



**Introductory guide for
computer science program**

**College of Computer and Information
Sciences**

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Table of Contents

Program foundation	4
Program vision.....	4
Program mission	5
Program Goals	5
Program learning outcomes	5
Program graduates' characteristics	7
Fields of work.....	8
Curriculum study plan	8
Curriculum Study Plan	9
Program advisory committee.....	15
Program regulations.....	16
Student Administration and Support	18
Student academic counseling.....	18
Learning resources, facilities and equipment	19
Classrooms, laboratories and equipment	20
E-learning	22
Faculty Members:	23
Boys section.....	23
Girls section	25

Program foundation

As a result of increased demand for sophisticated computing environments, applications, and scientific research inside and outside of the academic field, today's organizations in both public and private sectors need high qualified graduates relevant to the workplace. Jouf University is committed to developing employable graduates in the field of computer science through establishing this program and achieving its goals and objectives. Specifically, **the program was established for the following reasons:**

- To compensate the shortage in computer science specialty for the local and regional communities.
- To increase the level of dependency on national graduates.
- To offer training, consultancy, and services in the field of Computer Science to the community.
- To prepare graduates for higher studies in computer science domain.
- To contribute to the technological development plans of the Kingdom of Saudi Arabia as a partial fulfillment of the national development plan.
- Contribute to achieving the vision of the Kingdom of Saudi Arabia 2030.

The program contributes to the mission of the college as well as the university. It focuses on preparing cadres in the domain of computer science to serve the local as well as regional communities in different aspects of technological development.

Program vision

Excellence locally and internationally in education, scientific research and community service in the field of computer science.

Program mission

Providing distinct educational, professional, research and societal outputs locally and regionally in the field of computer science consistent with quality standards and contribute to filling the needs of the labor market and community service.

Program Goals

- Creating an attractive and integrated academic environment that provides equal opportunities for learning and developing various skills for program's stockholders.
- Contributing to enhancing the academic reputation of computer science program.
- Providing educational outputs that meet the requirements of the local labor market.
- Supporting and enhancing knowledge production in the field of computer science.
- Enhancing the benefit of local community from the field of computer science
- Achieving business sustainability in the program

Program learning outcomes

	NQF Learning Domains and Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding		
K1	Recognize the concepts of computing and mathematics appropriate to the discipline	<ul style="list-style-type: none"> • Lectures • Tutorials • Self-learning • Handouts • Problem Solving • Class Discussions 	<ul style="list-style-type: none"> • Exams • Assignments • Quizzes • Homework
K2	Recognize the essentials of design, implementation, and evaluation of computer-based system, process, component, or program to meet desired needs		
K3	Define the computing requirements to solve computer-based problems and state them in appropriate forms.		
2.0	Skills		
S1	Analyze a complex computing problem to apply principle of computing and other relevant disciplines to identify solutions.	<ul style="list-style-type: none"> • Lectures • Tutorial • Lab activities • Group Working • Handouts • Class Discussions • Case study 	<ul style="list-style-type: none"> • Quizzes • Homework • Exams • Assignments • Rubric-based Project Report • Presentation • Lab Exam/ Lab reports
S2	Design a computing –based solution to meet a given set of computing requirements in the context of the program’s discipline.		
S3	Apply computer science theory and software development fundamentals to produce computing-based solutions.		
S4	Identify user needs and take them into account in the selection, creation, evaluation and administration of computer-based systems.		
S5	Communicate effectively in a variety of professional contexts		
3.0	Values		
V1	Recognize the professional, ethical, legal, security and social issues and responsibilities	<ul style="list-style-type: none"> • Lectures • Tutorials • Reading Lists • Group Working • Self-learning • Class Discussions 	<ul style="list-style-type: none"> • Rubric-based Project Report • Class Graded Discussion • Summarizes reading • Lab Exam/Lab reports • Graded Class Discussion
V2	Function effectively as a member or leader of a team engaged in activities appropriate to the program’s discipline.		
V3	Identify the local and global impact of computing on individuals, organization, and society.		

Program graduates' characteristics

- An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.
- Analyze a problem, and identify and define the computing requirements appropriate to its solution.
- Design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.
- Function effectively on teams to accomplish a common goal.
- Adhere to high scientific and societal values and norms.
- Seeks to serve the community.
- Communicate effectively with a range of audiences.

Fields of work

- Programming and software engineering.
- Software developer
- Computer technical support
- Computer Scientist / Researcher
- Computer systems manager
- Computer Scientist / Researcher
- Network Security Manager
- Information Technology Specialist
- Contribute to the development and programming of information systems.
- Management and participation in the design of computer networks.
- Multimedia Developer
- Database Administrator
- Database Analyst
- Database Administrator
- Database developer
- Website design and development.
- Working in teams on smart applications or using data.

- Admission requirements

- Passing the university preparatory year according to the admission rates determined by the scientific department of the program.
- The details of the admission requirement are available through this [link](#).

Curriculum study plan

The study in the computer science program is divided into 8 levels according to the following schedule. The students should pass 133 credits.

Curriculum Study Plan						
Level	Course Code	Course Name	Required or Elective	* Pre-Requisite Courses	Credit Hours	GE/ Math & Sc. / College / CIS
First Year (Preparatory Year)						
Level 1	ENGL 001	English Language (1)	Required		6	GE
	EDU 101	University Life Skills	Required		2	GE
	CIS 101	Computer skills	Required		3	GE
	MTH 101	Introductory Mathematics	Required		3	Math & Sc.
Total					14	
Level 2	ENGL 002	English Language (2)	Required	ENGL 001	6	GE
	CHM 103	Principle of Chemistry	Required		3	Math & Sc.
	CIS 102	Problem Solving and Programming	Required	CIS 101	3	CIS
	MTH 102	Differential Calculus	Required	MTH 101	3	Math & Sc.
Total					15	
Second Year						
Level 3	ISL 101	Fundamentals of Islamic Culture	Required		۲	GE
	ARB 100	Arabic Language Skills	Required		2	GE
	MTH 203	Integral Calculus	Required	MTH 102	۳	Math & Sc.
	CIS 203	Computer programming (1)	Required	CIS 102	4	CIS
	CIS 211	Discrete Mathematics	Required	MTH 102	3	CIS
	PHS 101	General Physics (1)	Required		4	Math & Sc.
Total					18	
Level 4	ISL 107	Professional Ethics	Required		۲	GE
	ARB 102	Writing Skills	Required	ARB 101	2	GE
	CNE 261	Logic Design	Required	MTH 102	4	CIS
	CIS 204	Computer programming (2)	Required	CIS 203	۴	CIS
	CIS 205	Data structures	Required	CIS 203	4	CIS
Total					16	
Third Year						

Level 5	ISL100 or ISL108 or ISL109	Studies in the Biography of the Prophet or Contemporary Issues or The Role of Women in Development	Required		۲	GE
	MTH 285	Principles of Linear Algebra	Required	MTH 203	۲	Math & Sc.
	CIS 312	Theory of Computation	Required	CIS 211	۲	CIS
	CIS 331	Programming Languages and compilation	Required	CIS 205	3	CIS
	CIS 321	Software Engineering	Required	CIS 204	3	CIS
	CIS 343	Computer Organization	Required	CNE 261	3	CIS
Total					17	
Level 6	ISL100 or ISL108 or ISL109	Studies in the Biography of the Prophet or Contemporary Issues or The Role of Women in Development	Required		۲	GE
	MTH 281	Probabilities and Statistics	Required	MTH 203	3	Math & Sc.
	CIS 322	Concepts of Database Systems	Required	CIS 205	4	CIS
	CIS 313	Artificial Intelligence	Required	CIS 205	3	CIS
	CIS 323	Software Project Management	Required	CIS 321	3	CIS
	CIS 342	Operating systems	Required	CIS 205	۲	CIS
Total					18	
CIS 391	Field Training	Required	Complete 90 hours from the program	1	CIS	
Total					1	
Fourth Year						
Level 7	CIS 432	Parallel Computing	Required	CIS 343	3	CIS
	CNE 463	Computer Networks	Required	CIS 342	۲	CIS
	CIS 414	Design and analysis of Algorithms	Required	CIS 205	3	CIS
	CIS 492	Graduate Project (1)	Required	Complete 90 credit hours	2	CIS
	CIS 424	Mobile applications and development	Required	CIS 322 CIS 204	3	CIS
	CIS XXX	Elective (1)	Elective		3	CIS
Total					۱7	

Level 8	CIS 441	Introduction to Computer & Network Security	Required	CNE 463	3	CIS
	CIS 493	Graduate Project (2)	Required	CIS 492	۲	CIS
	CIS XXX	Elective (2)	Elective		3	CIS
	CIS XXX	Elective (3)	Elective		3	CIS
	CIS XXX	Elective (4)	Elective		۲	CIS
	EDU xxx	University Elective topic	Elective		2	GE
					۱7	

Credit Requirements		Hours
General University Education Requirements (GE)	Required Courses	٢9
	Elective Courses	2
Department Requirements (Math & Sc. + CIS)	Math & Science Required Courses	22
	CIS Required Courses <i>Compulsory Courses</i>	68
	CIS Elective Courses <i>Student can choose 4 courses from any combination of areas</i>	12
Total hours		133

University Required Courses (29 Hours)

SN	Course Code	Course Number	Course Name	Hours				Prior requirements
				Theoretical	Practical	Training/Exercises	Accredited	
1.	ENGL	001	English Language (1)	5	5	10	6	
2.	EDU	101	University Life Skills	2	0	0	2	
3.	CIS	101	Computer skills	2	0	0	3	
4.	ENGL	002	English Language (2)	5	5	10	6	ENGL 001
5.	ISL	101	Fundamentals of Islamic Culture	2	0	0	2	
6.	ARB	100	Arabic Language Skills	2	0	0	2	
7.	ISL	107	Professional Ethics	2	0	0	2	
8.	ARB	102	Writing Skills	2	0	0	2	ARB 101
9.	The student select two courses from Those Three Islamic courses							
10.	ISL	100	Studies in the Biography of the Prophet	2	0	0	٢	
11.	ISL	108	Contemporary Issues	2	0	0	٢	
12.	ISL	109	The Role of Women in Development	2	0	0	٢	

University Elective Courses (select 2 Hours)

SN	Course Code	Course Number	Course Name	Hours				Prior requirements
				Theoretical	Practical	Training/Exercises	Accredited	
1.	EDU	102	Volunteer Work	2	0	1	2	
2.	BUS	101	Entrepreneurship	2	0	1	2	

Department Required Courses - (90) Hours

SN	Course Code	Course Number	Course Name	Hours				Prior requirements
				Theoretical	Practical	Training / Exercises	Accredited	
1.	CHM	103	Principle of Chemistry	2	.	٢	3	---

2.	MTH	101	Introductory Mathematics	2	•	२	३	-----
3.	MTH	102	Differential Calculus	2	0	2	3	MTH 101
4.	MTH	203	Integral Calculus	2	0	2	3	MTH 102
5.	MTH	281	Statistics and Probabilities	2	0	2	3	MTH 203
6.	PHS	101	General Physics (1)	3	2	0	4	
7.	MTH	285	Principles of Linear Algebra	2	0	2	3	MTH 2•३
8.	CIS	211	Discrete Mathematics	3	0	1	3	MTH 102
9.	CIS	102	Problem Solving and Programming	2	2	0	3	CIS 101
10.	CIS	203	Computer Programming (1)	3	2	0	4	CIS102
11.	CIS	204	Computer Programming (2)	3	2	0	4	CIS 203
12.	CIS	205	Data Structures	3	2	0	4	CIS 203
13.	CIS	342	Operating Systems	3	0	1	३	CIS 205
14.	CIS	322	Concepts of Database Systems	३	२	•	4	CIS 205
15.	CIS	323	Software Project Management	3	0	1	3	CIS 322
16.	CNE	261	Logic Design	३	2	0	4	MTH 102
17.	CIS	312	Theory of computation	3	0	1	३	CIS 211
18.	CIS	3२1	Software Engineering	3	0	0	3	CIS 204
19.	CIS	331	Programming Languages and Compilation	3	0	1	३	CIS 20•
20.	CIS	343	Computer Organization	3	0	0	३	CNE 261
21.	CIS	313	Artificial Intelligence	3	0	0	3	CIS 205
22.	CIS	432	Parallel Computing	3	0	0	3	CIS 343
23.	CIS	391	Field Training	1	0	0	1	Complete 90 credit hours
24.	CNE	463	Computer Networks	3	0	1	3	CIS 342
25.	CIS	424	Mobile Applications and Development	2	२	•	3	CIS 322 CIS 204
26.	CIS	414	Design and Analysis of Algorithms	3	0	1	3	CIS 205
27.	CIS	49२	Graduate Project (1)	2	0	0	2	Complete 90 credit hours
28.	CIS	441	Introduction to Computer & Network	2	2	0	3	CNE 463

			Security					
29.	CIS	49३	Graduate Project (2)	3	0	0	3	CIS 49४

Department Elective Courses (select 12) Hours

SN	Course Code	Course Number	Course Name	Hours				Prior requirements
				Theoretical	Practical	Training/Exercises	Accredited	
1.	CIS	428	Programming on the Web	2	2	0	3	CIS 322 CIS 204
2.	CIS	425	Database Management System	3	0	1	3	CIS 322
3.	CIS	426	Advanced Software Engineering	3	0	0	3	CIS 321
4.	CIS	427	Web engineering and Development	2	2	0	३	CIS 424
5.	CIS	461	Computer Graphics	३	0	1	३	CIS 414
6.	CNE	484	Digital Image Processing	३	0	0	३	CIS 205
7.	CNE	471	Computer Vision	३	0	1	3	CIS 414
8.	CIS	464	Machine Learning	3	0	0	३	CIS 313
9.	CIS	465	Expert System	3	0	0	३	Complete 90 credit hours
10.	CIS	466	Human Computer Interaction	3	0	1	३	Complete 90 credit hours
11.	CIS	494	Selected Topics I	3	0	0	3	Complete 90 credit hours
12.	CIS	495	Selected Topics II	3	0	0	3	Complete 90 credit hours
13.	CIS	433	Distributed Systems	3	0	0	3	CIS 432
14.	CNE	478	Intelligent Systems & Robotics	2	2	0	3	Complete 90 credit hours
15.	CIS	434	Cloud Computing	2	2	0	3	Complete 90 credit hours
16.	CNE	474	Pattern Recognition	2	2	0	3	Complete 90 credit hours
17.	CIS	463	Bioinformatics	2	2	0	3	Complete 90 credit hours
18.	CIS	462	Natural Language Processing	3	0	0	3	Complete 90 credit hours
19.	CIS	442	Applied Cryptography	2	2	0	3	Complete 90 credit hours
20.	IS	427	Fundamentals of Big Data	3	0	0	3	Complete 90 credit hours

Program advisory committee

The program advisory committee is constructed as follows:


- Dr. Ibrahim Alrashdi (department chair)
- Dr. Youssef Al-Hwaiti (assistant professor)
- Dr. Asyaa BenAliaa (assistant professor girls Section.)
- Dr. Abdoallah Alamery (assistant professor Baha university)
- Mr. Eid Almubarak (IT manger in education sector in Jouf)
- Mra. Asmaa Yahia (IT manger united Ahli Bank)
- Mr. Ahmed Mohialdin (IT manger in secure networks institution)

The committee have periodic meetings with the following responsibilities:

- Contribute to developing future plans to meet current and future challenges.
- Improving research, development and consulting methods
- Provide advice, guidance and advice regarding the development of the academic program.

Program regulations

The graduate studies' unified regulations of Saudi universities and its executive rules will be applied at Jouf University with regard to admission requirements, graduation rules, obtaining a degree, as well as the additional criteria for the program. For more details you can visit the following links:

The skill record		https://bit.ly/38FTQQk
Student Council rules		https://bit.ly/3oIPiOr
Student discipline rules		https://bit.ly/3oJi4yx
Students' rights and duties		https://bit.ly/2LKmV3W
Campus regulations		https://bit.ly/2LPwQoJ

Student club rules		https://bit.ly/35ET7wR
Students' complaints regulations		https://bit.ly/3nH1Zs3
Study rules and exams		https://bit.ly/39t7pSi

Student Administration and Support

Student academic counseling

Each student is assigned to an academic advisor who will act as a mentor, providing academic and career advice, and general counseling. Each student is required to meet his advisor at least once a week, during the eighth semester. The Academic advising center of the university provide support to the students in the form of hosting extracurricular activities, field trips, and seminars by inviting guest speakers and providing an interactive learning environment. The Head of the Department is also available to meet the students and listen to their academic problems and concerns. The general advising duties can be stated as follows:

- The academic advisor is expected to deal with students' academic, career, and personal problems.
- The academic advisor helps his/her advisee students select the appropriate courses in order to fulfil the
- graduation requirements.
- The academic advisor helps the student explore the career fields within his/her major, and obtain
- related career information and survey job opportunities.
- The academic advisor serves as a link between the student and the administration by counseling the
- student on matters of failure, on the procedures for dropping and adding courses, course scheduling, and academic progress.
- The academic advisor must alert students of any subsequent changes in the curriculum that might be enforced during the course of their studies.

Learning resources, facilities and equipment

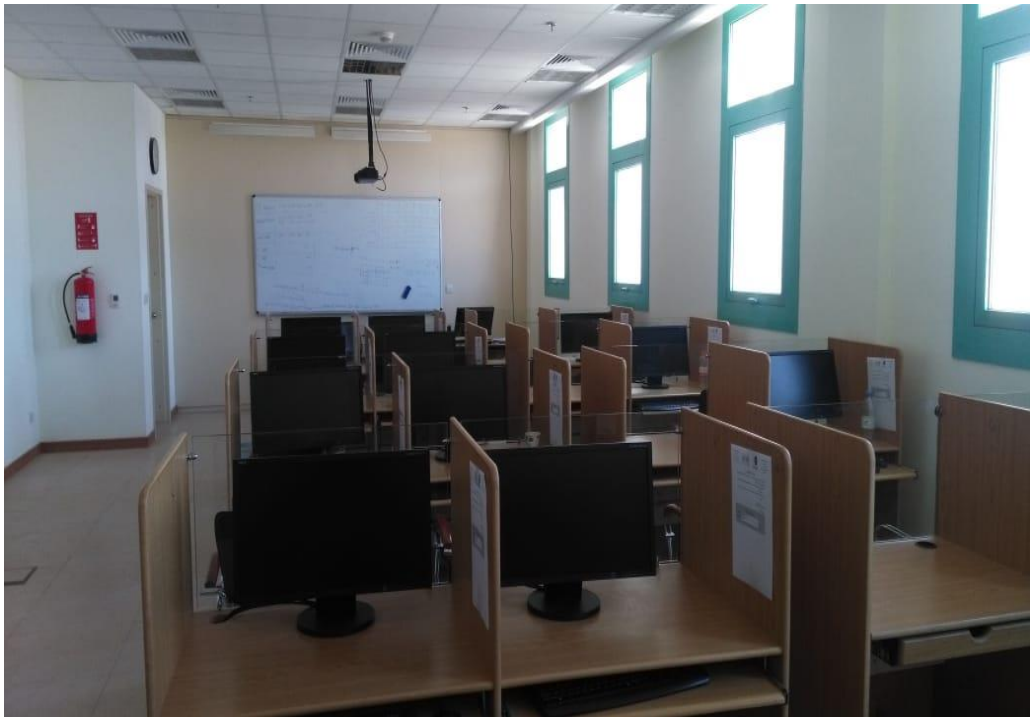
Courses instructors are requested to select textbooks that are commonly used by top universities in the world. Also, they are required to specify other teaching materials they need. The course coordinators submit all the department requests in appropriate form to library administration through departmental head. Course files are prepared for all courses where textbooks and helping materials are included. The faculty offer various facilities for learning such as:

- Fully equipped laboratories for teaching all subjects.
- A large number of scientific references were provided in coordination with the Central Library.
- The college has 17 classrooms of different sizes. Equipped with projectors and some of them are equipped with a smart board.
- Three video conference rooms
- Meeting rooms and offices for college committees and units.
- Blackboard: It is an electronic system for communication between teachers and their students.

Classrooms, laboratories and equipment

The department responsible for the program currently contains four computer laboratories, each of which has twenty computers with programs installed to be used to teach all the courses of the program. The department also benefits from the laboratories of other departments and colleges. As laboratories of the Computer Engineering Department, which are equipped with computer devices installed with programs used to teach programming courses and simulation programs used in teaching some courses such as data communication, networks and digital control. The department also currently contains logic design laboratories, electronics and electrical circuits that contribute effectively to the quality of the educational process.





E-learning

Students of the program can benefit from Blackboard as an educational system to provide educational or training programs to students or trainees at anytime and anywhere, as well as by using interactive information and communication technology such as (Internet, TV channels, e-mail, computers, and teleconferences ...) in a synchronous or asynchronous manner.

E-learning can be considered a method of education that depends in providing educational content and conveying skills and concepts to the learner on information and communication technologies and their multiple media in a way that allows the student to actively interact with the content, the teacher and colleagues simultaneously or asynchronously in time, place and speed that suit the circumstances of the learner and his ability, and the management of all activities The educational scientific and its requirements in electronic form through the electronic systems designated for that purpose.

Faculty Members:

Boys section

NO.	Name	Academic degree
1.	Dr. Ibrahim Alrashdi	Assistant professor (program chair)
2.	Dr. Saad Alanizi	Associative professor
3.	Dr. Youssef Al-Hwaiti	Assistant professor
4.	Dr. Shadi Ismail Nashwan	Professor
5.	Dr. Muhammad Al-Hafiz	Associative professor
6.	Dr. Osama Ouda	Associative professor
7.	Dr. Mohamed Ezzedine	Associative professor
8.	Dr. Muhammad Qamar Al-Zaman	Associative professor
9.	Dr. Musharraf Al-Ruwaili	Assistant professor
10.	Dr. Abdel Halim Samaei	Assistant professor
11.	Dr. Muhammad Hamid Sadiq	Assistant professor
12.	Dr. Ahmed Al Sayyat	Assistant professor
13.	Dr. Hadi Hamdy	Assistant professor
14.	Dr. Muhammad Mohi Azad	Assistant professor
15.	Dr. Nasser Al-Shammari	Assistant professor
16.	Dr. Eslam Hamouda	Assistant professor
17.	Dr. Alaa Saleh Al-Arjan	Assistant professor
18.	Dr. Muhammad Abdul Hamid Al-Nusairi	Assistant professor
19.	Dr. Akram Ajouli	Assistant professor
20.	Dr. Amjad Al-Sirhani	Assistant professor
21.	Dr. Medhat Abdel Hadi	Assistant professor

22.	Mr. Abdel Moneim Al-Zabali	Lecturer
23.	Mr. Abdulaziz Al-Sharari	Lecturer
24.	Mr. Ayman Al-Majnouni	Lecturer
25.	Mr. Badr Al-Enezi	Lecturer
26.	Mr. Aish Al-Biladi	Lecturer
27.	Mr. Abbas Al-Shuraimi	Lecturer
28.	Mr. Abdul Rahman Al-Yami	Lecturer
29.	Mr. Issa Al-Kuwaikibi	Lecturer
30.	Mr. Fadi Abed Al-Harbi	Lecturer
31.	Mr. Faris Al-Ruwaili	Lecturer
32.	Mr. Fawaz Al-Ruwaili	Lecturer
33.	Mr. Walid Al-Hamoud	Lecturer
34.	Mr. Muhannad Al-Khalidi	Lecturer
35.	Mr. Abdul Rahman Al-Harbi	Lecturer
36.	Mr. Sultan Al-Falah	Demonstrator
37.	Mr. Ayed Al-Shammari	Demonstrator
38.	Mr. Hilal Al-Shammari	Lecturer
39.	Mr. Mokhaled Al-Harbi	Lecturer
40.	Mr. Abdullah Khalif Al-Kuwaikibi	Lecturer

Girls section

No.	Name	Academic degree
1)	Dr. Asia Benalieh	Assistant professor
2)	Dr. Salwa Hindawi	Assistant professor
3)	Dr. Randa Jaber	Assistant professor
4)	Dr. Mayada Tarek	Assistant professor
5)	Dr. Orida Banu Bakr	Assistant professor
6)	Dr. Ghada Al-Waked	Assistant professor
7)	Dr. Fatima Al-Qaeed	Assistant professor
8)	Dr. Menwa Alshammeri	Assistant professor
9)	Mrs. Kholoud Al-Shadoukhi	Lecturer
10)	Mrs. Noura Al-Ghuwairi	Demonstrator
11)	Mrs. Aisha Al-Waked	Lecturer
12)	Mrs. Ashwaq Aljuhaysh	Lecturer
13)	Mrs. Wissam Al-Ruwaili	Lecturer
14)	Mrs. Rafeef Al-Shammari	Lecturer
15)	Mrs. Thana Al-Nusairi	Lecturer
16)	Mrs. Mona Al-Zahrani	Lecturer
17)	Mrs. Amjad Al-Enezi	Demonstrator
18)	Mrs. Fatima Al-Ruwaili	Lecturer
19)	Mrs. Mashaal Alsuwailem	Lecturer
20)	Mrs. Azzah Allahem	Lecturer
21)	Mrs. Amirah Al-Shammari	Lecturer

22)	Mrs. Deemah Almofarreh	Lecturer
23)	Mrs. Marwah Alsadun	Lecturer
24)	Mrs. Aala Alsalem	Lecturer
25)	Mrs. Amjad alowageel	Lecturer
26)	Mrs. Yasmeen Alomair	Lecturer
27)	Mrs. Maha AL-Frhood	Lecturer
28)	Mrs. Amal Almrshed	Lecturer
29)	Mrs. Meshail Alkhamsan	Lecturer
30)	Mrs. Malak Al-amri	Lecturer