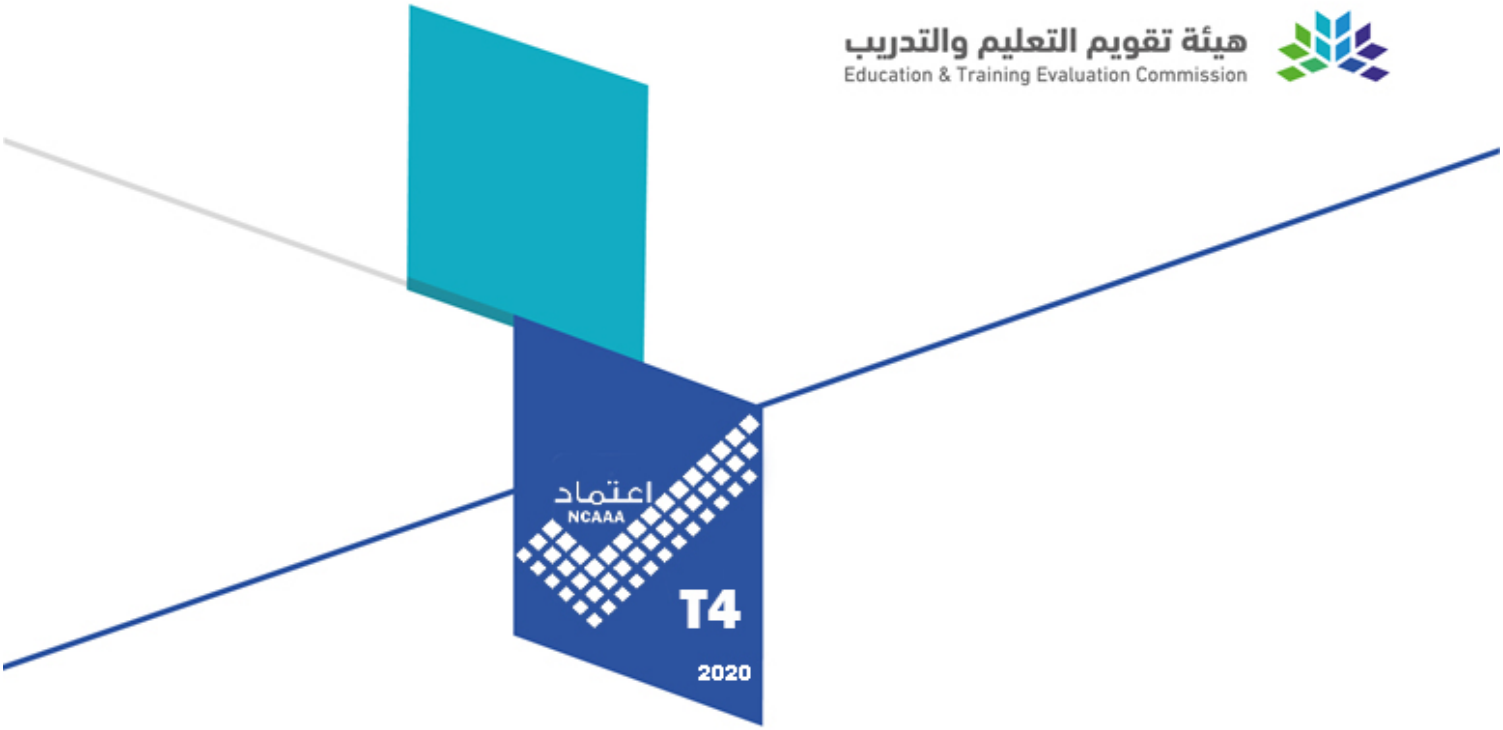
هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission



Course Specifications

Course Title:	Advanced Applications Programming
Course Code:	BSCS 4390
Program:	Computer Science
Department:	Computer Science
College:	Hekma School of Engineering, Computing and Informatics
Institution:	Dar Al-Hekma University

Table of Contents

A. Course Identification

1. Credit hours: 3 (2,2)
2. Course type **a.** University [ ] College [ ] Department [x] Others [ ] **b.** Required [x] Elective [ ]
3. Level/year at which this course is offered: 4nd year, 1st semester
4. Pre-requisites for this course (if any)**:** BSCS 2355 Object Oriented Programming
5. Co-requisites for this course (if any)**:** None

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	60	100%
2	**Blended**		
3	**E-learning**		
4	**Distance learning**		
5	**Other**		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	30
2	**Laboratory/Studio**	30
3	**Tutorial**	
4	**Others** (specify)	
	Total	60

B. Course Objectives and Learning Outcomes

1. Course Description

This course introduces the theory, design, techniques, practices, and languages used to develop software systems and applications with a focus on web-based client-server applications and mobile applications. It covers several advanced applications development environments including web development programming using HyperText Markup Language (HTML), Cascading Style Sheets (CSS), server database management technology such as Active Server Page (ASP), and cross-platform development. The course also emphasizes the development, design, and building of a variety of apps to reinforce learning and to develop real competency. Students are introduced to Object-Oriented programming techniques and Graphical User Interfaces (GUIs) using the C# programming language and then apply the skills to implement windows or web applications.

2. Course Main Objective

This course aims to help students developing software systems and applications for the internet, with a focus on web-based client-server applications and mobile applications. It covers several advanced applications development environments including web development programming using HyperText Markup Language (HTML), Cascading Style Sheets (CSS), server database management technology such as Active Server Page (ASP), and cross-platform development. The course also emphasizes the development, design, and building of a variety of apps to reinforce learning and to develop real competency. Students are introduced to Object-Oriented programming techniques and Graphical User Interfaces (GUIs) using the C# programming language and then apply the skills to implement windows or web applications.

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	**Knowledge and Understanding:**	
1.1	Identify the differences between web-based client server applications and mobile applications.	6
2	**Skills :**	
2.1	Design a website with appropriate security measures using HTML, CSS, and web services.	6
2.2	Implement mobile application development of major mobile operating system platforms.	6
2.3	Develop solutions for given problems using C#.	6
2.4	Implement CSS animation properties in web pages.	6
2.5	Apply server database management technologies such as Active Server Page (ASP) and cross-platform development.	6
2.6	Develop applications with a graphical User Interface (GUI) using C#.	6
3	**Values:**	
3.1	Implement a fully functioning project in teams.	5

C. Course Content

No	List of Topics	Contact Hours
1	Web-based client server applications vs. mobile applications	4
2	Hyper Text Markup Language (HTML)	6
3	Cascading Style Sheets (CSS)	2
4	C#	32
5	Active Server Page (ASP)	8
6	Mobile Application Development	8
Total		60

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding:**		

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.1	Identify the differences between web-based client server applications and mobile applications.	• Lectures • Labs	• Quizzes • Assignments • Exams
2.0	**Skills**		
2.1	Design a website with appropriate security measures using HTML, CSS, and web services.	• Lectures • Labs	• Quizzes • Assignments • Exams
2.2	Examine mobile application development of major mobile operating system platforms for both smartphones and tablets.	• Lectures • Labs	• Quizzes • Assignments • Exams
2.3	Develop solutions for given problems using C#.	• Lectures • Labs	• Quizzes • Assignments • Exams
2.4	Implement CSS animation properties in web pages.	• External Videos	• Assignments
2.5	Apply server database management technologies such as Active Server Page (ASP) and cross-platform development.	• Lectures • Labs	• Quizzes • Assignments • Exams
2.6	Develop applications with a graphical User Interface (GUI) using C#.	• Lectures • Labs	• Quizzes • Assignments • Exams
3.0	**Values**		
3.1	Implement a fully functioning project in teams	• Lectures • Labs	• Project
3.2			
…			

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Quiz 1	6th	10
2	Assignment 1	6th	7.5
3	Assignment 2	12th	7.5
4	Quiz 2	12th	10
5	Assignment 3	15th	10
6	Labs		10
7	Project	16th	15
8	Final	17th	30

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice:

Full time faculty are required to have a minimum of 10 office hours per week on campus. Usually, the time allotted to student exceeds this amount since faculty are always available to students as required.

Part time faculty are required to have a minimum of one office hour per week on campus for each course. The faculty is also available through email and Blackboard messaging system.

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	Niederst, R. J. (2018). *Learning web design: A beginner's guide to HTML, CSS, Javascript, and web graphics*. Sebastopol, CA : O'Reilly ISBN: 9781491960202 Deitel, P. J. (2017). *Visual C# how to program*. Boston: Deitel & Associates. ISBN: 978-0134601540
Essential References Materials	
Electronic Materials	
Other Learning Materials	

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Classrooms and labs
Technology Resources (AV, data show, Smart Board, software, etc.)	Personal computers with: • programming language software: C#. • A web browser • A text editor Integrated Development Environment such as: Visual Studio
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Course Indirect Assessment (ABET): the instructor collects valuable feedback regarding the course CLOs	Students	Course Survey, indirect

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Student course evaluations: The university collects valuable feedback from the student course evaluation which is completed at the end of the semester for each course.	Students	University Survey, indirect
Other surveys: The University gathers several surveys measuring teaching effectiveness; this includes Student Satisfaction Survey and Graduating Senior Survey which are both held every year.	Students	Questionnaire, indirect
Peer & department chair visits and evaluations	Faculty members	Visits & evaluation form, indirect
Performance management KPIs annual assessment	Quality Assurance Office	Forms, direct
Course reports	Faculty Members	Forms, direct
Annual program reports	Program Director	Forms, direct
External evaluation for course reports and files once a year	External examiner	Forms, indirect

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	6
Reference No.	6
Date	20/05/2021