

**DEPARTMENT OF SCIENCE
COURSE OUTLINE – WINTER 2026**

CS3860 (A3) Programming Paradigms 3 (3-0-3) 90 Hours for 15 weeks

Northwestern Polytechnic acknowledges that our campuses are located on Treaty 8 territory, the ancestral and present-day home to many diverse First Nations, Metis, and Inuit people. We are grateful to work, live and learn on the traditional territory of Duncan's First Nation, Horse Lake First Nation and Sturgeon Lake Cree Nation, who are the original caretakers of this land.

We acknowledge the history of this land and we are thankful for the opportunity to walk together in friendship, where we will encourage and promote positive change for present and future generations.

INSTRUCTOR: Franco Carlacci **PHONE:** 780-539-2091
OFFICE: C422 **E-MAIL:** fcarlacci@nwpolytech.ca
OFFICE HOURS: TBA

CALENDAR DESCRIPTION: A comparison of programming languages and their implementations. This course will survey the major types of programming languages. Topics include programming language paradigms (imperative, logic, functional and object-oriented), parameter passing, control structures, data types, typing mechanisms, binding rules, heap management, procedural languages, historical developments.

PREREQUISITE(S)/COREQUISITE: CS2010

REQUIRED TEXT/RESOURCE MATERIALS:

- No required texts. I will be using content from various OER resources.

DELIVERY MODE(S): Lecture/Lab/Seminar

LEARNING OUTCOMES:

Students successful in this course:

- will have learned the basic foundations and practical knowledge about functional, logic and other programming paradigms.
- will be able to think about and understand code utilizing the aforementioned programming paradigms.
- will be able to write code using the aforementioned paradigms using specific programming languages and libraries:

- will be able to learn more advanced topics related to the aforementioned paradigms, which build on the foundations taught in this class.
- will be able to learn other languages and libraries which conform to the learned programming paradigms.

TRANSFERABILITY: Please consult the Alberta Transfer Guide for more information. You may check to ensure the transferability of this course at the Alberta Transfer Guide main page <http://www.transferralberta.alberta.ca>.

**** Grade of D or D+ may not be acceptable for transfer to other post-secondary institutions. Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability**

EVALUATIONS:

| | |
|-------------|-----|
| Assignments | 20% |
| Quizzes | 20% |
| Midterm | 25% |
| Final Exam | 35% |

PLEASE READ THE FOLLOWING AND MAKE SURE YOU UNDERSTAND THAT:

- Late assignments will not be accepted. **I will be enforcing this rule with no exception.**
- All work must be submitted via myClass or in person ; no emailed assignments will be accepted.
- Once an assignment has been marked and a grade assigned, I will not be entertaining any request to re-mark it unless a mistake has been made by me.
- Exams will be written as scheduled. No rewrites will be given. If there is an excusable absence, the weighting of the missed exam will be added to the final exam weighting. If the absence is not excusable, a grade of 0% will be given. Absences due to a medical emergency must be supported by a physician's letter.

NOTE: YOU MUST GET A PASSING GRADE ON THE TESTING COMPONENT (IE. QUIZZES, MIDTERM, FINAL) OF COURSE FOR YOUR ASSIGNMENT MARKS TO COUNT TOWARDS YOUR FINAL GRADE. THIS MEANS THAT YOU MUST GET A MINIMUM OF 40 OUT OF 80 IN THE TESTING COMPONENT OF THE EVALUATIONS FOR YOUR ASSIGNMENTS TO COUNT TOWARDS YOUR FINAL GRADE

GRADING CRITERIA:

Please note that most universities will not accept your course for transfer credit **IF** your grade is **less than C-**.

| Alpha Grade | 4-point Equivalent | Percentage Guidelines | Alpha Grade | 4-point Equivalent | Percentage Guidelines |
|-------------|--------------------|-----------------------|-------------|--------------------|-----------------------|
| A+ | 4.0 | 95-100 | C+ | 2.3 | 67-69 |
| A | 4.0 | 85-94 | C | 2.0 | 63-66 |
| A- | 3.7 | 80-84 | C- | 1.7 | 60-62 |
| B+ | 3.3 | 77-79 | D+ | 1.3 | 55-59 |
| B | 3.0 | 73-76 | D | 1.0 | 50-54 |
| B- | 2.7 | 70-72 | F | 0.0 | 00-49 |

STUDENT RESPONSIBILITIES:

Regular attendance and participation (including homework) is required for the successful completion of this course. Assignments must be handed in on time, and quizzes/exams must be written on the days announced in class or on myClass. If an emergency prevents a student from writing a test/exam on the scheduled day, the student must contact the instructor **BEFORE** the test/exam to make other arrangements. Otherwise, the student will receive a zero grade for that component of the course.

Announcements will be sent via email from the myClass application, so students are responsible for checking for their NWP email regularly.

STATEMENT ON ACADEMIC MISCONDUCT:

Academic Misconduct will not be tolerated. For a more precise definition of academic misconduct and its consequences, refer to the Student Rights and Responsibilities policy available at <https://www.nwpolytech.ca/about/administration/policies/index.html>.

****Note:** all Academic and Administrative policies are available on the same page.

ADDITIONAL INFORMATION:

Attendance A student may be debarred from an examination when specific requirements are identified in the Course Outline and when the student’s performance does not meet the specified requirements. This usually happens when absences are more than four absences (2 weeks), or if significant assessments like exercises and exam(s) are not completed and submitted for grading before the deadlines published; see Final Examination Policy and Debarred from Examinations; <https://www.nwpolytech.ca/about/administration/policies/fetch.php?ID=37>