

# Course Outline

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**Course Title** Advanced Topics in Programming

**Course Code** PROG 2200

**Hours** 60

**Credits** 4

**Prerequisites** PROG 1400, SAAD 1001

**Co-Requisites**

**Conditions**

## Course Description

This course builds on the student's understanding of object-oriented design principles and introduces software design patterns upholding these principles. This course also includes development of network-aware applications and explores multi-threading and distributed application models.

## Rationale

Software developers are often faced with programming challenges that require abilities beyond basic programming skills. This course attempts to develop these abilities by covering advanced software development topics and having students apply these concepts.

## Learning Outcomes

Students are required to successfully complete each course outcome. In keeping with NSCC's approach to portfolio learning, students will have demonstrated the ability to:

1. Develop an application by researching and implementing design patterns to support object-oriented design principles.
2. Develop an application that implements a design pattern.
3. Design and develop an asynchronous application using multi-threading.
4. Devise software solutions to real-world problems described in scenario-based case studies.

## Grading

**The pass for this course is** 60%

## **Required Supplies**

Under Development

## **Other Learning Resources**

See your Instructor for details.

## **Other Information**

Not Applicable

## **Other Course Notes**

It is the responsibility of the student to review and understand all Nova Scotia Community College policies, most specifically the Student Community Standards, Academic Integrity, Student Appeals, Use of Copyright Materials, and Academic Accommodation policies. Policies directly applicable to students are referenced in the student handbook. The policies and procedures can be found on the College website: [Policies & procedures \(https://nsc.ca/policies/\)](https://nsc.ca/policies/)

If you have questions about policies and/or procedures, you are encouraged to ask Faculty, your Academic Chair or Staff at Student Services.

## **Workplan**

A workplan for this course is attached and will be reviewed by your faculty member(s) within the first week of class study.