CURRICULUM GUIDE: OFFICIAL COURSE OUTLINE

Course Code	CPSC 112	Course Title	Introduction to Programming			
Credit Value	4	Department	Mathematics and Science			
No. of weeks	14	Hrs. per week	*Lecture*	*Tutorial*	*Laboratory*	*Total*
			3	0	2	5

Course Description	This course is intended for students who plan to major in Computer Science and offers an advanced introduction to programming. It focuses on data abstraction and object-oriented programming.
Prerequisite(s)	ENGL 098, CPSC 111

Initial Articulation Targets	*UBC*	*SFU*	*UVic*	*UNBC*	*TRU*
	CPSC 1st (3) Exempt UBCV CPSC 260	CMPT 125 (3) - Q	CSC 115 (1.5)	CPSC 101 (4)	COMP 1230 (3)
	For updated information on the transferability of this course, please consult the BC Transfer Guide, www.bctransferguide.ca				

Learning Outcomes	Upon successful completion of this course, the student will be able to: • Write programs using Java and object-oriented programming concepts such as classes, encapsulation, inheritance, and polymorphism. • Implement exception handling • Implement computing algorithms using data structures including m-dimensional arrays, linked lists, stacks, queues • Explain the benefits of reuse in software design • Explain the importance of abstraction and encapsulation • Explain the four software development activities • Explain how interpreters and compilers work
Content	**Core** topics – all of the following will be covered: Programming in Java: • Conditionals, Functions, Loops, Recursion, Arrays, Objects and Classes, Methods • Stacks, Queues, Linked Lists • Object-Oriented Design • Inheritance and Polymorphism • Abstract Data Types, Interfaces • Exception Handling and File I/O Additional topics may also be covered, at the discretion of the instructor: • Java FX and Event Driven Programming

Methods of Instruction	Lectures, assignments, computer laboratory work, projects, assigned reading, quizzes, examinations
Required Textbook(s)	The following textbook(s) is/are required, or approved equivalent(s). Lewis, John et al. Introduction to Program Design and Data Structures. 5th ed. Harlow, Essex: Pearson Education Limited, 2019. Print. Liang, Y D. Introduction to Java: Programming and Data Structures. 12th ed. New Jersey: Pearson Education Inc, 2019. Print.
Required Equipment and Technology	Students are required to have a computer with internet access. The following resources are provided by the College: • Office 365 • Student email
Homework Hours	At minimum, students can expect one hour of homework for every hour of instructional time.

Evaluation	Component	% Value
	Assignments and quizzes	10-20%
	Labs and projects	10-20%
	Midterm examinations (1-2)	20-40%
	Final examination	30-35%

Completion Requirements	The minimum grade to pass this course is D (50%). Unless otherwise stated, a minimum grade of C- (55%) is required for this course to fulfil a prerequisite.		
Course Designer(s)	Alexandra Fedorova, Simon Fraser University Tiko Kameda, Ph.D., Department of Computing Science, Simon Fraser University	Consultant(s), *if applicable*	
Dean's Approval	Barbara Moon, Ph.D., Dean of Arts and Sciences	Dean's Approval Date	October 9, 2007
Curriculum Committee Approval Date	October 9, 2007	First Term Offered	Spring 2008
Last Review Date	September 28, 2022	Next Review Date	September 28, 2027
Revision History	January 5, 2011-Title changed from "Introduction to Programming II: Data Abstraction" to "Introduction to Programming." August 2, 2014-Revised by Tiko Kameda, SFU September 28, 2022-Revision to some learning outcomes, content, textbook, assessments by Kelly Cheung.		