University of Babylon

College of Science for Women

Department of Computer Science

Academic Program Description for Undergraduate Studies Department of Computer science for the Year 2025-2026

Academic Program Description Form

University Name: University of Babylon

College/Institute: College of Science for Women

Name of the academic: Bachelor's in Computer Science

Name of final degree: Bachelor's in Computer Science

Study system: Undergraduate Studies/course system

Description preparation date: 17/12/2025

Date of filling out the file: 21/3/2026

Signature:

Name of Department Head

Dr. Saif Mahmoud

Date: / / 2026

Signature:

Name of Scientific Assistant

Dr.Abeer Fauzi Murad

Date: / / 2026

The file is checked by

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Mohammed J.Jader

Date: / / **2026**

Signature:

Approval of the Dean

Introduction to the Academic Program Description

The Department of Computer Science is one of the main departments in the College of Science, encompassing a number of diverse scientific disciplines, including communications, computer networks, artificial intelligence, and cybersecurity. The Department of Computer Science is of great importance due to its influential role in supplying the labor market with programmers and software developers. Therefore, it has the highest priority in keeping pace with the latest developments in the field of information technology.

The department currently offers three programs (Bachelor's, Master's) in Computer Science. The Department of Computer Science is committed to meeting all quality standards to prepare, qualify, and graduate a cadre capable of performing their scientific and educational professions with competence and excellence. The department is also committed to continuously developing its curricula and teaching staff in line with the curricula of international universities. The development of software has opened up broad horizons for the employment of information technology in all scientific and applied fields. The use of information technology has increased the efficiency and accuracy of work, while reducing human effort through the use of computer software.

The curriculum is subject to periodic review to ensure its alignment with international academic standards and labor market developments. It includes field training opportunities, giving graduates a competitive advantage in the workplace or for pursuing graduate studies at the world's most prestigious universities.

1. Program Vision

The Department of Computer Science is one of the main departments in the faculties of science, as it includes a number of different scientific specializations, including: communications, computer networks, artificial intelligence, and cybersecurity.

2. Program Mission

The program's mission is to present a generation of graduates to society who have the scientific capabilities and expertise that enable them to contribute to building and developing a labor market based on the use of the best and most modern scientific and technological techniques to serve society.

3. Program Objectives

The Department of Computer Science at the College of Science for Girls aims to supply the labor market with a proportion of its need for programmers and developers of software and applications at various applied levels, in addition to constantly striving to keep pace with scientific and technological development, which is reflected in increasing the skills of the department's graduates. In addition to contributing to the development of this important field of knowledge (computer science) through its researchers presenting scientific research at international and local conferences, in addition to publishing scientific research in various international journals, as well as patents, workshops, seminars, and training courses that accelerate progress in this field.

4. Programmatic Accreditation
Nothing
5. Other External Influences
Association Collegiate School of Business(AACSB)

6. Program Structure

Distribution of units across study stages and the percentages of departmental requirements (mandatory or elective), college, and university requirements were as follows:

Stage	Number of Units	Core (Mandatory)	Elective	Supported
First	30	19	0	11
Second	41	24	15	2
Third	39	27	9	3
Fourth	35	19	14	2
Total	145	89	38	18
Percentage		61.4%	26.2%	12.4%

7. *Program Description* :: *Note: Stage 1 + 2 +3(Bologna Route)*

Year/level	*course code*	*Name of the course*	*Credit hours*	
			Theoretical	*Practical*
The fourth stage Course (1)	**C21**	**Operating Systems (1)**	2	2
	C23	**Computing Security (1)**	2	2
	C28	**Human Computer Interaction**	3	-
	C29	**Graduate Project**	1	2
	E54	**Evolutionary Computing**	2	2
	E20	**Coding and Data Compression**	2	-
The fourth stage Course (2)	**C22**	**Operating Systems (2)**	2	2
	C24	**Computing Security (2)**	2	2
	E10	**Digital Image Processing**	2	2
	C29	**Graduate Project**	1	-
	E47	**Multi-agent Systems**	2	2
	E59	**Mobile's Applications Programming**	2	2
	S6	**English Language (4)**	2	-

8.The expected learning outcomes of the program	
Knowledge	
Knowledge and Understanding	1- To recognize the nature of laser rays. 2- To recognize the types of laser beams. 3- To be able to use different types of lasers in applications. 4-To analyze laser device systems. 5- To evaluate the feasibility and cost of using lasers in medicine and industry.
Skills	
Subject-Specific Skills	1 - The student's knowledge of the physical nature of the laser beam. 2 - The student's ability to deal with laser beams and laser systems. 3- Enabling students to analyze the quality of uses of laser rays in medicine and industry. 4- Reviews of industrial quality measurement analysis systems in the use of lasers.
Thinking Skills	1 - Thinking skill according to ability. The goal of this skill is for the student to believe in what is tangible (the student's abilities) and understand when, what and how he should think and work to improve the ability to think reasonably. 2- High thinking skill (the goal of this skill is to teach thinking well before making the decision that determines the student's life)
Ethics	

Evaluation methods	1- Exams 2- Learning Matrix 3- Which Face 4- CAT (student feedback) 5- Learning Triangle

9. Teaching and Learning Strategies

Learning strategies

1-Thinking strategy according to the student's ability (for example: if the student is able to learn the correct concept of management, he will acquire the skill of managing and organizing his personal life).

2- High thinking skill strategy (for example, if the student wants to make a good decision, it is important that he thinks well before he makes the decision, and if he decides without thinking, or if he cannot think well, or if he cannot decide, or perhaps he will not decide, then this This means he does not have high thinking skills.)

3- Critical thinking strategy in learning (Critical Thanking) (It is a term that symbolizes the highest levels of thinking, which aims to pose a problem and then analyze it logically to reach the desired solution).

4-Brainstorming

Methods of teaching and learning

1- Method of giving lectures.

2- Student Center

3- Student groups

4- Workshops

5- (Scientific trips to follow up on the environmental reality)

6- Learning Technologies on Campus

7- (Experiential learning)

8- Application Learning)

10. Evaluation methods

1- Exams

2- Learning Matrix

3- Which Face

4- CAT (student feedback)

5- Learning Triangle

11. Faculty

Faculty Members

Academic Rank	*Instructor's name*	*Specialization*		*Special Requirements/skills (it applicable)*	*Number of the teaching staff*	
		General	*Special*		*staff*	*Lecturer*
Professor	Dr. Suhad Ahmed Ali	Computer	Artificial Intelligence		√	
Professor	Dr. Majid Jabbar Jawad	computer	security and information processing		√	
Professor	Dr . Samaher Hussein Ali	Computer	Artificial Intelligence		√	
Professor	Dr. Samah Abdel Hadi Abbas,	Mathematics	Mathematics		√	

Professor	Dr Muhammad Abdullah Nasser	Computer	security and information processing		√	
Professor	Dr. Sahar Adel Kazem	Computer	Security and information		√	
Professor	Dr. Israa Hadi Obaid,	Computer	Translators and Computational Theory		√	
Professor	Dr. Saif Mahmoud,	Computer	computer networks		√	
Professor	Dr. Mahdi Abdel Salman	Computer	Distributed Systems		√	
Professor	Dr. Muhammad Obaid	Computer	Information Technology/Soft ware		√	
Assistant Professor	Dr. Salah Mahdi Saleh	Computer	Timbers Patterns		√	
Professor	Dr. Ahmed Badri Muslim,	Computer	Parallel Algorithms		√	
Assistant Professor	Dr.Ali Yaqoub Youssef	Computer	artificial intelligence		√	
Assistant Professor	Dr . Farah Muhammad Hassan,	Computer	information security		√	
Assistant Professor	Dr. wed Kazem Aliwi	Computer	Computer		√	
Assistant Professor	Dr. Ahmed Mohamed ,Hussein	Computer	Computer		√	
Assistant Professor	Dr.. Zainab Abdel Moneim Abdel Hadi,	Mathematics	Functional Approximation Theory		√	
Teacher	Zainab Falah Hassan	Computer	Computer		√	

Assistant Professor	Dr. Elaf Ali Abboud	Computer	Computer		√	
Teacher	Noor Kazem Ayoub	Computer	Computer		√	
Assistant Professor	Asraa Abdullah Hussein	Computer	Computer		√	
Teacher	Russell Muhammad Nimah	Computer	Computer		√	
t teacher	Nada Fadel Muhammad	Computer	Computer		√	
assistant teacher	Ishraq Abdel Amir Yahya	Computer	Computer		√	
Assistant Professor	Hadeel Qasim Ghani	Computer	Computer		√	
Assistant Professor	Zahraa Jabbar Hussein	Computer	Computer		√	
teacher	Zahraa Abdel Mohamed	Computer	Computer		√	
teacher	Jinan Ali Abd	Computer	Computer		√	
teacher	Shaima Abdel Kazem Hadi	Computer	Computer		√	
teacher	Zahraa Aboud Ahmed	Computer	Computer		√	
teacher	Rafif Mazhar Katran	Computer	Computer		√	

Professional Development

Mentoring new faculty members

Teaching, like any other art, can be acquired by practicing and following its methods and principles, provided that there is a sincere desire to practice the teaching profession, and the method in education means taking interconnected steps to reach a specific goal that you hope to achieve. Therefore, it must follow the basic principles of good teaching, which are:

1- Directing and guiding learners by creating educational situations that lead to desirable activities.

2- Providing an atmosphere of love, kindness and cooperation between the teacher and the learners and between the learners themselves through his love for his students without discrimination and not excessive feminization.

3- Adopting democratic leadership through the emotional relationship between the teacher and his students, which leads them to control based on mutual respect and creating a cooperative atmosphere between the students and between the teacher and his students.

Professional development for faculty members

1- Thinking strategy according to the student's ability (for example: if the student is able to learn the correct concept of management, he will acquire the skill of managing and organizing his personal life). And the high thinking skill strategy (for example, if the student wants to make a good decision, it is important that he thinks well before he makes the decision, and if he decides without thinking or if he cannot think well or if he cannot decide or perhaps he will not decide, this means He does not have high thinking skills.)

2- General and transferable skills (other skills related to employability and personal development).

3- Verbal communication.

4- Teamwork.

5- Analysis and investigation (collecting information systematically and scientifically to establish facts and principles for solving the problem).

12. Acceptance criterion

Central acceptance and parallel acceptance

13. The most important sources of information about the program

4- The website of the college and university.

https://csg.uobabylon.edu.iq/
https://csg.uobabylon.edu.iq/department/?cdid=4

https://csg.uobabylon.edu.iq/department/dep_lectures.aspx?cdid=4

5- University guide .https://systems.uobabylon.edu.iq /

6- The most important books and resources in the college library.

14. Program development plan

The Bologna Process was applied to the students of the first stage, and work is being done to apply it to the next stages, along with conducting workshops and seminars to familiarize faculty members with the requirements of the Bologna Process and how to work with it, and to discuss the negatives and obstacles and find solutions for them. The electronic system was applied in the education process.

Program skills Outline																			
				Required program learning outcomes															
Year /Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics				Other skills related to employability and personal development			
				A_1	A_2	A_3	A_4	B_1	B_2	B_3	B_4	C_1	C_2	C_3	C_4	D_1	D_2	D_3	D_4
The fourth stage Course (1)	C21	Operating Systems (1)	Core	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	C23	Computing Security (1)	Core	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	C28	Human Computer Interaction	Core	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	C29	Graduate Project	Core	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	E54	Evolutionary Computing	Elective	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	E20	Coding and Data Compression	Elective	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

Program skills Outline																			
				Required program learning outcomes															
Year /Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics				Other skills related to employability and personal development			
				A_1	A_2	A_3	A_4	B_1	B_2	B_3	B_4	C_1	C_2	C_3	C_4	D_1	D_2	D_3	D_4
The fourth stage Course (2)	C22	Operating Systems (2)	Core	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	C24	Computing Security (2)	Core	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	E10	Digital Image Processing	Elective	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	C29	Graduate Project	Core	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	E47	Multi-agent Systems	Elective	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	E59	Mobile's Applications Programming	Elective	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

	S6	English Language (4)	Supported																