



The VIU community acknowledges and thanks the Snuneymuxw, Quw'utsun, Tla'amin, Snaw-naw-as and Qualicum First Nation on whose traditional lands we teach, learn, research, live and share knowledge.

Course Outline

Applications Programming
CSCI 112 (3 credits)
F26N01, F26N02

Calendar Description

An introduction to the use and customization of application packages. Includes macro programming as well as visual programming. (3:0:2)

Delivery Mode

Face-to-face

Contact hours

3 hours of lectures and 2 hours of lab per week, from September 10th to December 11th, 2026.

Prerequisites and Corequisites

None.

Course Motivation and Overview

This course is intended to give interested students an introduction to a variety of forms and levels of application programming: from the use of built-in environments in applications such as Excel, to independent development of small scale applications using visual environments such as Visual Basic for Applications. Time permitting, the course may include topics such as the extraction and manipulation of data from sources such as web sites and databases. Theoretical topics will be discussed in the lectures, while the weekly labs will guide the students through the use and application of the various tools, languages, and programming techniques. A more detailed topics list is included in the Topics section below.

Course Schedule

- Lectures: 13:00 – 14:30 Mondays and Wednesdays (Building 200 Room 105)
- Labs: 13:00 – 15:00 Thursdays for F26N01 (Building 315 Room 114),
and 15:00 – 17:00 Thursdays for F26N02 (Building 315 Room 114)

Course Topics and their tentative schedule

Dates and topics are approximate and are subject to change.

Dates	Topics
Week 1	Introduction • Computer literacy • Data literacy • Software and algorithms • Math models
Week 2	Introduction to Excel and applications programming
Week 3	Visual Basic for Applications (VBA) • Basics • Variables and data types • Human-computer communications
Week 4	VBA User Forms, Controls and Events
Week 5	Decisions
Week 6	Repetition
Week 7	More Repetition
Week 8	Midterm
Week 9	General Procedures
Week 10	Arrays, Additional Controls and Objects
Week 11	Managing files
Week 12	Databases
Week 13	Review

Instructor Info

Instructor name:	Huizhu Liu
Instructor VIU email address:	Huizhu.Liu@VIU.CA
Office Hours:	9:30 to 11:30, Mondays and Wednesdays
Office Location:	Building 315 Room 211

Learning Outcomes

Upon completing this course, students should be able to:

- Identify basic computer architecture/components and functionalities
- Extract and format data from various sources
- Use spreadsheet, especially Excel, to collect and store data
- Use spreadsheet formula to process data and establish simple models
- Design, implement and test VBA procedures to process data and build data models per specification
- Design user interface to collect user input effectively using VBA userform
- Write event-driven procedures to handle userform related tasks

Course Learning Materials

- Textbook: None
- Web material: some material will be made accessible online. Possible online material includes lecture notes, assignments, labs, sample programs, practice problems, and links to external documentation and tutorials.
- Software resources: we will be using the Microsoft Excel and Visual Basic for Applications (VBA).

Evaluation and Assessment

- About 7 to 10 Assignments -- 40%
- In-class Midterm -- 20%
- Final Exam -- 40%

Grade Conversion: The following grade scale will be used:

Percentage(%)	Letter Grade	Grade Point
90-100	A+	4.33
85-89	A	4.00
80-84	A-	3.67
76-79	B+	3.33
72-75	B	3.00
68-71	B-	2.67
64-67	C+	2.33
60-63	C	2.00
55-59	C-	1.67
50-54	D	1.00
0-49	F	0.00

Extra notes on evaluation and assessment:

- The instructor reserves the right to modify this grading scheme during the term as necessary.
- All the course works must be done by students individually and independently.
- To pass the course, your weighted exam average must be a passing mark.
- No late submissions unless they are approved by the instructor before the due date/time of the corresponding submission.
- You must be enrolled in, and fully participate in, the weekly lab sessions. During these sessions the students will apply the concepts discussed in lectures.
- If you miss a test, details of your absence may be shared with the S&T Dean's Office where it will be confidentially tracked. The Dean, or their designate, may reach out to you for more information related to your absence and to connect you with an appropriate student

Appeals of Grades:

Any exercise or examination grade may be appealed. However, the appeal must be made to the instructor, in writing and attached to the work in question, and within 7 days of the grade being made available to the class. The instructor reserves the right to re-grade the entire piece of work submitted on appeal, not necessarily just the component that the student believes is in error.

Resources

- [Link to Faculty website](#)
- [VIULearn](#)
- [Library](#)
- [Academic Advising](#)
- [Writing Centre](#)
- [Math Learning Centre](#)
- [Services for Aboriginal Students](#)
- [Counseling Services](#)
- [Accessibility](#)
- [Registration](#)
- [VIU Students' Union](#)

Accessibility

Vancouver Island University recognizes its legal duty to provide educational opportunities that enable students with a documented disability to access courses, programs, facilities, and services.

The Policy and Procedural Guidelines apply to all students who have identified themselves to the institution as having a documented disability who are inquiring about, applying to, or registered in credit or non-credit courses in both on and off-campus programs.

- [Policy 32.02 - Services Available to Students with a Documented Disability](#)

Academic Integrity

Integrity in academic work is a central element of learning and is the basis of intellectual pursuits in any academic community. It is also your responsibility to abide by the Student Conduct Code and Student Academic Code of Conduct.

- [Academic Integrity](#)



Links University Policies, Standards, and Guidelines

- [University Policies](#)
- [Freedom of Information and Protection of Privacy](#)
- [Student Conduct and Care \(SCC\)](#)
- [Student Academic Code of Conduct](#)
- [Student Affairs](#)
- [Academic Regulations](#)
- [Equity, Diversity, and Inclusion \(EDI\)](#)