# Computer Science 3710: Vocational Languages
# Winter 2004

**Objectives (from the undergraduate handbook)**: To provide students with a working knowledge of a variety of high-level programming languages. When given a wide range of languages with which to solve a particular problem, the student will be able to choose the most appropriate language for implementing the solution. For the Winter 2004 semester, the languages that will be studied are C, C++, and Perl.

**Prerequisite**:

- Computer Science 2711 — Introduction to Algorithms and Data Structures

**Evaluation**:

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| Final examination | 50% | |
| Midterm examination | 30% | tentatively scheduled for February 18, 2004 (Wednesday) |
| Homework assignments | 20% | $\approx$ 9 assignments (roughly three per language / one per week) |

**Outline**:

- C – compiling and executing C programs, preprocessor, input/output, functions, pointers and arrays, dynamic memory allocation, structures, typedefs, standard library, multifile compilation, runtime stack, debugging.
- C++ – compiling and executing C++ programs, input/output, standard library, containers (`string`, `vector`, `list`, `map`), iterators, classes, constructors and destructors, encapsulation, templates, exceptions, inheritance, dynamic binding, object-oriented programming.
- Perl – executing Perl scripts, input/output, data types (scalars, lists, hashes), regular expressions, subroutines, file and directory management.

**Textbooks**:

- B.W. Kernighan, D.M. Ritchie, *The C Programming Language, $2^{nd}$ edition*, ISBN: 0-13-110362-8, March 1988, Prentice-Hall Canada Incorporated.
- A. Koenig, B.E. Moo, *Accelerated C++: Practical Programming by Example*, ISBN: 0-201-70353-X, August 2000, Addison Wesley Professional.
- R.L. Schwartz, T. Phoenix, *Learning Perl, $3^{rd}$ edition*, ISBN: 0-596-00132-0, July 2001, O'Reilly & Associates.

**Web Page**: `http://www.cs.mun.ca/~donald/comp3710/`

The following information will be available on the web page:

- A course diary which will provide details of the topics discussed during each lecture.
- The assignments and solutions.
- Office hours.
- Other general information related to the course including notices regarding class cancellations, clarifications of assignment questions, extensions of assignment deadlines, etc.

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