

# SULTAN QABOOS UNIVERSITY COURSE OUTLINE PROGRAM: INTRODUCTORY PROGRAMING COURSE

1. Course Code		COMP2105	COMP2105			
2. Course Title		Introduction	Introduction to Problem Solving with Visual Basic			
3. Credits		3	3			
4. Pre-requisite	Course(s)	COMP2101				
5. Co-requisite	Course(s)	None				
6. Equivalent C	ourse(s)	None	None			
7. Incompatible	e Course(s)					
8. Course Categ	gory	Department 1	Elective			
9. Course Owne	er	College: Scie	nce	Depart	Department: Computer Science	
10. Course Type		Lecture/Lab				
11. Language of	Instruction	English				
12. Course Descr	ription					
This course provides the necessary intermediate level programming skills and knowledge for developing windows-based applications using Visual Basic programming environment. Students will learn how to write event-driven programs, create stand-alone applications and build effective user interfaces.						
13. Teaching/Learning Strategies The theory part is delivered during the lectures and student programming skills are developed during the lab sessions. Moodle is used as an online platform to support student learning						
14. Assessment C	Components and Weig	ht [%]	<u>C</u>			
Home works 10%	Lab Exercises 5%	Project 5%	Midterm Exam 15%		Quiz 5%	
Lab Test 20%	Lab Test 20%			Final Exam 40%		
15. Grading Method: A-F Scale						
<ul> <li>16. Department's Late Submission Policy:</li> <li>a. 1-24 hours: 25 % of the marks will be deducted.</li> <li>b. &gt; 24 hours: Not accepted.</li> <li>It is up to the instructor to give extension to all students if deemed needed.</li> </ul>						
<ul><li>17. Textbook(s) and Supplemental Material:</li><li>1. An Introduction to Programming Using Visual Basic 2010, 8th Ed., David I. Schneider.</li></ul>						

MATCHING COURSE OBJECTIVES WITH PROGRAM OUTCOMES AND SQU GRADUATE ATTRIBUTES						
	SQU Graduate Attributes					
A. SQU graduates should be able to:	B. SQU graduates possess	C. SQU graduates should				
<ol> <li>apply the knowledge and skills relevant to the specialization</li> <li>communicate effectively and use information and communication technologies</li> <li>critically analyze complex information and present it in simple clear manner</li> </ol>	<ol> <li>interpersonal communication skills and alignment with culture of international labor market to assist them in practical life and in living successfully</li> <li>skills and motivation for independent learning and engagement in lifelong learning and research</li> <li>work ethics and positive values, and intellectual independence and autonomy</li> </ol>	Relish good citizenship qualities, be conscious of their national identity and be socially responsible, engage in community affairs and be mindful of contemporary issues.				
	4. teamwork skills and display potential leadership qualities					

#	Intended Student Learning Outcome /Course Learning Objective	Relevant Student Outcome(s)	Applicable Attribute(s)
1.	Use Visual Basic environment to create windows–based applications.	SO6	A-1
2.	Design algorithms to solve problems using pseudo code and flowcharts.	SO1, SO2	A-1
3.	Break down a problem into distinct tasks.	SO1, SO2	A-1
4.	Understand how to translate an algorithm into a Visual Basic program.	SO1, SO2	A-1
5.	Understand Visual Basic memory concepts, operators, and data types.	SO6	A-1
6.	Understand Visual Basic selection and repetition control structures.	S01, SO2 and S06	A-1
7.	Use functions and sub-procedures in program development.	S01, SO2 and S06	A-1
8.	Create and use sequential files	S01, SO2 and S06	A-1
9.	Understand database connectivity using Visual Basic.	S01, SO2 and S06	A-1
10.	Understand basic query language statements and their usage in Visual Basic applications.	S01, SO2 and S06	A-1
11.	Apply problem solving strategy and programming skill in developing a complete project.	S01, SO2 and S06	A-1

#### **18. Student Responsibilities**

It is the student's responsibility to know and comply with all University Academic Regulations relevant to participation in this course. These regulations specifically include attendance requirement and students` academic code of conduct.

For attendance, it is the student's responsibility to be punctual and to attend all classes.

Students are expected to perform their work with honesty and avoid any academic misconduct, which is defined as the use of any dishonest or deceitful means to gain some academic advantage or benefit. This can take many forms, including but not limited to, the following: copying, plagiarism, collusion and forging documents. For full details, please refer to the Undergraduate Academic Regulations and to the Student Academic Misconduct Policy.

#### **19. Department's Policy for Dealing with Cheating:**

It is essential that each student solves all programming assignments, lab tests and exams individually unless instructed otherwise, e.g., for group projects. Copying, plagiarism, collusion, switching, and falsification are violations of the university academic regulations. Students involved in such acts will be severely penalized. The department has adopted a firm policy on this issue. A zero mark will be given for the first time a student is caught involved in copying and his/her name will be added to a watch list maintained by the Head of Department. Further repeated involvements in copying will cause the student to get an F grade in that course. This is in line with the university academic regulations.

## 20. Department's Grading Scheme:

Grade	A	A-	B+	В	B-	C+	С	C-	D+	D	F
Score	≥90	≥87	≥84	≥80	≥77	≥73	≥68	≥64	≥ 58	≥ 50	< 50

COURSE INFORMATION				
Course Code: COMP2105	Course Title: Introduction to Problem Solving with Visual Basic			
Semester/ Year: Spring2023	Section(s): 10/11			
Day, Time, and Place: Monday 12:00 – 13:50, SCI/Lab 18 - Wednesday 12:00 - 13:50, SCI/Lab18				
Course Coordinator: Mr Mohammed Sajeed				
Office Location: Office No. 0231, CS Dept.	Office Hours: Monday and Wednesday 10:00 AM to 11:AM			
Office Tel. Ext.: 2223	Email: sajeed@squ.edu.om			

TENTATIVE SCHEDULE				
Week	Topic/Material to be covered	Assessment		
1	Chapter1: Introduction to Computer and Problem Solving Introduction to programming and Visual Basic. Program development cycle.	Quiz and Final Exam		
2	Chapter 2: Introduction to Visual Basic 2010, Visual Basic Controls, Visual Basic Events	Midterm Lab test Quiz and Final Exam		
3	Chapter 3: Variables, Visual Basic Data Types, Input and Output	Home Works, Quiz, Lab Test, Midterm and Final Exam		
4	Chapter 4: Decision Relational and Logical Operators, if Blocks, Select Case Blocks, Input visa user selection	Home Works, Quiz, Lab Test, Midterm and Final Exam		
5	Chapter 6: Repetition Do Loops, ForNext Loops, List Boxes and Loops	Home Works, Lab Test, Midterm and Final Exam		
6	Chapter 5: General Procedures Function Procedures, Sub Procedures.	Home Works, Lab Test, Midterm and Final Exam		
7	Chapter 5: General Procedures (Contd.) Modular Design.	Home Works, Lab Test, Midterm and Final Exam		
8	Chapter 7: Arrays Creating and accessing arrays, Using arrays, Sorting and searching, Array of structures	Home Works, Lab Test, Midterm and Final Exam		
9	Chapter 7: Arrays (Contd.) Two- Dimensional array	Home Works, Lab Test, and Final Exam		
10	Chapter 8: Files Sequential files, Using Sequential Files	Home Work3, Lab Test and Final Exam		
11	Chapter 8 : Files (Contd.) File operations (Add, Modify and Delete),	Home Work4, Lab Test and Final Exam		
12	Chapter 9: Additional Objects and Controls Additional Objects and Control	Home Work4, Lab Test and Final Exam		
13	.Chapter 9: Additional Objects and Controls Graphical Display of Data.	Final Exam		
14	Chapter 10: Database Management Introduction to databases, Relational databases and SQL.	Final Exam		
15	Chapter 10: Database Management Data-Bound Control	Final Exam		

### **APPENDIX: ADDITIONAL INFORMATION**

Assessment Plan: Item	Date Out	Due Date	v	Weights	
Weekly Lab Exercise	 2S			5%	
Homework 1	Week 3 / Sun W	/eek 5/Sat		2.5%	
Homework 2	Week 6 / Sun	Week 9 /Sat		2.5%	
Homework 3	Week 10 / Sun	Week 12 /Sa	nt	2.5%	
Homework 4	Week 13 / Sun	Week 15/Su	n	2.5%	
Quiz (Online)	Week 6/Thursday	9/3/23	6:00PM to 7:30 PM	5%	
Midterm	Week 9 / Wednesday	29/3/23		15%	
<b>Project Submission</b>	Week 13/ Saturday	26/4/23	Time 23:55	5%	
Lab Test	Week 14/ Thursday	3/5/23		20%	
Final Exam	Week 16/ Sunday	14/523	3:00PM to 6:00PM	40%	

List of Program Student Outcomes (SOs) Enabled in this Course

SO1: Analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify possible solutions.

SO2: Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.

SO6: Apply computer science theory and software development fundamentals to produce computing-based solutions.