**Excel VBA Programming Bridging Course**

COMP 1029V

1 Credit

Exclusion(s): COMP 1022Q, ISOM 3230

Prerequisite(s):  COMP 1021 OR COMP 1022P OR ISOM 3320

**Name:** Gibson Lam

**Email:** gibson@cse.ust.hk

**Course Description**

This course introduces the VBA programming language, in the context of Microsoft Excel. It is intended for students who already have some experience in computer programming but wish to learn how to apply those programming skills to VBA, within Excel. The course covers basic programming topics, such as variables, functions and loops, to more advanced topics. Appropriate features of the Excel program are also covered. Students explore these by self-learning of course materials together with guided programming exercises. Students without the prerequisites but possess relevant programming knowledge may seek instructor's approval for enrolling in the course. Graded P or F.

**List of Topics**

Introduction to Excel
- Introduction to Spreadsheets
- Cell References
- Cell Formulas
- Making Decisions in Cell Formulas

Getting Started with Excel VBA
- Making Macros
- Basic VBA Programming
- Making Decisions in VBA

Loops and Functions
- Common Excel VBA Objects
- Looping
- Functions and Subroutines

GUI and Recursion
- Introduction to GUI Handling
- Adding GUI Components
- Recursion

Object-Oriented Programming and Arrays
- Object Oriented Programming in VBA

- Array Indexing
- 2D Arrays

**Intended Learning Outcomes (ILOs)**

1. Define basic programming elements such as variables, loops and functions in VBA
2. Describe data structures and data abstraction in VBA
3. Implement advanced programming concepts in VBA
4. Design, write and debug computer programs in VBA

**Assessments:**

| Assessment Task | Contribution to Overall Course grade (%) |
| --- | --- |
| Online exercises | 50% |
| Final examination | 50% |

**Required Texts and Materials**

Reference book: Excel and Excel VBA Programming for Beginners – 3rd Edition for Office 2013

**Additional Resources**

Online course content to be published in HKUST canvas when the semester begins.