THE UNIVERSITY OF WINNIPEG

## Scientific Computing
### PHYS-2102-051 · ACS-2102-051
Winter 2020

**Course Information**

Meeting time: Thursdays, 6:00 PM – 9:00 PM
Room number: 2L14
Website: www.scicomp.ca

Contact information:

| | |
|---|---|
| Instructor | Dave Ostapchuk |
| Office | 2C32 |
| Phone | 204-786-9183 |
| Email | instructor@scicomp.ca |
| Office hours | Wednesdays, 12:30 PM – 1:30 PM |

Important dates:

| | |
|---|---|
| 9 Jan. 2020 | First class |
| TBD Feb. 2020 | Midterm test |
| 20 Feb. 2020 | No class (reading week) |
| 13 Mar. 2020 | Final day to withdraw without academic penalty |
| 2 Apr. 2020 | Last class |
| 9 Apr. 2020 | Final exam (6:00 PM) |

Please note that withdrawing before the VW date does not necessarily result in a fee refund.

**Course Material**

Required textbook/reading:

- K. N. King. *C Programming: A Modern Approach*, second edition. W. W. Norton, 2008. ISBN 978-0-393-97950-3.

**Evaluation Criteria**

Your final grade will be composed of the following components:

- Assignments 30%
  - Approximately one assignment per week.
  - Assignments must be submitted by the indicated due date.
  - Late assignments will not be accepted.
  - Assignments must by typed.
- Midterm test 30%
  - Calculators will not be permitted.
  - Photo-identification will not be asked for.
- Final exam 40%
  - Calculators will not be permitted.
  - Photo-identification will not be asked for.

The guidelines for conversion from numerical (percentage) grades to letter grades are as follows:

| Letter Grade | Percentage |
|:---:|:---:|
| A+ | 95–100 |
| A | 87–94 |
| A− | 80–86 |
| B+ | 74–79 |
| B | 67–73 |
| C+ | 61–66 |
| C | 53–60 |
| D | 50–52 |
| F | 0–49 |

Note that the above are guidelines and that final grades shall be approved by the Department Review Committee and may be subject to change.

**Topics to be Covered**

This course will introduce the C programming language and cover the following topics:

- C fundamentals
- Formatted input and output
- Operators and expressions
- Selection statements
- Loops
- Basic types
- Arrays
- Functions

- Program organization
- Pointers
- Strings
- The preprocessor
- Structures, unions, and enumerations
- The Standard Library
- File input and output
- Numerical analysis techniques

Not all topics will necessarily be covered.

**University of Winnipeg Regulations and Policies**

- Class cancellation

  - When it is necessary to cancel a class due to exceptional circumstances, I will make every effort to inform students via uwinnipeg email, as well as the Departmental Assistant and Chair/Dean so that class cancellation forms can be posted outside classrooms.

- Communication

  - Students are reminded that they have a responsibility to regularly check their uwinnipeg e-mail addresses to ensure timely receipt of correspondence from the university and/or their course instructors.

- Respectful Working and Learning Environment Policy

  - All students, faculty and staff have the right to participate, learn, and work in an environment that is free of harassment and discrimination. The UW Respectful Working and Learning Environment Policy may be found online at http://www.uwinnipeg.ca/respect/

- Religious holidays

  - Students may choose not to attend classes or write examinations on holy days of their religion, but they must notify their instructors at least two weeks in advance. Instructors will then provide opportunity for students to make up work examinations without penalty. A list of religious holidays can be found in the 2019-20 Undergraduate Academic Calendar.

- Appeals and misconduct

  - Students are encouraged to familiarize themselves with the Regulations and Policies found in the University Academic Calendar. Particular attention should be given to subsections 8 (Student Discipline), 9 (Senate Appeals), and 10 (Grade Appeals). Please note, in particular, the subsection of Student Discipline pertaining to plagiarism and other forms of cheating.

  - Students are encouraged to view the University of Winnipeg Library video tutorial "Avoiding Plagiarism".

  - Detailed information about misconduct policies and procedures can be found at the following links:
    * Academic Misconduct Policy
    * Academic Misconduct Procedure
    * Non-Academic Misconduct Policy
    * Non-Academic Misconduct Procedures

  - Uploading essays and other assignments to essay vendor or trader sites (filesharing sites that are known providers of essays for use by others who submit them to instructors as their own work) involves aiding and abetting plagiarism. Students who do this can be charged with Academic Misconduct.

- Copyright

    – Course materials are owned by the instructor who developed them. Examples of such materials are course outlines, assignment descriptions, lecture notes, test questions, and presentation slides. Students who upload these materials to filesharing sites, or in any other way share these materials with others outside the class without prior permission of the instructor/presenter, are in violation of copyright law and University policy. Students must also seek prior permission of the instructor /presenter before photographing or recording slides, presentations, lectures, and notes on the board.

**Accessibility Services**

Students with documented disabilities, temporary or chronic medical conditions, requiring academic accommodations for tests/exams (e.g., private space) or during lectures/laboratories (e.g., note-takers) are encouraged to contact Accessibility Services at 204-786-9771 or accessibilityservices@uwinnipeg.ca to discuss appropriate options. All information about a student's disability or medical condition remains confidential.

More information about Accessibility Services can be found online at http://www.uwinnipeg.ca/accessibility/