

# COSC 2P05 Programming Languages



### Instructor: Michael Winter, Office MCC J323, Office Hours: Mon & Thu, 11:00am - 01:00pm, email: mwinter@brocku.ca

| Course Overview                                     |                |                | Lectures  |  |
|---|----------------|----------------|---|--|
| Course Outline<br>Course Procedure<br>Course review |                |                | • Mon & Thu, 01:30pm-03:00pm, Fall 2023, TH325  |  |
| Lecture Notes                                       |                |                | Important Dates   |  |
| Week 1  | Week 2         |                | Mid-term test 1: Oct 16, 01:30pm-03:00pm, in class  |  |
| Week 4  | Week 5         | Week 6         | Mid-term test 2: Nov 13, 01:30pm-03:00pm, in class<br>Exam: Dec 14, 07:00pm-09:00pm, WCIBDS |  |
| Week 7  | Week 8         | Week 9         |   |  |
| Week 10   | <u>Week 11</u> | <u>Week 12</u> |   |  |

All Computer Science courses are subject to the rules and regulations of the University (as described in the <u>calendar</u>), the Faculty of Mathematics & Sciences and the <u>policies</u> of the Department of Computer Science.

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# COSC 2P05 Course Outline



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## **Calendar description**

Fundamental concepts of programming languages including syntax, semantics, program translation, virtual machines, control, data types, multi-threading, exception handling and abstraction mechanisms. Introduction to programming paradigms including imperative, applicative, logic and object-oriented.

Lectures, 3 hours per week.

Prerequisite: COSC 2P03 (minimum 60 percent).

#### **Course Outline**

| Week | Date          | Book/Chapt. | Topics  |
|------|---------------|-------------|---|
| 1    | Sep 07/11     | 1,2         | Introduction, Evolution of programming languages              |
| 2    | Sep 14/18     | 2           | Evolution of programming languages                            |
| 3    | Sep 21/25     | 5,6         | Names, Bindings, Scope, Data types                            |
| 4    | Sep 28/Oct 02 | 6,7         | Data types, Expressions and assignments                       |
| 5*   | Oct 05/16     | 8           | Control structures (Midterm 1)                                |
| 6    | Oct 19/23     | 9,10        | Subprograms   |
| 7    | Oct 26/30     | 11          | Abstract data type  |
| 8    | Nov 02/06     | 12          | Object-oriented languages                                     |
| 9    | Nov 09/13     | 13          | Concurrency (Midterm 2)                                       |
| 10   | Nov 16/20     | 15          | Functional programming languages                              |
| 11   | Nov 23/27     | 15, 16      | Functional programming languages, Logic programming languages |
| 12   | Nov 30/Dec 04 | 16          | Logic programming languages, Review                           |

\* Oct 09-13 is Reading Week.

## Texts

Sebesta, Robert W.: Concepts of Programming Languages (12th edition) Pearson, 2019, ISBN: 9780135102268

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# COSC 2P05 Course Procedures



### Instructor: Michael Winter, Office MCC J323, Office Hours: Mon & Thu, 11:00am - 01:00pm, email: mwinter@brocku.ca

### **Marking Scheme**

| Mid-term test 1 | 20% |
|-----------------|-----|
| Mid-term test 2 | 20% |
| Final Exam      | 60% |

### **Important Dates**

 Mid-term test 1:
 Oct 16, 01:30pm-03:00pm, in class

 Mid-term test 2:
 Nov 13, 01:30pm-03:00pm, in class

 Exam:
 Dec 14, 07:00pm-09:00pm, WCIBDS

#### Notes

- A mark of at least 40% on the final exam is required to achieve a passing grade in this course.
- Consideration regarding illness for assignment submission or test dates will only be considered if accompanied with the completed Departmental Medical Excuse form.

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