هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

T-104
2022

Course Specification

Course Title: Computer Programming (برمجة الحاسب)	
Course Code: CSC 111	
Program: (Cross-Listed Course)	
- Civil Engineering Program - Electrical Engineering Program - Renewable Energy Program	- Architecture Program - Interior Design Program - Cybersecurity Program
Department: (Cross-Listed Course)	
- Civil Engineering Department - Electrical Engineering Department	- Architecture Department - Cybersecurity Department
College: College of Engineering and Information Technology	
Institution: Onaizah Private Colleges	
Version: Second Version	
Last Revision Date: 2023-05-11	

Table of Contents:

A. General information about the course:

Course Identification	
1. Credit hours:	3 Credit Hours
2. Course type a. University ☐ College ☒ Department ☐ Track ☐ Others ☐ b. Required ☒ Elective ☐	
3. Level/year at which this course is offered:	Second Level / First Year
4. Course general Description The course produces general overview of programing fundamentals and focuses on JAVA for engineering.	
5. Pre-requirements for this course (if any): CSC105	
6. Co- requirements for this course (if any): None	
7. Course Main Objective(s) The objective of this course is to provide an introduction and fundamental concepts of programming, algorithmic thinking, and computational problem solving. The programming language Java is used to introduce basic programming techniques. Students will gain some proficiency with the programming techniques, skills and tools necessary for computing practices.	

1. Teaching mode

No.	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	48	80%
2	E-learning	6	10%
3	Hybrid • Traditional classroom • E-learning	6	10%
4	Distance learning		

2. Contact Hours (based on the academic semester)

No.	Activity	Contact Hours
1	Lectures	30
2	Laboratory/Studio	15
3	Field	
4	Tutorial	15
5	Others (specify)	
Total		60

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

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
CSC 111.CLO.K.1	Explain the structure of the computer program using pseudo-code and algorithms.	K.1(الأمن برنامج السيبراني Cybersecurity)	Primary: Tutorial Additional: Group Work (competitive or cooperative / Online or F2F)	Formative: Homework Summative: Homework
CSC 111.CLO.K.2	Explain the structure of the computer program the structure of the computer program	K.1(الهندسة برنامج الكهربائية Electrical Engineering)	Primary: Lecture Additional: Discussion (or similar active learning strategies \ F2F or Online)	Formative: Quiz (Online or F2F) Summative: Written Exam (MCQ or Essay / F2F or Online)
2.0	**Skills**			
CSC 111.CLO.S.1	Research for appropriate program structure to be used in solving discipline-related problems.	S.1(الأمن برنامج السيبراني Cybersecurity)	Primary: Project or Research (Individual or Group) Additional: Presentations (Individual or Group)	Formative: Research Assessment (Rubric) Summative: Project Assessment (Rubric)
CSC 111.CLO.S.2	Analyze discipline-related design parameters using basic programing concepts.	S.3(الأمن برنامج السيبرانى Cybersecurity)	Primary: Interactive Lecture \ Demonstration Additional: Tutorial	Formative: Practical Assessment (Rubric) Summative: Written Exam (MCQ or Essay / F2F or Online)

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
CSC 111.CLO.S.3	Solve discipline-related design parameters using fundamental programming concepts.	S.5(التصميم برنامج الداخلي Interior Design)	Primary: Interactive Lecture \ Demonstration Additional: Tutorial	Formative: Practical Assessment (Rubric) Summative: Practical Assessment (Rubric)
CSC 111.CLO.S.4	Communicate basic programing steps, structure, and goal with wide range of stakeholders.	S.6(التصميم برنامج الداخلى Interior Design)	Primary: Interactive Lecture \ Demonstration Additional: Lab Work/Experiment	Formative: Practical Assessment (Rubric) Summative: Short Reports (Individual or Group) (Rubric)
CSC 111.CLO.S.5	Solve discipline-related design parameters using fundamental programming concepts.	S.2(هندسة برنامج المتجددة الطاقة Renewable Energy)	Primary: Interactive Lecture \ Demonstration Additional: Tutorial	Formative: Practical Assessment (Rubric) Summative: Practical Assessment (Rubric)
CSC 111.CLO.S.6	Solve discipline-related design parameters using fundamental programming concepts.	S.1(الهندسة برنامج المدنية Civil Engineering)	Primary: Interactive Lecture \ Demonstration Additional: Tutorial	Formative: Practical Assessment (Rubric) Summative: Practical Assessment (Rubric)

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
CSC 111.C LO. S.7	Analyze discipline-related designs using basic programing concepts.	S.3(الهندسة برنامج المدنية Civil Engineering)	Primary: Interactive Lecture \ Demonstration Additional: Tutorial	Formative: Presentation (Individual or Group) (Rubric) Summative: Practical Assessment (Rubric)
CSC 111.C LO. S.8	Solve discipline-related design parameters using fundamental programming concepts.	S.2(العمارة برنامج Architecture)	Primary: Interactive Lecture \ Demonstration Additional: Tutorial	Formative: Practical Assessment (Rubric) Summative: Practical Assessment (Rubric)
CSC 111.C LO. S.9	Solve discipline-related design parameters using fundamental programming concepts.	S.2(الهندسة برنامج الكهربائية Electrical Engineering)	Primary: Interactive Lecture \ Demonstration Additional: Tutorial	Formative: Practical Assessment (Rubric) Summative: Practical Assessment (Rubric)
3.0	**Values, Autonomy, and Responsibility**			
CSC 111.C LO. V.1	Show autonomously behavior in a non-supervised task.	V.3(الهندسة برنامج الكهربائية Electrical Engineering)	Primary: Group Work (competitive or cooperative / Online or F2F) Additional: Group Project or Research	Formative: Observation (Instructor/ Students/ Committee) (Rubric) Summative: Observation

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
				(Instructor/ Students/ Committee) (Rubric)

C. Course Content

No.	List of Topics	Contact Hours
1	Becoming a Programmer.	4
2	Writing Your First Program.	4
3	Vacationing in Java.	4
4	Understanding How Java Programs Work.	4
5	Storing and Changing Information in a Program.	4
6	Storing and Changing Information in a Program.	4
7	Using Strings to Communicate.	4
8	Using Strings to Communicate.	4
9	Using Conditional Tests to Make Decisions.	4
10	Using Conditional Tests to Make Decisions.	4
11	Repeating an Action with Loops.	4
12	Repeating an Action with Loops.	4
13	Storing Information with Arrays.	4
14	Storing Information with Arrays.	4
15	Revision.	4
Total		**60**

D. Students Assessment Activities

No.	Assessment Activities*	Assessment Timing (in Week No.)	Percentage of Total Assessment Score
1	Observation (Instructor/ Students/ Committee) (Rubric)	2nd - 15th	2.5%
2	Presentation (Individual or Group) (Rubric)	13th - 15th	2.5%
3	Research Assessment (Rubric)	13th - 15th	2.5%
4	Short Reports (Individual or Group) (Rubric)	13th - 15th	2.5%
5	Homework	2nd - 14th	5%
6	Practical Assessment (Rubric)	2nd - 14th	5%
7	Quiz (Online or F2F)	4th - 14th	10%
8	Written Exam (MCQ or Essay / F2F or Online)	10th	70%
9	Project Assessment (Rubric)	13th - 15th	5%
			100%

*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	- "Introduction to Programming I", by Florence Tiu Balagtas, Java Education and Development In initiative (JEDI), 2006 (or more recent Edition.)
Supportive References	- Sam's Teach Yourself Java in 24 Hours 6th edition.
Electronic Materials	- Programming for beginner's https://youtu.be/KnEeMj58w3A
Other Learning Materials	None.

2. Required Facilities and Equipment

Items	Resources
Facilities (Classrooms, Laboratories, Exhibition Rooms, Simulation Rooms, etc.)	Fully equipped lectures with built-in overhead facilities (Classroom with 60 seats).
Technology Equipment (Projector, Smart Board, Software)	Educational materials and teaching aids.
Other Equipment (Depending on the nature of the specialty)	None.

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Peer Reviewer	Direct (peer classroom observation according to the approved Rubric)
Effectiveness of students' assessment	Faculty/Instructor	Direct (analysis of CLOs assessment results and grade distributions)
Quality of learning resources	Students	Indirect (course evaluation survey)
The extent to which CLOs have been achieved	Faculty/Instructor	Direct (CLOs assessment and analysis of results according to CLOs targets)
	Students	Indirect (Students through course evaluation survey)
Commitment to learning and teaching strategies and assessment methods included in the program and course specifications	Peer Reviewer	Direct (Peer- classroom observation according to the approved Rubric in OC-QMS)
	Department Chair through Students Focus Groups	Indirect (Chair – survey questions to a focus group of students according to OC QMS)
Action Plan Continuity (Closing the Loop)	QAC (Quality Assurance Committee)	Direct (periodic review of course reports and submitting comments to course instructor/coordinator)
Instructor's Support to Students	Students	Indirect (course evaluation survey)

Assessor (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

G. Specification Approval Data

COUNCIL /COMMITTEE	Department Council
REFERENCE NO.	10
DATE	2023-05-23

Learning outcomes of this course, as well as CLOs/Teaching Strategies/Assessment Methods matrix have been evaluated and reviewed by multiple OC parties according to OC-QMS. You can access results of these final reviews by scanning the QR code on the right, which contains a link to the reviews on OC-E-QMS.

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