outcomes to complete embedded systems projects. (T, A) |

## Learning Resources

**a. Required**

None

**b. Supplemental**

None

## Student Evaluation

**Assignments (5 @ 20% each) - 100%**

Unit 1 Assignment = 20%
Unit 2 Assignment = 20%
Unit 3 Assignment = 20%
Unit 4 Assignment = 20%
Unit 5 Assigment = 20%

## Grade Scheme

The round off mathematical principle will be used. Percentages are converted to letter grades and grade points as follows:

| Mark (%) | Grade | Grade Point | Mark (%) | Grade | Grade Point |
|---|---|---|---|---|---|
| 94-100 | A+ | 4.0 | 67-69 | C+ | 2.3 |
| 87-93 | A | 3.7 | 63-66 | C | 2.0 |
| 80-86 | A- | 3.5 | 60-62 | C- | 1.7 |
| 77-79 | B+ | 3.2 | 50-59 | D | 1.0 |
| 73-76 | B | 3.0 | 0-49 | F | 0.0 |
| 70-72 | B- | 2.7 | | | |

## Prior Learning Assessment and Recognition

Students who wish to apply for prior learning assessment and recognition (PLAR) need to demonstrate competency at a post-secondary level in all of the course learning requirements outlined above. Evidence of learning achievement for PLAR candidates includes:

- Not Applicable: This course is not eligible for Prior Learning Assessment.

## Course Related Information

The course is designed primarily to deliver more emphasis on hands on experience assignments. Each assignment is designed to evaluate a single learning outcome.

## College Related Information

**Academic Integrity**

Lambton College is committed to high ethical standards in all academic activities within the College, including research, reporting and learning assessment (e.g. tests, lab reports, essays).
The cornerstone of academic integrity and professional reputation is principled conduct. All scholastic and academic activity must be free of all forms of academic dishonesty, including copying, plagiarism and cheating.

Lambton College will not tolerate any academic dishonesty, a position reflected in Lambton College policies. Students should be familiar with the Students Rights and Responsibilities Policy, located at lambtoncollege.ca. The policy states details concerning academic dishonesty and the penalties for dishonesty and unethical conduct.

Questions regarding this policy, or requests for additional clarification, should be directed to the Lambton College Student Success Department.

### Students with Disabilities

If you are a student with a disability please identify your needs to the professor and/or the Accessibility Centre so that support services can be arranged for you. You can do this by making an appointment at the Accessibility Centre or by arranging a personal interview with the professor to discuss your needs.

### Student Rights and Responsibility Policy

Acceptable behaviour in class is established by the instructor and is expected of all students. Any form of misbehaviour, harassment or violence will not be tolerated. Action will be taken as outlined in Lambton College policy.

### Date of Withdrawal without Academic Penalty

Please consult the Academic Regulations and Registrar's published dates.

### Waiver of Responsibility

Every attempt has been made to ensure the accuracy of this information as of the date of publication. The content may be modified, without notice, as deemed appropriate by the College.

Students should note policies may differ depending on the location of course offering. Please refer to campus location specific policies:

LAMBTON COLLEGE POLICIES – applicable to all Lambton College students.

- Student Rights & Responsibilities & Discipline policy (2000-5-1)
- Test & Exam Writing Protocol (2000-1-6)
- Evaluation of Students (2000-1-3)
- (https://www.lambtoncollege.ca/custom/Pages/Policies/Policies.aspx)

CESTAR COLLEGE:

- https://www.lambtoncollege.ca/Programs/International/Lambton_in_Toronto/Student_Policies/

QUEENS COLLEGE:

- https://www.lambtoncollege.ca/Programs/International/Lambton_in_Mississauga/Student_Policies/

Note: It is the student’s responsibility to retain course outlines for possible future use to support applications for transfer of credit to other educational institutions.