

PROG 2200: ADVANCED OOP

History

1. Aug 3, 2022 by Amy Blagden (amy.blagden)
2. Jan 13, 2023 by Kristine Jacobsen (kristine.jacobsen)

Viewing: PROG 2200 : Advanced OOP

Last approved: Fri, 13 Jan 2023 09:13:28 GMT

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Change Type

Minor

Change Justification: Why is this change(s) necessary?

Redundant learning outcome removed

Change Impact: What is the impact of the change(s)?

No impact.

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Effective Term

Fall 2024(Term 1248)

Subject Area

PROG - Programming

Catalog Nbr

2200

Course ID

011590

Academic Organization

ITDATANALT - IT and Data Analytics

Academic Group

TEEN - School of Technology and Environment

Curriculum Consultant

Kristine Jacobsen

School Manager

Julia Brandwin-Glait

Other Course Development Team Members

Faculty/Subject Matter Expert(s)

Faculty/Subject Matter Expert(s)

Darren Andrews

Career

Credit

Title (Short)

Advanced OOP

Title (Long)

Advanced OOP

Line of Business
Line of Business

Core

Course Description

Advanced object-oriented programming (OOP) builds on the student's understanding of object-oriented concepts in a project-based learning environment. The course includes application of object-oriented design principles and the software design patterns upholding these principles. This course includes development of network-aware applications and uses approaches such as multi-threading and distributed application models.

Credits

1

Hours

60

Grading Basis

60% (GRD)

Pre-Requisite(s)

PROG 1400, SAAD 1001

Instruction Mode / Course Delivery Method

In person

Attendance Type

Class Meeting

Components

Components	Final Exam	Primary
Independent Study (IND)	Yes	No
Discussion (DIS)	Yes	Yes
Computer Lab (CMP)	Yes	No

Course Attributes

Attribute	Value
Category for ConEd course (CAT1)	Creative Industries (APPA&NW)
Primary Cat for ConEd/Mari crs (CAT0)	Computer (COMPUTER)

Post-Secondary Student Information System (PSIS) Course Data Requirements (Used by Institutional Research)
Delivered Under Contract

No

Retraining/Skills Upgrade

No

Brokered Course

No

Cost Recovery

No

Course 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.

Course Outcomes and Objectives

In keeping with NSCC's approach to portfolio learning, learners will have demonstrated the ability to:

Outcome

1. Develop an application utilizing custom-developed or third-party class libraries or frameworks.

In keeping with NSCC's approach to portfolio learning, learners will have demonstrated the ability to:

Outcome

2. Develop an application by selecting and utilizing appropriate design patterns to support object-oriented design principles.

In keeping with NSCC's approach to portfolio learning, learners will have demonstrated the ability to:

Outcome

3. Examine the structure of a distributed application by exploring a variety of distributed application models.

In keeping with NSCC's approach to portfolio learning, learners will have demonstrated the ability to:

Outcome

4. Develop asynchronous applications using multi-threading.

In keeping with NSCC's approach to portfolio learning, learners will have demonstrated the ability to:

Outcome

5. Devise software solutions to real-world problems described in scenario-based case studies.

Learning Outcomes Display (show only)

109: IT Programming (<https://www.nssc.ca/programadmin/?key=109>)

PLO 1: Use problem-solving techniques and systematic procedures to implement IT programming solutions.

PLO 2: Produce software to meet a technical specification.

PLO 3: Produce technical documentation to meet the steps of a software development process (requirements, design, implementation, testing).

PLO 4: Work within a programming development process such as Waterfall or Agile development.

PLO 5: Work within development platforms such as mobile, windows, and Web.

PLO 6: Work with programming languages such as Java, C++, Python, C#, PHP, JavaScript, and others.

PLO 7: Combine software programming with SQL databases, non-SQL databases, or object-oriented databases to create software solutions.

PLO 8: Create software in specific application areas making use of the appropriate Software Development Kits (SDKs) and software libraries.

PLO 9: Employ a version control tool (such as git) to manage software configurations.

PLO 10: Solve business problems by developing new software or extending off-the-shelf applications, within a software development process such as Waterfall or Agile

PLO 11: Integrate professional practices and skills into all projects, activities and communications in the context of an IT industry environment.

PLO 12: Demonstrate continuous professional improvement through reflection and modification of processes and approaches in relation to the IT industries.

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: <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.

Summary of Changes

Summary of Changes

Academic Year 2023-24

Learning Outcomes: revised

Key: 5542