Academic Program Specification Form for the Academic Year 2020-2021

University: University of Technology
College : Computer Sciences Department – Computer Security
Number Of Departments in The College : 6
Date of Form Completion: 9-6-2021

Programme Mager's Name :
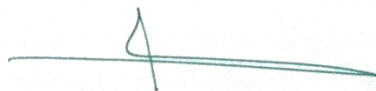Dr. Athraa Jasem Mohammed
Date: June 2021

Signature

Quality Assurance and
Evaluation Correction
director: Nada Najeel Kamal
Date: June 2021
Signature:

 Dean's Name: Dr. Aliaa Karim
 Abdul Hassan
Date: June 2021
Signature

Deans Assistant for Scientific
Affairs: Nuha Jamil Ibrahim
Date: June 2021
Signature

TEMPLATE FOR PROGRAMME SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

PROGRAMME SPECIFICATION

This Programme Specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It is supported by a specification for each course that contributes to the programme.

1. Teaching Institution	University of technology
2. University Department/Centre	Department of computer sciences
3. Programme Title	Software
4. Title of Final Award	B.SC. in computer sciences
5. Modes of Attendance offered	courses
6. Accreditation	ABET
7. Other external influences	no
8. Date of production/revision of this specification	9-6-2021
9. Aims of the Programme	

The first goal: To graduate qualified students to work in the software field.

The second goal: to understand and support the relationship of building software applications with the needs of the community.

The third goal: to develop the field of knowledge.

10. Learning Outcomes, Teaching, Learning and Assessment Methods

A. Knowledge and understanding

1- Knowing the events and methods associated with building software according to modern programming methods.

2- Knowledge of software algorithms adopted in building systems according to modern techniques and methods

3- The student explains the concepts of techniques adopted in the development and construction of software

4- The student remembers, describes and enumerates these concepts after graduating .

B. Subject-specific skills

B1 - Writing application systems according to modern programming methods that support all applications and various programming languages

Teaching and Learning Methods
Theoretical books, scientific laboratories, homework, projects, Electronic references
Assessment methods
Semester and final exam (electronic), laboratory exam (electronic), semester projects, special studies

C. Thinking Skills

C1- Give the student ways to analyze the problem and solve it

C 2- Adding mental skills to him

C 3- Expanding his mental, predictive and creative thinking

Teaching and Learning Methods
Electronic lectures and on electronic platforms, illustrative examples, the use of modern methods of learning such as data show devices
Assessment methods
(electronic) exam, (electronic) laboratory exam (and attendance), quarterly projects that are supervised and followed up on electronic platforms, special studies through supporting electronic platforms.

D- General and transferable skills (or) other skills related to employability and personal development

1- Building systems, using software, designing systems, solving problems, communicating in computer science

2- Using new technologies to solve problems

3- Computer laboratories management

Learning Methods

Electronic lectures and on electronic platforms, illustrative examples, the use of modern methods of learning such as data show devices

Assessment methods

Theoretical and practical exam (electronic and attendance)

Daily exams and surprise exams و

Duties of attendance and activity

Class discussions (electronic via electronic platforms)

Making mini projects

13. Personal Development Planning
Graduate Studies
Research and projects
Participation in seminars and conferences

14. Admission criteria.
Central Admission

15. Key sources of information about the programme
1. Labor market requirements 2. Keeping pace with scientific development

Software Curriculum

First Year – first Semester					
Code	Title	/ Week Hours			
		Lect.	Lab.	Disc.	Units
CSCL1101	**Structured Programming I**	3	2	1	4
CSCL1103	**Mathematics I**	2	-	1	2
CSCL1105	**Discrete Structure I**	2	-	-	2
CSCL1107	**Computer Organization**	2	-	1	2
CSCL1109	**Introduction to Statistics**	2	-	1	2
CSCL1111	**English Language I**	2	-	-	1
CSSP1101	**Fundamental of Programming Techniques**	2	-	-	2
	Work shop	-	2	-	2
Totals		15	4	4	17

المرحلة الاولى ـ الكورس الثاني

First Year – Second Semester					
Code	Title	Week Hours			
		Lect.	Lab.	Disc.	Units
CSCL1202	**Structured Programming II**	3	2	1	4
CSCL1204	**Mathematics II**	2	-	1	2
CSCL1206	**Discrete Structure II**	2	-	-	2
CSCL1208	**Logic Design**	2	2	1	3
CSCL1210	**Probability Theory**	2	-	1	2
CSSP1202	**Software Development Fundamentals**	2	-	-	2
CSSP1203	**Software Engineering I**	2	2	-	3
Total		15	6	4	18

Total No. of Unit for first Course: (17)Units

Total No. of Unit for Second Course: (18)Units

Total No. of Unit for Year: (35) Unit

Second Year – First Semester					
Code Lab.	Title Disc.	/ Week Hours			
		Lect.	Lab.	Disc.	Units
CSCL2112	Object Oriented Programming 1	2	2	1	3
CSCL2114	Data Structures	2	2	1	3
CSCL2116	Mathematics 3	2	2	1	3
CSCL2118	Database Foundation	2	2	1	3
02CSSP12	Software Development Fundamentals	2	-	-	2
CSSP2104	Software Engineering 2	2	2	1	3
Totals		12	10	5	17

Total No. of Unit for first Course: (19)Units

Total No. of Unit for Second Course: (19)Units

Total No. of Unit for Year: (38) Unit

Second Year – Second Semester					
Code Lab.	Title Disc.	/ Week Hours			
		Lect.	Lab.	Disc.	Units
CSCL2213	Object oriented programming2	2	2	1	3
CSCL2215	Sorting and Searching Algorithms	2	2	1	3
CSCL2217	Numerical Analysis	2	2	1	3
CSCL2219	DataBase Design	2	2	1	3
CSCL2221	Democracy	2	-	-	1
CSSP2205	Analysis and Design of Algorithms	2	2	-	3
CSSP2206	Computational Complexity	2	-	-	2
CSCL2122	English Language 2	2	-	-	1
Totals		16	10	4	19

Total No. of Unit for first Course: (17)Units

Total No. of Unit for Second Course: (19)Units

Total No. of Unit for Year: (36) Unit

المرحلة الثالثة– الفصل الاول

Third Year – First Semester					
Code	**Title**	**/ Week Hours**			
		Lect..	**Lab.**	**Disc.**	**Units**
CSCL3123	**Microprocessor**	2	2	1	3
CSCL3125	**Computation Theory**	2	-	1	2
CSCL3133	**English Language 3**	2	-	-	1
CSSP3107	**Machine Learning**	2	2	1	3
CSSP3108	**Computer Graphics and Visualization 1**	2	2	1	3
CSSP3110	**Parallel Programming Paradigms**	2	2	1	3
CSSP3111	**Software Modelling and analysis**	2	2	-	3
CSSP3112	**Information Retrieval Techniques**	2	-	-	2
Totals		**16**	**10**	**5**	**20**

المرحلة الثالثة– الفصل الثاني

Third Year – Second Semester					
Code	**Title**	**/ Week Hours**			
		Lect.	**Lab.**	**Disc.**	**Units**
CSCL3224	**Computer Architecture**	2	2	1	3
CSCL3226	**Compiler Design**	2	2	1	3
CSSP3213	**Computer Network 1**	2	2	1	3
CSSP3209	**Computer Graphics and Visualization 2**	2	2	1	3
CSSP3214	**Data Mining and Data Warehousing**	2	-	1	2
CSSP3215	**Soft Ware Design**	2	-	-	2
CSSP3216	**Mobile Application Design**	2	2	-	3
Totals		**14**	**10**	**5**	**19**

Total No. of Unit for first Course: (20)Units

Total No. of Unit for Second Course: (19)Units

Total No. of Unit for Year: (39) Units

المرحلة الرابعة ـ الفصل الاول

Fourth Year – First Semester					
Code	**Title**	**/ Week Hours**			
		Lect.	**Lab.**	**Disc.**	**Units**
CSCL4134	**Static Web Programming**	**2**	**2**	**1**	**3**
CSCL4136	**Operating System 1**	**2**	**2**	**1**	**3**
CSCL3131	**1 Image Processing**	**2**	**2**	**1**	**3**
CSCL4138	**Data Security 1**	**2**	**2**	**1**	**3**
CSSP4119	**Windows Programming 1**	**2**	**2**	**1**	**3**
CSSP4121	**Human Computer Interaction**	**2**	**-**	**-**	**2**
CSCL444	**Project**	**2**	**2**	**-**	**3**
Totals		**14**	**12**	**5**	**20**

المرحلة الرابعة ـ الفصل الثاني

Fourth Year – Second Semester					
Code	**Title**	**/ Week Hours**			
		Lect.	**Lab.**	**Disc.**	**Units**
CSCL4235	**Dynamic Web Programming**	**2**	**2**	**1**	**3**
CSCL4237	**Operating System 2**	**2**	**2**	**1**	**3**
CSCL3232	**Image Processing 2**	**2**	**2**	**1**	**3**
CSSP4218	**Secure Software Engineering**	**2**	**-**	**-**	**2**
CSSP4220	**Windows Programming 2**	**2**	**2**	**1**	**3**
CSSP4222	**Intelligent Search Methods**	**2**	**2**	**-**	**3**
CSCL444	**Project**	**2**	**2**	**-**	**3**
CSCL4142	**English Language 4**	**2**	**-**	**-**	**1**
Totals		**16**	**12**	**4**	**21**

Total No. of Unit for first Course: (20)Units

Total No. of Unit for Second Course: (21)Units

Total No. of Unit for Year: (41)Units

Curriculum Skills Map

please tick in the relevant boxes where individual Programme Learning Outcomes are being assessed

Year / Level	Course Code	Course Title	Core (C) Option (O)	General and Transferable Skills (or) Other skills relevant to employability and personal development			Thinking Skills			Subject-specific skills			Knowledge and understanding			
				D2	D2	D1	C3	C2	C1			B1	A4	A3	A2	A1
First Year/ First Course	CSCL1101	Structured Programming I	c	√	√	√	√	√	√			√	√	√	√	√
	CSCL1103	Mathematics I	c				√	√	√			√	√	√	√	√
	CSCL1105	Discrete Structure I	c			√			√			√	√	√	√	√
	CSCL1107	Computer Organization	c	√	√	√		√	√			√	√	√	√	√
	CSCL1109	Introduction to Statistics	c				√	√	√			√	√	√	√	√
	UT100	Workshp										√	√	√	√	√
	CSCL1111	English Language I	c	√	√	√		√	√						√	√
	CSSP1101	Fundamental of Programming Techniques	c	√	√	√	√	√	√			√		√	√	√
First Year/ Second Course	CSCL1202	Structured Programming II	c	√	√	√	√	√	√			√	√	√	√	√
	CSCL1204	Mathematics II	c				√	√	√			√	√	√	√	√
	CSCL1206	Discrete Structure II	c			√			√			√	√	√	√	√
	CSCL1208	Logic Design	c	√	√	√		√	√			√	√	√	√	√
	CSCL1210	Probability Theory	c	√	√	√		√	√			√	√	√	√	√
	CSSP1202	Software Development Fundamentals	c	√	√	√	√	√	√			√		√	√	√
	CSSP1203	Software Engineering I	c	√	√	√	√	√	√			√		√	√	√

Year / Course	Code	Course	Type	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Second Year/ First Course	CSCL2112	Object Oriented Programming I	c		√	√			√	√	√				√	√	√	√	√
	CSCL2114	Data Structures	c	√	√	√			√	√	√				√	√	√	√	√
	CSCL2116	Mathematics III	c						√	√	√				√	√	√	√	√
	CSCL2118	Database Foundation	c		√	√				√	√				√	√	√	√	√
	CSCL2221	Democracy	c																
	CSSP2205	Analysis and Design of Algorithms	c	√	√	√			√	√	√				√		√	√	√
	CSSP2206	Computational Complexity		√	√	√				√	√				√		√	√	√
Second Year/ Second Course	CSCL2213	Object oriented programming II	c		√	√			√	√	√				√	√	√	√	√
	CSCL2215	Sorting and Searching Algorithms	c	√	√	√			√	√	√				√			√	√
	CSCL2217	Numerical Analysis	c		√	√				√	√				√	√	√	√	√
	CSCL2219	DataBase Design	c		√	√				√	√				√	√	√	√	√
	CSCL2221	Democracy	c	√	√	√				√	√				√		√	√	√
	CSSP2205	Analysis and Design of Algorithms	c	√	√	√			√	√	√				√		√	√	√
	CSSP2206	Computational Complexity	c	√	√	√				√	√				√		√	√	√
	CSCL2122	English Language 2		√	√	√			√	√								√	√

Year / Course	Code	Course Name	Type	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Third Year/ First Course	CSCL3123	Microprocessor	c			√	√			√	√					√		√	√	√	√
	CSCL3125	Computation Theory	c		√	√	√		√	√	√					√	√	√	√	√	
	CSCL3133	English Language 3	c		√	√	√			√	√					√				√	√
	CSSP3107	Machine Learning	c			√	√		√	√	√					√	√	√	√	√	
	CSSP3108	Computer Graphics and Visualization 1	c				√									√					√
	CSSP3110	Parallel Programming Paradigms	c		√	√	√		√	√	√					√	√	√	√	√	
	CSSP3111	Software Modelling and analysis	c		√	√	√		√	√	√					√				√	√
	CSSP3112	Information Retrieval Techniques	c		√	√	√		√	√	√					√				√	√
Third Year/ Second Course	CSCL3224	Computer Architecture	c		√	√	√		√	√	√					√	√	√	√	√	
	CSCL3226	Compiler Design	c		√	√	√		√	√	√					√		√	√	√	
	CSSP3213	Computer Network 1	c		√	√	√		√	√	√					√		√	√	√	
	CSSP3209	Computer Graphics and Visualization 2	c				√									√					√
	CSSP3214	Data Mining and Data Warehousing	c		√	√	√		√	√	√					√				√	√
	CSSP3215	Soft Ware Design	c				√				√					√					√
	CSSP3216	Mobile Application Design	c		√	√	√		√	√	√					√			√	√	√
Fourth year/ First Course	CSCL4134	Static Web Programming	c				√				√					√	√	√	√	√	
	CSCL4136	Operating System 1	c			√	√		√	√	√					√			√	√	√
	CSCL3131	Image Processing 1	c			√	√				√					√					√
	CSCL4138	Data Security 1	c			√	√				√					√	√	√	√	√	

Year	Code	Course	Type	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	CSSP4119	Windows Programming 1	c				√				√				√	√	√	√	√
	CSSP4121	Human Computer Interaction	c		√	√	√		√	√	√				√		√	√	√
	CSCL444	Project	c		√	√	√		√	√	√				√	√	√	√	√
Fourth year/ Second Course	CSCL4235	Dynamic Web Programming	c				√				√				√	√	√	√	√
	CSCL4237	Operating System 2	c			√	√		√	√	√				√		√	√	√
	CSCL3232	Image Processing 2	c				√				√				√				√
	CSSP4218	Secure Software Engineering	c		√	√	√		√	√	√				√		√	√	√
	CSSP4220	Windows Programming 2	c				√				√				√	√	√	√	√
	CSSP4222	Intelligent Search Methods	c		√	√	√			√	√				√	√	√	√	√
	CSCL444	Project	c		√	√	√		√	√	√				√	√	√	√	√
	CSCL4142	English Language 4	c		√	√	√			√	√							√	√