

ISOM3230: Business Programming in VBA

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LSK 4080

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Course goals

This course will provide students with skills and knowledge of business applications programming and experience in designing and developing business applications.

Learning outcomes

By the end of this course, students will be able to:

1. Utilize programming concepts to address business challenges
2. Explain the logic and flow of provided programs
3. Anticipate program outputs accurately
4. Formulate programs employing prevalent programming techniques
5. Recognize and rectify logical and runtime errors within programs

Course description

This course is tailored to equip students with a comprehensive understanding of programming, specifically focusing on programming for business applications. Through this course, students will delve into the rationale behind incorporating programming into their respective professions, the significance of constructing business applications, and the impact of these applications on business workflows. Additionally, they will explore the heightened utility and advantages that programming can bring to the realm of business applications.

Furthermore, students will become adept at grasping fundamental programming syntax and structure. They will gain the proficiency to construct rudimentary business applications utilizing high-level programming languages.

It's important to note that this course is centered around programming. Students are expected to engage with online resources independently to enhance their learning. Throughout the course, students will be tasked with researching VBA syntax through sources like Google, which might not be extensively covered in the course materials but are necessary for fulfilling course assignments and tasks.

Assessment scheme

Evaluation and grading constitute intrinsic components of any university course. Nevertheless, the most pivotal assessment lies in the students' self-evaluation. Did the course present novel and valuable concepts and skills? Did it prompt a shift in perspectives concerning oneself, collaborative work, and organizational dynamics? If such transformations occurred, the students' endeavors in the course have been truly meaningful.

The final grade distribution will be determined based on the following percentages, which will be used to evaluate the course objectives:

Components	Learning outcomes assessed	Percentage of the grade
A. Assignment (x2)	1, 2, 3, 4, 5	30%
B. In-class exercise (x2) (Individual)	1, 2, 3, 4, 5	16%
C. Final Exam	1, 2, 3, 4, 5	54%
TOTAL:		100%

A. Assignment (30%) (Individual and Group)

The aims of the assignments encompass the analysis and resolution of business predicaments through VBA utilization. There exist two assignments, designated as Assignment 1 and Assignment 2. The specifics of these assignments will be communicated at a subsequent point in the course.

Assignment 1 (Individual) - (10%)

This assignment is intended to be completed individually. Each student is expected to develop a VBA program that fulfills ALL the stipulated requirements outlined in the assignment.

Assignment 2 (Group) - (20%)

This assignment involves collaboration within a designated group (comprising 4-6 students). The task entails collectively crafting a VBA program that addresses ALL the specifications provided in the assignment. Furthermore, student groups are obliged to prepare a video presentation, limited to a maximum duration of 10 minutes, to accompany their submission.

(Important Note: Peer evaluation will be conducted subsequent to the deadline. Students are urged to ensure their contribution to the submitted assignment is equitable. Every case will be evaluated independently, with no option for appealing the decision.)

B. In-class Exercise (16%) (Individual)

Throughout the semester, there will be a total of THREE in-class exercises, all of which are intended to be individual efforts. These exercises provide students with an opportunity to apply their VBA programming skills and knowledge to address business challenges during class sessions. Towards the conclusion of the class, student responses will be collected and subjected to grading. It's important

to note that deductions arising from errors and the application of VBA will be determined at the grader's discretion. Each student will receive scores for THREE in-class exercises; however, only the two highest scores will contribute to the final grade. It's important to emphasize that there will be NO provision for makeup in-class exercises, regardless of the circumstances.

Kindly take note: Ensuring the proper functionality of MS Excel (Windows version) during in-class Exercises remains the responsibility of the student.

Late Submission Policy: Submissions after the designated time frame will result in a score of ZERO. Students may submit their work via Canvas or through email, addressed to both the instructor and TA. Failure to adhere to the specified submission guidelines will result in a 30% deduction from the awarded marks.

C. Final Exam (54%)

A comprehensive Final Exam will encompass **ALL topics** covered during the semester. Additional details will be furnished during the final class session.

Make-up exams will not be conducted except in cases of exceptional circumstances beyond a student's control, such as medical emergencies. Should an absence arise due to a medical emergency, students are required to submit relevant documentation issued by a registered medical practitioner to the course instructor via email. This submission is necessary to be eligible for potential consideration regarding a make-up exam. The format for the make-up exam will be in the form of an essay.

(Attention: Students who are eligible to take the make-up exam are required to compose a research article consisting of an introduction, references, proper citations, and other essential sections. This article must be completed within a few hours of its assignment. Please note that there will be **no opportunity for a second make-up exam** under any circumstances. Failing to submit the research article for any reason, such as email or internet issues, will result in a grade of ZERO for the exam.)

Use of generative AI

Students are permitted to utilize generative artificial intelligence (AI) tools exclusively for enhancing programming tasks within this course. Nonetheless, students are obligated to duly acknowledge and credit any employment of generative AI. In the context of producing video presentations, employing generative AI tools is strictly prohibited for students.

- Leveraging ChatGPT, individuals can effortlessly generate content devoid of grammatical errors. As a result, during assessment, we presuppose that the content is devoid of any grammatical blunders.
- During the grading process, our emphasis is on two key aspects: "Proficiency in VBA" and "Understanding of Business and User Requirements."
- We anticipate students to acquire coding skills by independently employing ChatGPT. For instance, when seeking additional practice and examples, ChatGPT can provide valuable assistance.

	ChatGPT only (Other generative AI tools are NOT allowed in this course)
In-class Exercise	✓ or ✗ (default)
Assignment	✓
Final Exam	✗
Lecture and Lab	✓
Outside the class (for learning)	✓ (highly recommended)

Grade appeal

Upon completion, all scores will be posted on Canvas. It is incumbent upon the student to review their scores and verify their accuracy. If any discrepancies arise, score appeals must be submitted via email to jkwok@ust.hk. It's important to note that score appeals will not be entertained once the designated checking/appeal period has elapsed (e.g., 36 hours subsequent to the score release) if applicable.

[In instances where a student is unable to check their paper within the stipulated checking period, the student's score will be deemed final by default. Regrettably, we won't be able to modify or rectify the score beyond the checking/appeal period.]

Efficient Email Communication Guidelines

To ensure prompt assistance, please include [**Course Code - LX**] (X being the section number), e.g., [**ISOM3230-L1**] at the start of your email's subject line. Neglecting this may lead to delays in our response time.

Anticipate a surge in email volume as deadlines approach. For timely support, address your queries ahead of time and utilize instructor and TA office hours.

Kindly note that **direct assignment answers won't be furnished by the instructor or TAs.** Your understanding and collaboration are appreciated.

Student learning resources

Text and Reference Books

No particular textbooks or reference books are mandatory for this course. The learning materials will comprise diverse readings accessible on Canvas.

Course Website

Course content updates and other pertinent information will be communicated through the course website - <http://canvas.ust.hk>. It is advisable for students to consistently monitor this platform throughout the semester.

Software requirements

- MS Excel 365 (Windows) or MS Excel 2019 (Windows)

Note: Mac users are required to use MS Excel (Windows version) during the class.

Course schedule

The course is offered in lecture session and laboratory session.

L1: Monday and Wednesday 10:30am – 11:50am, 04-Sep – 29-Nov

Venue: Rm 6602, Lift 31-32

L2: Monday and Wednesday 12:00pm – 1:20pm, 04-Sep – 29-Nov

Venue: Rm 6602, Lift 31-32

LA1: Thursday 1:30pm – 2:20pm

Venue: Room G021, LSK Bldg

LA2: Thursday 10:30am – 11:20am

Venue: Room G021, LSK Bldg

LA3: Wednesday 4:30pm – 5:20pm

Venue: Room G021, LSK Bldg

Tentative Course Schedule. Please visit Canvas for updated schedule, readings, and assignments.

Schedule of Lecture (Tentative)

Wk.	Date	No.	Lecture	Assignment Due/Remark
1	4-Sep	L01a	Intro. to Course, Intro. to Programming	
	6-Sep	L01b	Intro. to Business Applications	
2	11-Sep	L02a	Practice: Business Applications	Add/Drop deadline: 14 Sep
	13-Sep	L02b	Macro Recording	
3	18-Sep	L03a	Variables and IO	
	20-Sep	L03b	OOP, Workbooks, and Worksheets	
4	25-Sep	L04a	Ranges	
	27-Sep	L04b	Ranges	
5	2-Oct		No class: The day following National Day	
	4-Oct	L05a	If-then-else and select-case 1	
6	9-Oct	L06a	If-then-else and select-case 2	
	11-Oct	L06b	[In-class Exercise 1]	
7	16-Oct	L07a	Looping 1	Asg. 1 Release on 16 Oct
	18-Oct	L07b	Looping 2	
8	23-Oct		No class: Chung Yeung Festival	
	25-Oct	L08a	Methods 1	
9	30-Oct	L09a	Methods 2	Asg. 1 Due on 31 Oct
	1-Nov	L09b	Methods 3 + Business Application	
10	6-Nov	L10a	Userform	Asg. 2 Release on 6 Nov
	8-Nov	L10b	[In-class Exercise 2]	
11	13-Nov	L11a	Business Application 1	
	15-Nov	L11b	Business Application 2	
12	20-Nov	L12a	[In-class Exercise 3]	

	22-Nov	L12b	Formula Implementation	
13	27-Nov	L13a	Business Applications 3	Asg. 2 Due on 28 Nov
	29-Nov	L13b	Asg. 2 Presentation	

Schedule of Laboratory (Tentative)

Wk.	LA1, LA2	LA3	No.	Topics
1	7-Sep	6-Sep	LA01	Intro to Excel (Win and Mac) / ChatGPT
2	14-Sep	13-Sep	LA02	Basic VBA program
3	21-Sep	20-Sep	LA03	Variables, Data, Buttons, and IO
4	28-Sep	27-Sep	LA04	Workbooks and Worksheets
5	5-Oct	4-Oct	LA05	Ranges
6	12-Oct	11-Oct	LA06	If-then-else and select-case
7	19-Oct	18-Oct	LA07	Looping
8	26-Oct	25-Oct	LA08	Methods
9	2-Nov	1-Nov	LA09	Userform
10	9-Nov	8-Nov	LA10	Business Applications
11	16-Nov	15-Nov	LA11	Business Applications
12	23-Nov	22-Nov	LA12	Business Applications
13	30-Nov	29-Nov	LA13	Business Applications

Office Hours and Contact Information

Prof. Kwok's office is located in room LSK4080, and he extends a warm invitation for you to visit during his office hours or at your convenience for any queries you may have. For urgent concerns, feel free to reach out via email (jkwok@ust.hk) or phone (2358-7652); however, he does emphasize that email is the preferred mode of communication as he frequently monitors it. Additionally, the Teaching Assistant (TA) assigned to this course is available to address inquiries related to grading, attendance, assignments, and any administrative matters.

Academic honesty

Upholding academic integrity stands as a fundamental principle within our university community. Any breach of integrity undermines the foundation of our learning environment and the essence of inquiry that is vital for the institution's effectiveness. I maintain a zero-tolerance stance towards cheating, and no exceptions will be entertained. Students found engaging in acts of cheating, plagiarism, or any form of academic dishonesty will face a reduction of their course grade by a minimum of one letter grade. Moreover, it is my responsibility to report any instances of unethical conduct or indications of dishonesty in this course to the University.

Please bear in mind the current university regulation: any occurrence of cheating, irrespective of its magnitude, will result in an "X" grade notation on the student's academic record, signifying that the grade was attained through dishonest means. This "X" grade will persist on the student's record until graduation. Should a student be caught cheating again and subsequently receive another "X" grade, they will be dismissed from the University.

Plagiarism encompasses the act of copying text or ideas from external sources without appropriate citation. Even if you rephrase the concept using your own words, citing the origin is necessary when utilizing someone else's idea. It is imperative to exercise extreme caution to prevent presenting someone else's work as your own. Proper citations are obligatory when incorporating external sources' ideas, arguments, or any content. Whether drawing from research or the Internet, it is mandatory to acknowledge the source, even if you employ the general notion rather than verbatim wording.

Learning environment

I wholeheartedly embrace feedback on my teaching during the entirety of the semester. I strongly encourage you to reach out to me or my TA whenever you have questions, suggestions, concerns, or if you seek advice. Your input is valued and will contribute to enhancing the learning experience. Feel free to contact us at your convenience.