هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

2023
TP-153

Course Specification
(Bachelor)

Course Title:	Visual Programming
Course Code:	CSC 1404
Program:	Bachelor in Computer Science
Department:	Computer Science
College:	Computers and Information Technology
Institution:	University of Tabuk
Version:	1.0
Last Revision Date:	27 July 2022

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: (3 hours)					
2. Course type					
A.	☐University	☐College	☒ Department	☐Track	☐Others
B.	☐ Required		☒ Elective		
3. Level/year at which this course is offered: (Level 7,8/ Year 4)					
4. Course general Description:					
This course introduces advanced programming topics including GUI Programming comprise GUI basics, event-driven programming, GUI controls and Database connection.					
5. Pre-requirements for this course (if any)**:**					
Database systems - CIT1305					
6. Co-requisites for this course (if any)**:**					
N/A					
7. Course Main Objective(s):					
• **To be able to create Graphical User Interfaces programs.** • **Understand the architecture of GUI Programming.** • **Recognize and arrange control structures.** • **Design and implement systems that are easily extensible and maintainable.** • **Students prepare various projects by helping visual programming.** • **To be able to create database-based applications.** • **To be able to create reports.**					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	45	100%
2	E-learning	-	-
3	Hybrid • Traditional classroom • E-learning	-	-

No	Mode of Instruction	Contact Hours	Percentage
4	Distance learning	-	-

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	45
2.	**Laboratory/Studio**	-
3.	**Field**	-
4.	**Tutorial**	-
5.	**Others (specify)**	-
Total		45

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	**Identify the principles of GUI interfaces for a computer program to interact with users, and to understand the event-based GUI handling principles.**	K1, K2, K3	• **Lectures** • **Class discussions**	• **Exams** • **Class works** • **Assignments**
1.2	**Describe the concepts of GUI to software design**	K1, K2, K3	• **Lectures** • **Class discussions**	• **Exams** • **Class works** • **Assignments**
1.3	**Recognize the requirements of the problems in programming.**	K2,K3,K4	• **Lectures** • **Class discussions**	• **Exams** • **Class works** • **Assignments**
1.4	**Identify the components of algorithmic solutions such as inputs, outputs, variables, types, data structures,**	K2,K3,K4	• **Lectures** • **Class discussions** • **Lab discussions**	• **Exams** • **Class works** • **Assignments** • **Lab works**

Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
	processes, decisions, and loops			
2.0	**Skills**			
2.1	**Apply the Visual Studio.NET Application Programming Interface (API) classes and methods to create GUI classes with event handling.**	S2, S3, S4	• **Lectures** • **Class discussions**	• **Exams** • **Class works** • **Assignments**
2.2	**Design problems as steps so as to be solved systematically**	S2, S3, S4	• **Lectures** • **Class discussions**	• **Exams** • **Class works** • **Assignments**
3.0	**Values, autonomy, and responsibility**			
3.1	**Communicate and work (effectively, ethically, and professionally) (individually and in groups/teamwork) to accomplish all the assigned duties and projects.**	V2	• **Class discussions**	• **Project**

C. Course Content

No	List of Topics	Contact Hours
1.	**Introducing the Microsoft .NET Platform Visual Studio.NET IDE (part 1):** Introduction, Visual Studio .NET (IDE) Overview, Installation, Menu Bar and Toolbar, Visual Studio .NET Windows, Solution Explorer	3
2.	**Introducing the Microsoft .NET Platform Visual Studio.NET IDE (part 2):** Properties Window, Using Help, Customizing Form, Reset Window Layout, open project, saving project.r	3
3.	**Introducing the Microsoft .NET Platform Visual Studio.NET IDE (part 3):** Simple Program: Create a Simple Program that Displays Text and an Image, Programmatically Displaying Text in a Label (TextBox and PictureBox), Controls' Naming Conventions	3
4.	**Graphical User Interface Concepts (Part 1):** Introduction, Windows Forms, Event-Handling Model, Basic Event Handling, Labels, TextBoxes, Buttons,	3

	Addition program, Comparing two integers with the equality and relational operators, Welcome page, Login page	
5.	**Graphical User Interface Concepts (Part 2):** ListBox Control, Class Average Problem, Exam Analysis Problem, Formatting string, Dates and Times, Class Average Problem, Exam Analysis Problem	3
6.	**Graphical User Interface Concepts (Part 3):** Multiple Forms, Accessing Controls on Different Forms – Labels, Buttons and ListBoxes, Checkbox Control, Dental Payment Calculator	3
7.	**Graphical User Interface Concepts (Part 4):** GroupBoxes and Panels, RadioButton, ComboBox	3
8.	**Graphical User Interface Concepts (Part 5):** DateTimePicker Control, ProgressBar Control	3
9.	**Graphical User Interface Concepts (Part 6):** Validating for Letters only (1), Validating for Letters only (2), Check for uppercase letter and Validate an email address.	3
10.	**Graphical User Interface Concepts (Part 6):** Checked ListBox Control, ScrollBars Control, TreeViews, ListViews	3
11.	**Graphical User Interface Concepts (Part 7):** Color Dialog Box, Font Dialog Box, OpenFile Dialog Box, Print Dialog Box and Tab Control, Menu Control	3
12.	**Graphical User Interface Concepts (Part 8):** send Email and Multiple Document Interface (MDI) Windows.	3
13.	**Database Connectivity (Part 1):** review of Database technology, install SQL server and Install Microsoft SQL server Management Studio.	3
14.	**Database Connectivity (Part 2):** create Database, connect to server, insert into table, update, delete and query. Create reports.	3
15.	**Database Connectivity (Part 3):** create Database, connect to server, insert into table, update, delete and query. Create reports.	3
Total		**45**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Class Works (Class Activities, *Quizzes*, Homework)	1 – 13	20%
2.	Mid-Term Exams	6,12	20%
3.	Project	4, 8	30%
4.	Final Exam	17	30%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	**Visual C# How to Program, Paul Deitel and Harvey Deitel, Pearson, 6th edition, 2016, ISBN 978-0134601540**
Supportive References	**1) Intro to Java Programming, Comprehensive Version, Y. Daniel Liang, Pearson, 12rd edition, 2019, ISBN 978-0136520153** **2) C++ How to Program, Harvey M. Deitel and Paul J. Deitel, Pearson, 10th edition, 2016, , ASIN: 0134448235** **3) Programming Languages Academy, Python for Beginners: 2 Books in 1: Python Programming for Beginners, Independently published, 2020, ISBN-10 : 1654414018, ISBN-13 : 978-1654414016**
Electronic Materials	**Saudi Digital Library (SDL) (www.sdl.edu.sa)**
Other Learning Materials	**1) Java How to Program, Late Objects, Paul Deitel and Harvey Deitel, Pearson, 11rd edition, 2017, ISBN 978-0134791401** **2) Java 9 for Programmers, Paul Deitel and Harvey Deitel, Pearson, 4rd edition, 2017, ASIN: B071S84XCK**

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	**Classroom (25 seats)**
Technology equipment (projector, smart board, software)	**White board, Data show projector**
Other equipment (depending on the nature of the specialty)	**N/A**

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of Teaching	Faculty, Program Leaders, and Advisory Board	Both Direct and Indirect
	Students	Indirect
Effectiveness of Students Assessment	Faculty, Program Leaders, Advisory Board, and Independent Opinion	Both Direct and Indirect
Quality of Learning Resources	Faculty, Students, and Advisory Board	Indirect
The Extent to which CLOs have been Achieved	Faculty, Program Leaders, Advisory Board, and Independent Opinion	Direct (as in section B) and Indirect/Surveys
	Students	Indirect

Assessment Areas/Issues	Assessor	Assessment Methods
Other	-	-

Assessors (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	
REFERENCE NO.	
DATE	