



T-103
2023

Program Specification

| | |
|---|---|
| Program Name: | Computer Science |
| Program Code (as per Saudi university ranking): | 645 |
| Qualification Level: | Bachelor (Level 6) |
| Department: | Computer Science |
| College: | Computer and information sciences |
| Institution: | Jouf University |
| Program Specification: | New <input type="checkbox"/> updated* <input checked="" type="checkbox"/> |
| Last Review Date: | 1/02/2023 |

*Attach the previous version of the Program Specification.

Content:

| Content | Page |
|---|------|
| A. Program identification and general information | 3 |
| B. Mission, Objectives, and Program Learning Outcomes | 4 |
| C. Curriculum | 5 |
| D. Student Admission and Support | 7 |
| E. Faculty and Administrative Staff | 8 |
| F. Learning Resources, Facilities, and Equipment | 9 |
| G. Program Quality Assurance | 10 |
| H. Specification Approval Date | 11 |



A. Program Identification and General Information

1. Program's Main Location:

Saudi Arabia, Jouf Emirate, Sakakah, Jouf University, Main Campus

2. Branches Offering the Program (if any):

N/A

3. Partnerships with other parties (if any) and the nature of each:

N/A

4. Professions/jobs for which students are qualified

1. Systems analyst and designer
 - Software developer and designer
 - Web Developer.
 - Mobile Application Developer
 - Software project director.
 - Software Engineer
 - IT Specialist
 - IT Supervisor
 - IT Manager
 - IT expert
 - IT Support technician
 - Information Security Specialist

5. Relevant occupational/ Professional sectors:

- Information Technology Sector
- Educational Sector

6. Major Tracks/Pathways (if any): (N/A)

| Major track/pathway | Credit hours (For each track) | Professions/jobs (For each track) |
|---------------------|----------------------------------|--------------------------------------|
| - | - | - |

7. Exit Points/Awarded Degree (if any): (N/A)

| exit points/awarded degree | Credit hours |
|----------------------------|--------------|
| - | - |

8. Total credit hours: (133).



B. Mission, Objectives, and Program Learning Outcomes

1. Program Mission:

Providing distinguished educational, research, and community outputs locally and regionally in the fields of Computer Science consistent with quality standards and contributing to meeting the needs of the labor market, serving the community, and achieving sustainable development.

2. Program Objectives:

1. Provide high quality education through advanced curricula and equip graduates with essential knowledge and skills.
2. Enhance the Program's Research Excellence and International Collaboration.
3. Engage in lifelong learning for a successful career in the fields of Computer Science.
4. Equip students to embody ethical, responsible, and sustainable practices, serving as inspiring role models within their community.

3. Program Learning Outcomes*

Knowledge and Understanding

| | |
|----|--|
| K1 | Recognize fundamental concepts of computing and mathematics appropriate to the discipline |
| K2 | Recognize critical aspects of designing, implementing, and evaluating computer-based systems |
| K3 | Define computing requirements for solving computer-based problems |

Skills

| | |
|----|---|
| S1 | Analyze complex computing problems and employ principles from computing for solutions |
| S2 | Design computing-based solutions tailored to specific requirements |
| S3 | Apply computer science theories and software development principles |
| S4 | Incorporate user needs in the creation and administration of computer-based systems |
| S5 | Communicate effectively in a variety of professional contexts. |

Values, Autonomy, and Responsibility

| | |
|----|---|
| V1 | Recognize the professional, ethical, legal, security and social issues and responsibilities |
| 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. |

* Add a table for each track or exit Point (if any)





C. Curriculum

1. Curriculum Structure

| Program Structure | Required/ Elective | No. of courses | Credit Hours | Percentage |
|----------------------------|-----------------------|-------------------|-----------------|-------------|
| Institution Requirements | Required | 10 | 29 | 21.8% |
| | Elective | 1 | 2 | 1.5% |
| College Requirements | Required | 7 | 22 | 16.55% |
| | Elective | - | - | - |
| Program Requirements | Required | 20 | 62 | 46.6% |
| | Elective | 4 | 12 | 9% |
| Capstone Course/Project | | 2 | 5 | 3.8% |
| Field Training/ Internship | | 1 | 1 | 0.75% |
| Residency year | | - | - | - |
| Others | | - | - | - |
| Total | | 45 | 133 | 100% |

* Add a separated table for each track (if any).

2. Program Courses

| Level | Course Code | Course Title | Required or Elective | Pre-Requisite Courses | Credit Hours | Type of requirements (Institution, College, or |
|---------|----------------------------|--|----------------------|-----------------------|--------------|--|
| Level 1 | ENGL 001 | English Language (1) | Required | | 6 | Institution |
| | EDU 101 | University Life Skills | Required | | 2 | Institution |
| | CIS 101 | Computer skills | Required | | 3 | Institution |
| | MTH 101 | Introductory Mathematics | Required | | 3 | College |
| Level 2 | ENGL 002 | English Language (2) | Required | ENGL 001 | 6 | Institution |
| | CHM 103 | Principle of Chemistry | Required | | 3 | College |
| | CIS 102 | Problem Solving and Programming | Required | CIS 101 | 3 | Department |
| | MTH 102 | Differential Calculus | Required | MTH 101 | 3 | College |
| Level 3 | ISL 101 | Fundamentals of Islamic Culture | Required | | 2 | Institution |
| | ARB 100 | Arabic Language Skills | Required | | 2 | Institution |
| | MTH 203 | Integral Calculus | Required | MTH 102 | 3 | College |
| | CIS 203 | Computer programming (1) | Required | CIS 102 | 4 | Department |
| | CIS 211 | Discrete Mathematics | Required | MTH 102 | 3 | Department |
| | PHS 101 | General Physics (1) | Required | | 4 | College |
| Level 4 | ISL 107 | Professional Ethics | Required | | 2 | Institution |
| | ARB 102 | Writing Skills | Required | ARB 101 | 2 | Institution |
| | CNE 261 | Logic Design | Required | MTH 102 | 4 | Department |
| | CIS 204 | Computer programming (2) | Required | CIS 203 | 4 | Department |
| | CIS 205 | Data structures | Required | CIS 203 | 4 | Department |
| 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 | | 2 | Institution |
| | MTH 285 | Principles of Linear Algebra | Required | MTH203 | 3 | College |
| | CIS 312 | Theory of Computation | Required | CIS 211 | 3 | Department |
| | CIS 331 | Programming Languages and compilation | Required | CIS 205 | 3 | Department |
| | CIS 321 | Software Engineering | Required | CIS 204 | 3 | Department |
| | CIS 343 | Computer Organization | Required | CNE 261 | 3 | Department |



| Level | Course Code | Course Title | Required or Elective | Pre-Requisite Courses | Credit Hours | Type of requirements (Institution, College, or |
|---------|----------------------------|--|----------------------|------------------------------------|--------------|--|
| 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 | | 2 | Institution |
| | MTH 281 | Probabilities and Statistics | Required | MTH 203 | 3 | College |
| | CIS 322 | Concepts of Database Systems | Required | CIS 205 | 4 | Department |
| | CIS 313 | Artificial Intelligence | Required | CIS 205 | 3 | Department |
| | CIS 323 | Software Project Management | Required | CIS 321 | 3 | Department |
| | CIS 342 | Operating systems | Required | CIS 205 | 3 | Department |
| | CIS 321 | Field Training | Required | Complete 90 hours from the program | 1 | Department |
| Level 7 | CIS 432 | Parallel Computing | Required | CIS 343 | 3 | Department |
| | CNE 463 | Computer Networks | Required | CIS 342 | 3 | Department |
| | CIS 414 | Design and analysis of Algorithms | Required | CIS 205 | 3 | Department |
| | CIS 492 | Graduate Project (1) | Required | Complete 90 credit hours | 2 | Department |
| | CIS 492 | Mobile applications and development | Required | CIS 322 CIS 204 | 3 | Department |
| | CIS XXX | Elective (1) | Elective | | 3 | Department |
| Level 8 | CIS 441 | Introduction to Computer & Network Security | Required | CNE 463 | 3 | Department |
| | CIS 493 | Graduate Project (2) | Required | CIS 492 | 3 | Department |
| | CIS XXX | Elective (2) | Elective | | 3 | Department |
| | CIS XXX | Elective (3) | Elective | | 3 | Department |
| | CIS XXX | Elective (4) | Elective | | 3 | Department |
| | EDU xxx | University Elective topic | Required | | 2 | Institution |

* Include additional levels (for three semesters option or if needed).

** Add a table for the courses of each track (if any)

Department Elective Courses

| Course Code | Course Title | Pre-Requisite Courses | Credit Hours | Type of requirements (Institution, College, or Program) |
|-------------|---------------------------------|--------------------------|--------------|---|
| CIS428 | Programming on the Web | CIS 322 CIS 204 | 3 | Department |
| CIS425 | Database Management System | CIS 322 | 3 | Department |
| CIS426 | Advanced Software Engineering | CIS 321 | 3 | Department |
| CIS427 | Web engineering and Development | CIS 424 | 3 | Department |
| CIS461 | Computer Graphics | CIS 414 | 3 | Department |
| CNE 484 | Digital Image Processing | CIS 205 | 3 | Department |
| CNE471 | Computer Vision | CIS 414 | 3 | Department |
| CNE 478 | Intelligent Systems & Robotics | Complete 90 credit hours | 3 | Department |
| CIS464 | Machine Learning | CIS 313 | 3 | Department |
| CIS465 | Expert System | Complete 90 credit hours | 3 | Department |
| CIS466 | Human Computer Interaction | Complete 90 credit hours | 3 | Department |
| CIS433 | Distributed Systems | CIS 432 | 3 | Department |
| CIS434 | Cloud Computing | Complete 90 credit hours | 3 | Department |



| Course Code | Course Title | Pre- Requisite Courses | Credit Hours | Type of requirements (Institution, College, or Program) |
|-------------|-----------------------------|------------------------------|-----------------|---|
| CIS463 | Bioinformatics | Complete 90 credit hours | 3 | Department |
| CIS462 | Natural Language Processing | Complete 90 credit hours | 3 | Department |
| CIS442 | Applied Cryptography | Complete 90 credit hours | 3 | Department |
| CNE 474 | Pattern Recognition | Complete 90 credit hours | 3 | Department |
| IS427 | Fundamentals of Big Data | Complete 90 credit hours | 3 | Department |

3. Course Specifications:

Insert hyperlink for all course specifications using NCAAA template (T-104)

https://drive.google.com/drive/folders/1iSeet20w7L1yZxUcIBidSGvI4Nwp_IX_?usp=share_link

4. Program learning Outcomes Mapping Matrix:

Align the program learning outcomes with program courses, according to the following desired levels of performance (*I = Introduced* *P = Practiced* *M = Mastered*).

| Course code & No. | Program Learning Outcomes | | | | | | | | | | |
|----------------------|--------------------------------|----|----|--------|----|----|----|----|---|----|----|
| | Knowledge and understanding | | | Skills | | | | | Values, Autonomy, and Responsibility | | |
| | K1 | K2 | K3 | S1 | S2 | S3 | S4 | S5 | V1 | V2 | V3 |
| ENGL 001 | I | | | I | | | | | | | I |
| EDU 101 | I | I | I | I | I | I | | | I | I | I |
| CIS 101 | | | I | I | | | | I | | | |
| MTH 101 | I | | | | I | | I | | | | I |
| ENGL 002 | I | | | I | | | | | | | I |
| CHM 103 | I | I | I | I | I | | | | I | I | |
| CIS 102 | I | I | | I | I | | | | | | |
| MTH 102 | | I | I | | | I | I | | I | | |
| ISL 101 | | I | | | | I | | | | I | I |
| ARB 100 | I | | I | I | | | I | | | I | |
| MTH 203 | | I | I | | I | I | | | | I | |
| CIS 203 | I | I | | I | I | | | I | | | |
| CIS 211 | I | I | | I | I | | | | | | |
| PHS 101 | I | | I | I | | I | | | | | |
| ISL 107 | I | I | I | I | I | | I | | I | | I |
| ARB 102 | I | I | | I | | | I | | | I | |
| CNE 261 | P | P | | P | P | | | | | | |
| CIS 204 | P | | P | | | P | | | P | | |
| CIS 205 | P | | P | | P | P | | P | | | |
| CIS 312 | P | P | P | P | | | | | | | |





| Course code & No. | Program Learning Outcomes | | | | | | | | | | |
|-------------------|-----------------------------|----|----|--------|----|----|----|----|--------------------------------------|----|----|
| | Knowledge and understanding | | | Skills | | | | | Values, Autonomy, and Responsibility | | |
| | K1 | K2 | K3 | S1 | S2 | S3 | S4 | S5 | V1 | V2 | V3 |
| CIS 331 | P | P | | P | P | | | | | | |
| CIS 321 | | P | | | P | | P | P | | P | |
| CIS 343 | P | | | | P | | | P | P | P | |
| MTH 281 | P | | | P | | P | | P | | | |
| CIS 322 | P | | | P | P | | | | P | | |
| CIS 313 | P | | | P | | P | | P | P | | |
| CIS 323 | | P | P | | | P | | | | P | |
| CIS 342 | P | P | | P | P | | | P | | | |
| CIS 391 | M | M | | | | M | M | M | M | M | M |
| CIS 432 | M | M | | M | M | | | | | | |
| CNE 463 | | | M | M | M | | M | | | | M |
| CIS 414 | M | | M | M | M | M | | | | | |
| CIS 492 | | M | M | M | M | M | | | M | M | M |
| CIS 424 | M | M | | | M | M | | | | | M |
| CIS 441 | M | | | M | | M | | M | M | | |
| CIS 493 | | M | M | M | M | | M | | M | M | M |

* Add a separated table for each track (if any).

| Course code & No. | Program Learning Outcomes (Elective Courses) | | | | | | | | | | |
|-------------------|--|----|----|--------|----|----|----|----|--------------------------------------|----|----|
| | Knowledge and understanding | | | Skills | | | | | Values, Autonomy, and Responsibility | | |
| | K1 | K2 | K3 | S1 | S2 | S3 | S4 | S5 | V1 | V2 | V3 |
| CIS428 | | M | | M | | M | | | M | | |
| CIS425 | M | | | | M | | M | | | M | |
| CIS426 | M | | M | M | | M | | | | M | |
| CIS427 | | M | | M | | M | | | M | | |
| CIS461 | | M | | M | M | | | | | | M |
| CNE 484 | M | | | M | | M | | M | | M | |
| CNE471 | | M | M | M | | | | M | M | | M |
| CNE 478 | M | | M | | M | M | | | | M | |
| CIS464 | M | | M | M | M | M | | | | | |
| CIS465 | M | | M | M | M | M | | | | | |
| CIS466 | M | | | M | | | | M | M | | |
| CIS433 | M | M | | | M | | | M | M | | |
| CIS434 | M | | M | M | M | | | | M | | |
| CIS463 | M | | M | M | M | | | | M | | |
| CIS462 | M | | | | M | M | | | | M | |
| CIS442 | M | | M | M | M | | | | M | | |
| CNE 474 | M | M | | | | M | | M | M | | |
| IS427 | | M | | | M | | M | | M | | M |



5. Teaching and learning strategies applied to achieve program learning outcomes.

The graduates should possess the knowledge, skills and values to enable them to cope with dynamic employment opportunities, but they must also understand, through the benefits and constraints of their disciplinary perspectives, who they are and how they might contribute positively to the heterogeneity they will encounter in their local, regional and global communities.

High quality learning is not possible without high quality teaching. In CS program, we use different teaching strategies including:

- Lectures
- Tutorials
- Class discussion
- Problem solving
- Case study
- Self-learning
- Lab activities
- Reading Lists
- Hand-outs
- Group Work

Program Learning Outcomes and Teaching Strategies work together and are aligned. They are joined together as one, coherent, unity that collectively articulate a consistent agreement between student learning and teaching. The below table summarizes the teaching learning strategies methods for program learning outcomes:

| Program Learning Outcomes (PLOs) | | Teaching and Learning Strategies |
|------------------------------------|--|--|
| Knowledge and Understanding | | |
| K1 | Recognize fundamental concepts of computing and mathematics appropriate to the discipline | <ul style="list-style-type: none"> ▪ Lecture ▪ Tutorials ▪ Self-Learning ▪ Handouts ▪ Problem Solving |
| K2 | Recognize critical aspects of designing, implementing, and evaluating computer-based systems | <ul style="list-style-type: none"> ▪ Lecture ▪ Tutorials ▪ Handouts ▪ Self-Learning ▪ Class Discussions |
| K3 | Define computing requirements for solving computer-based problems | <ul style="list-style-type: none"> ▪ Lecture ▪ Tutorials ▪ Handouts ▪ Self-Learning ▪ Class Discussions |





| Skills | | |
|--------------------------------------|---|--|
| S1 | Analyze complex computing problems and employ principles from computing for solutions | <ul style="list-style-type: none"> ▪ Lectures ▪ Tutorials ▪ Lab activities ▪ Group Work ▪ Handouts ▪ Class Discussions ▪ Case study |
| S2 | Design computing-based solutions tailored to specific requirements | <ul style="list-style-type: none"> ▪ Lectures ▪ Lab ▪ Group Work ▪ Class Discussions ▪ Case study |
| S3 | Apply computer science theories and software development principles | <ul style="list-style-type: none"> ▪ Lectures ▪ Tutorials ▪ Lab activities ▪ Group Work ▪ Case study |
| S4 | Incorporate user needs in the creation and administration of computer-based systems | <ul style="list-style-type: none"> ▪ Lectures ▪ Lab activities ▪ Group Work ▪ Case study ▪ Class Discussions |
| S5 | Communicate effectively in a variety of professional contexts. | <ul style="list-style-type: none"> ▪ Group Work ▪ Class Discussions |
| Values, Autonomy, and Responsibility | | |
| V1 | Recognize the professional, ethical, legal, security and social issues and responsibilities | <ul style="list-style-type: none"> ▪ Lectures ▪ Tutorials ▪ Reading Lists ▪ Class Discussions ▪ Group work ▪ Case study |
| V2 | Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline. | <ul style="list-style-type: none"> ▪ Tutorials ▪ Project ▪ Group Work ▪ Self-learning ▪ Class Discussions ▪ Case study |
| V3 | Identify the local and global impact of computing on individuals, organization, and society. | <ul style="list-style-type: none"> ▪ Lectures ▪ Tutorials ▪ Group Work ▪ Class Discussions ▪ Case study |

Teaching and learning strategies are planned and identified according to each course learning outcomes, which are aligned with PLOs. Further, these teaching strategies are



chosen based on the domains of learning. These includes active learning strategies such as:

- Class discussion
- Group Project-based learning
- Self-learning
- Presentation and reporting strategies

Regarding the Extracurricular activities, The Jouf University has two Deanships that are responsible for developing, observing, performing, and following up of the necessary responsibilities and services related to students. These deanships are: (1) The Deanship of Admissions & Registration and (2) The Deanship of Student Affairs. The Deanship for Admissions and Registration is the impetus for academic progress of the student. It manages the most of students' affairs throughout their time at the program, starting with the application cycle, throughout their tenure as students and even after their graduation. On the other hand, the Deanship of Student Affairs gives programs and services that help the students and strengthen the academic excellence by giving chances for the students both inside and outside the program. It facilitates with the College of Computer and Information Sciences, other colleges and the Jouf University's administration in order to develop a good academic learning environment, which advances successful learning and personal development according to the rules and policies of Jouf University.

Also, the CS program propose extracurricular activities to contribute in the program learning outcomes. Extracurricular activities complement the academic curriculum by refining and developing interpersonal skills and behaviors, hence, enhancing students' experience. The impact of Student engagement in extracurricular activities on achievement and employment is becoming evident nowadays. The extra-curricular activities include the following domains:

- **Community Service**, which covers any sort of volunteer work, either in the community, on a national scale, or abroad, most educational institutions offer regular opportunities for students to give back to the community. These activities take a variety of shapes, including participating in environmental clean-up efforts and mentoring students in elementary schools. Including volunteer work on the resume shows the degree of commitment to helping the community and the willingness to serve others.



- **Professional training and academic clubs**, which shows that the passionate about learning and gaining a competitive advantage. At the collegiate level, many high-performing students are invited to join professional societies. These

are typically national associations that seek out members who are skilled in a particular field. Joining one of these societies shows the commitment to your chosen industry and the level of professional competency. Belonging to a club or taking part in professional training is beneficial because it shows potential employers that the student has some technical skills and that he/she intentionally sought out opportunities to develop professionally. The college level committee of professional and academic training organizes at each semester a wide range of training courses covering different areas in the information systems. It should also be mentioned that the CIS College offers training within the framework of IBM, CISCO, ORACLE, and Microsoft certifications as an academy accredited by the corresponding institutes and organizations. A lot of clubs are also settled at the college.

The below table summarizes some of the extra-curricular activities offered to the students and their impact on the CS program outcomes.

| Extra-curricular activity | Course | CS Program Learning Outcomes | | | | | | | | | | | |
|---|--|------------------------------|----|----|----|----|----|----|----|----|----|----|---|
| | | K1 | K2 | K3 | S1 | S2 | S3 | S4 | S5 | V1 | V2 | V3 | |
| knowledge and Technological skills | | | | | | | | | | | | | |
| 1 | Problem-Solving methods in programming | CIS102 | x | x | | x | x | | | | | | X |
| 2 | Introduction to programming using Python | CIS203 | x | x | | x | x | | | x | | | |
| 3 | Android App Development for Beginners | CIS203 | x | x | | x | x | | | x | | | |
| 4 | Advanced Programming in C++ | CIS204 | x | | x | | | x | | | x | | |





| Extra-curricular activity | | Course | CS Program Learning Outcomes | | | | | | | | | | |
|---------------------------------|---|--------|------------------------------|----|----|----|----|----|----|----|----|----|----|
| | | | K1 | K2 | K3 | S1 | S2 | S3 | S4 | S5 | V1 | V2 | V3 |
| 5 | Software design using UML | CIS321 | | x | | | x | | x | | | x | |
| 6 | Introduction to Excel (Microsoft certification) | CIS101 | x | | x | x | | | | x | | | |
| 7 | Introduction to Cybersecurity | CNE463 | | | x | x | x | | x | | x | | |
| 7 | SAS Business Analytics | CIS313 | x | | | x | x | | | x | x | | |
| 8 | Database Foundation | CIS322 | x | | | x | x | | | | x | | |
| 9 | Object-Relational Databases | CIS322 | x | | | x | x | | | | | | x |
| 10 | Database Design and Programming Using ORACLE | CIS322 | x | | | x | x | | | | | | x |
| 11 | Oracle Forms Application Server | CIS322 | x | | | x | x | | | | | | x |
| Academic Teams and Clubs | | | | | | | | | | | | | |
| 1 | Cyber Security Club: Intro to Network Security | CNE463 | | | x | x | x | | x | | x | | |
| 2 | Cyber Hub Student Club training session | CNE463 | | | x | x | x | | x | | x | | x |
| Leadership activities | | | | | | | | | | | | | |
| 1 | Develop entrepreneurial skills | CIS391 | | | | | | | | | x | x | x |
| 2 | Develop yourself with Droob-in | CIS391 | | | | | | | | | x | x | x |





6. Assessment Methods for program learning outcomes.

In order to assess and evaluate the extent to which the PLOs are being attained, the CS Program uses various processes. These processes are defined to keep data gathering efficient and effective, and the evaluation relevant according to the process of continuous improvement. To achieve these goals, two types of assessments, direct and indirect are performed. The indirect assessment is performed using surveys while the direct assessment results are obtained from student coursework-based evaluations.

1. Direct Assessment:

The direct assessment of the outcomes usually relies on the coursework and uses a variety of tools that include combinations (as defined in the articulation matrix at the beginning of academic year) of final exam, midterm tests, quizzes, homework, laboratory works, assignments, practical, projects, presentations, etc. The assessment tools do however vary from course to course. The below table summarizes the assessment methods for program learning outcomes. The department has identified various possible assessment tools where the instructor can choose from. The choice of the assessment tools varies from course to course. The list of the direct assessment tools are as follows:

- Homework
- Quizzes / Tests
- Group (Individual) Project / Mini project – Rubric Based
- Research Report– Rubric Based
- Lab Exam / Lab reports
- Exam (Mid-term and Final)
- Class Graded Discussion
- Case study
- Summarizes reading.





| Program Learning Outcomes (PLOs) | | Assessment Methods |
|---|--|---|
| Knowledge and Understanding | | |
| K1 | Recognize fundamental concepts of computing and mathematics appropriate to the discipline | <ul style="list-style-type: none"> ▪ Exams ▪ Quizzes ▪ Homework |
| K2 | Recognize critical aspects of designing, implementing, and evaluating computer-based systems | <ul style="list-style-type: none"> ▪ Exams ▪ Quizzes ▪ Homework |
| K3 | Define computing requirements for solving computer-based problems | <ul style="list-style-type: none"> ▪ Exams ▪ Quizzes ▪ Homework |
| Skills | | |
| S1 | Analyze complex computing problems and employ principles from computing for solutions | <ul style="list-style-type: none"> ▪ Quizzes/Homework ▪ Exams ▪ Rubric-based Project Report ▪ Lab Exam/Lab reports |
| S2 | Design computing-based solutions tailored to specific requirements | <ul style="list-style-type: none"> ▪ Quizzes/Homework ▪ Exams ▪ Rubric-based Project Report ▪ Lab Exam/Lab reports |
| S3 | Apply computer science theories and software development principles | <ul style="list-style-type: none"> ▪ Quizzes/Homework ▪ Exams ▪ Rubric-based Project Report ▪ Lab Exam/Lab reports |
| S4 | Incorporate user needs in the creation and administration of computer-based systems | <ul style="list-style-type: none"> ▪ Quizzes/Homework ▪ Exams ▪ Rubric-based Project Report ▪ Lab Exam/Lab reports |
| S5 | Communicate effectively in a variety of professional contexts. | <ul style="list-style-type: none"> ▪ Rubric-based Project Report ▪ Class Graded discussion |
| Values, Autonomy, and Responsibility | | |
| V1 | Recognize the professional, ethical, legal, security and social issues and responsibilities | <ul style="list-style-type: none"> ▪ Rubric-based Project Report ▪ Quizzes ▪ Class Graded Discussion ▪ Summarizes reading ▪ Case study |





| | | |
|----|---|--|
| V2 | Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline. | <ul style="list-style-type: none"> ▪ Rubric-based Project Report ▪ Lab Exam/Lab reports ▪ Graded Class Discussion ▪ Case study |
| V3 | Identify the local and global impact of computing on individuals, organization, and society. | <ul style="list-style-type: none"> ▪ Rubric-based Project Report ▪ Quizzes ▪ Graded Class Discussion ▪ Case study |

2. Indirect Assessment:

Students are asked to rate the quality of teaching and learning process through the conduction of different surveys. The CS program developed evaluation forms for many stakeholders to guide the evaluation of results obtained from the collected surveys. The table below summarizes the tools for the indirect assessment and evaluation. In this regard, formal written surveys targeting the sought outcomes are solicited from students at the end of the CS courses. The surveys are conducted by the faculty members in their respective classes or by the program coordinator.

| Assessment Tool | Frequency of Assessment | Target Level of Achievement |
|--|-------------------------|-----------------------------|
| Course Student Evaluation Survey (CES) | Semester | 60% |
| Program Evaluation Survey (PES) | Semester | 60% |
| Employers Survey | Semester | 60% |
| Exit Surveys | Semester | 60% |
| Student experience Survey | Semester | 60% |

Course Student Evaluation Surveys:

For the indirect assessment, surveys are conducted at the end of each CS course. These surveys target to obtain analysis from students towards each course at the semester end. This is designed by the deanship of quality and academic accreditation that are



based upon the suggested templates NCAAA. The survey included four themes which are:

- The first theme: The beginning of the course
- The second theme: What happened during the course (progression)
- The third theme: Evaluation of the course
- The fourth theme: Overall Evaluation

The survey used the five-point scale (Likert scale), and the mean and orientation were calculated for each item. The orientation (degree of agreement) was based on the weighted average as follows:

- Very Low
- Low
- Average
- High From
- Very High

This survey is carried out at the end of each semester. It aims to measure students' perspectives about various aspects of the courses offered in the CS program. All the Course student evaluations are carried out electronically through an Electronic Student Gate.

Program Evaluation Survey (PES): This survey result provides valuable information on the effectiveness of the program in achieving its outcomes. Furthermore, it reflects the positive and negative aspects of the student's achievements in the program.

Employer Satisfaction Survey: This survey is designed specifically for students completing the program in order to measure their extent of achievement of the set outcomes intended for the program. Such surveys have important role to play in assessing the outcomes and monitoring the quality and effectiveness of CS Program.



Exit Surveys: At the end of each semester, a survey for the final year students is carried out. The survey sought to find out how the students perceive the program in developing analytical skills, independent thinking, and others. The questions in the surveys assessed graduating students' satisfaction in the whole components of the program and program outputs including knowledge, skills, and abilities that they gained, academic and career counseling, faculty members, materials and facilities they have encountered before graduation. Survey questions on the scale of 1 to 5 with 5 being the best.

Student Experience Survey: This survey is designed to provide faculty members and administration with information about the student's learning experience. In order to increase student satisfaction with the learning experience, the instructor should retain the classroom teaching method and identify novelty to improve classroom performance.



The following steps summarize the assessment methods in CS program:

- Collecting information about our current students' performance and their grade distributions through their academic advisors, graduating student surveys, employment outcome data, employer feedback and subsequent performance of graduates are used to provide evidence about the appropriateness of intended learning outcomes and the extent to which they are achieved.
- If problems are found through program evaluations appropriate action is taken to make improvements.
- Courses and programs are evaluated and reported on annually with information about the effectiveness of planned strategies and the extent to which intended learning outcomes are being achieved.
- Records of student completion rates in all courses and the program as a whole are kept and used as quality indicators.
- Annual reports including quality assurance data are provided and reviewed by senior administrators and quality committees.
- Identifying issues that require urgent attention through students' anonymous opinions.
- Gather suggestions for improvement through workshops with working graduates.
- Conducting surveys to measure the percentage of graduates who are getting the jobs that they were expecting.
- The program is evaluated by representatives of an accreditation body.
- Feedback from visiting lecturers from the industry.
- Primarily through employer surveys, and consultation with members of the industrial advisory board who are selected to represent relevant community and employer stakeholders





D. Student Admission and Support:

1. Student Admission Requirements

The University Council determines the number of students to be admitted in the upcoming academic year according to the recommendations of Colleges' Councils and respective bodies. Admission of prospective students requires the following:

1. The applicant must hold the General Secondary Certificate or its equivalent from inside outside Saudi Arabia.
2. The General Secondary Certificate or its equivalent must have been obtained within the last five years (Exceptions can only be decided by the University Council in light of persuasive reasons).
3. The applicant must enjoy a good conduct.
4. The applicant must pass any interviews or tests decided by the University Council.
5. The applicant must be medically fit.
6. The applicant must obtain an approval to the study from his/ her employer if he/she works in any government or private institution.
7. The applicant must meet any other conditions determined and announced by the University Council at the time of application.
8. The applicant must have not been dismissed from another university for disciplinary reasons.
9. Holders of a bachelor's degree or its equivalent may not be admitted to study another BA degree (exceptions can be decided only by the University Rector).
10. Applicants who are currently registered for another university degree or less, in this university or another one, may not be admitted.

Selection of admitted students from applicants who meet all admission requirements is taken on the basis of their grades in the general secondary certificate, personal interviews and admission tests (if any).





2. Guidance and Orientation Programs for New Students

(Include only the exceptional needs offered to the students of the program that differ from those provided at the institutional level).

All newly admitted students spend their first academic year in the Common First Year. Since the language of instruction in majority of the private or public secondary schools is Arabic, the main objectives of the Common First Year program are: (a) to improve the students' English proficiency and thus enable them to pursue undergraduate studies in English, which is the principal language of instruction; (b) to review and reinforce the students' knowledge of basic mathematics and physics with English as the language of instruction; (c) to introduce the students to new university study skills needed by the students such as design studio, computer science as well as learning, communication, research and computer skills to improve their manual dexterity and develop practical skills; (d) to expose the students to the various academic specialties available in the University; and (e) to improve the students' physical well-being through health and physical education.

Students must complete all courses offered in the Common First Year program with a minimum GPA of 2 to be eligible for promotion to the freshman level and placement in CS program.

Placement is done normally at the end of spring (second) semester or after summer semester for irregular students, i.e., the students that must repeat courses. Irregular students are given a chance in the summer semester to complete their Common First Year courses according to the study and examination rules of Jouf University.

3. Student Counseling Services

(Academic, professional, psychological and social)

(Include only the exceptional needs offered to the students of the program that differ from those provided at the institutional level).

Guidance to Advising

At the beginning of each academic year, the dean and faculty of each college conduct a welcome orientation of its newly admitted students. The objectives of such an orientation include but not limited to:



1. A welcoming message from the Dean aimed at facilitating their integration into the various services of the university and also to the departments of the college.
2. Introducing the students to the Academic and Student Advising Unit in the college
3. Distributing the university Advising Guide
4. Assigning faculty advisors to the individual students
5. The meeting of the coordinators of the academic guidance to consult on the academic guidance plan in the college and about ways to develop it through practical proposals by each department under the supervision of the academic guidance unit,
6. Activate the service of an academic guide for the new faculty members and connect students with them to establish a balance in the service of guidance among all members of the faculty without full-time assignments.

Role of academic advisors

A departmental faculty member is assigned for each student as long as he is staying with the department as a student. The academic advisor advises the student until his graduation. The advisor monitors the student's performance, rectifies any errors and observed deficiencies, guides the student in preparation of the graduation plan, helps to select the elective courses and a suitable topic for senior design project to meet his graduation plan. Other responsibilities of the academic advisors may include:

1. Monitoring the absence of the student: Monitoring the absence of students from the functions of the professor of the course, and the academic advisor to follow up cases referred to him by the coordinator's guidance in accordance with the plan.
2. Coaching about students add and drop of courses procedures.
3. Providing students with direct and indirect access to the expertise of college members outside the classroom.
4. Advise the students of their career opportunities.





Career Guidance

1. Workshops are conducted during the studying for students in the early stages of how to choose a career path.
2. In each academic year prior to the commencement of the practical examinations, the college participates in the professional day. On a professional day, several workshops are held to teach students how to write a C.V., how to conduct interviews and how to choose the right job. On a professional day, the university invites a group of companies specializing in Information Technology, where they are presented with graduation projects for senior students and graduates.

4. Special Support

(Low achievers, disabled, gifted, and talented students).

Universities and colleges are increasingly aware of the needs of students with a disability and students with a learning difficulty.

Support for students with disabilities

Support provided by the college can include:

- accommodation adapted for the needs of students with disabilities
- professional care staff
- help from volunteers

Disability advisors and learning support coordinators

The college has a disability advisor or learning support coordinator to help the student get the most out of time in higher education. They can tell the student about the support available.

There are many things universities can do to help students with disabilities, including:

- making sure buildings and facilities are accessible
- encouraging flexible teaching methods
- providing support during exams
- allowing additional time to complete courses

Support for gifted and talented students

The CS program encourages talented and gifted students and ensures their continued development as ideal future candidates for advanced studies in Computer Science field on their journey to becoming the Nation's next generation of leaders and decision-makers.





E. Faculty and Administrative Staff:

1. Needed Teaching and Administrative Staff

| Academic Rank | Specialty | | Special Requirements / Skills (if any) | Required Numbers | | |
|--------------------------------------|------------------|-------------------------|--|------------------|----|----|
| | General | Specific | | M | F | T |
| Professor | Computer Science | Artificial Intelligence | - | 4 | 2 | 6 |
| | | Cyber Security | | 1 | 3 | 4 |
| | | Software engineering | | 3 | 4 | 7 |
| | | Distributed Systems | | 3 | 4 | 7 |
| Associate Professor | Computer Science | Artificial Intelligence | - | 2 | 3 | 5 |
| | | Cyber Security | | 2 | 3 | 5 |
| | | Software engineering | | 3 | 4 | 7 |
| | | Distributed Systems | | 2 | 5 | 7 |
| Assistant Professor | Computer Science | Artificial Intelligence | - | 3 | 3 | 6 |
| | | Cyber Security | | 2 | 5 | 7 |
| | | Software engineering | | 5 | 4 | 9 |
| | | Distributed Systems | | 3 | 6 | 9 |
| Lecturer | Computer Science | - | - | 10 | 10 | 20 |
| Teaching Assistant | Computer Science | - | - | 8 | 8 | 16 |
| Technicians and Laboratory Assistant | IT | IT | - | 5 | 6 | 11 |
| Administrative and Supportive Staff | secretary | secretary | - | 6 | 6 | 12 |
| Others (specify) | - | - | - | - | - | - |



F. Learning Resources, Facilities, and Equipment:

1. Learning Resources

Learning resources required by the Program (textbooks, references, and e-learning resources and web-based resources, etc.)

- a. Selecting learning resources (textbooks, references and other resource materials, including electronic and web-based resources, etc.):

The Curriculum Committee formulated general criteria for the selection of learning resources. These general criteria aim to help each subject panel to consider a number of key factors in learning resources selection. They should:

- be in line with the curriculum aims and contain the core elements of the curriculum;
- provide students with a range of materials at various levels of difficulty and present different points of view;
- enhance students' motivation and learning effectiveness;
- ensure the design of tasks and activities that cater for learner diversity;
- add reflection, self-assessment, peer and group assessment to the learning activities to improve learning;
- provide opportunities for discussion and further enquiries to facilitate students' critical thinking and to assist them to make informed judgments;

- b. Making Effective Use of learning resources

Learning resources are not the only resources that bring about learning. Faculty members continuously:

- exercise professional judgment in deciding whether to cover all the materials in the Learning resources or not;
- adapt or replace any part of a Learning resources found inappropriate to the needs of the students and use other supplementary learning and teaching resources to support students' learning;
- re-organize the units and the sequence of activities in a unit to cater for students' differing abilities; and
- Choose amongst the materials provided, e.g. avoid using workbooks/ supplementary exercises associated with particular textbooks indiscriminately in order to leave space for students to engage in a range of meaningful learning tasks.

- c. Providing Learning resources

Jouf University library offer the needed textbooks and the additional references print/online for the offered academic programs in accordance with the courses specifications that aims at providing the students with the needs knowledge/skills to attains the program/courses outcomes. The library contains thousands of paper/electronic books, journals, periodicals, etc. in the library shelves and/or via the Saudi digital library SDL. In addition, the library/digital library are reviewed and updated annually with new books and references that meet the academic program needs.



2. Facilities and Equipment

(Library, laboratories, classrooms, etc.)

a. Offices, Classrooms and Laboratories

The Computer Science department is housed within the new building of the College of Computer and Information Sciences in the main campus of Jouf University and shares some common facilities with other departments. Most of the equipment in the department are new and bought to accommodate the program needs. The faculty members and students have adequate facilities available for conducting a successful program. The facilities include several classrooms, course labs, faculty offices, and university library and network access facilities.

Classrooms

There are Four classrooms assigned to the CS department; located in the second floor of the new college building. In addition, there are fourteen classrooms of the college of Computer and Information Sciences can be used. Classrooms are adequately equipped with educational electronic media, such as a projector with Wi-Fi capacity and air conditioning system. Each classroom has suitable seating for at least twenty students.

Administrative

Head of the department has an office within the CS department suite of the college building. His office is equipped with furniture (tables, chairs, bookshelves, sofas, and notice board), an internal telephone line, personal computer connected to the Internet, a laser printer, necessary office stationery and a photocopying / scanning machine and shelving cupboards for departmental documentation and archives. There is a meeting room for the department, it is equipped with a data show a photocopy machine and a whiteboard. This room is utilized for department council meetings, faculty interviews, teaching assistant interviews, and other departmental activities.

Faculty Offices

There are seven faculty offices are located in the Computer Science department in the second floor of the college building. Every faculty has his own office that has adequate furniture (tables, chairs, bookshelves and notice board), and is equipped with a desktop and/or notebook connected to the Internet, a printer and office supplies. In addition, some of the faculty offices are also equipped with a scanner.

Clerical Staff

The department secretary's office is in front of to the head of the department office, it is furnished to seat students and visitors besides the normal office furniture (tables, chairs and bookshelves), and personal computer connected to the Internet, laser printer, and office supplies.



University library

The central library of the university is located near the college building and students can access the library online through the blackboard system.

Laboratories

All laboratories are located in the first floors of the college building. Laboratories are well equipped for practical training of students according to courses requirements, such as computers and the associated tools and equipment that support instruction. All laboratories follow safety instructions that ensure the safety of students and equipment. The general safety for students, staff, faculty and visitors is the top priority in the college. The laboratories are open to students during working hours. However, there is a schedule for each laboratory stating the times for each of the courses. For a specific course, only students of that course should use the laboratories during the allotted time for that course. The students can also use the laboratories under the supervision of department lecturer for course or project.

Network access

Faculty members and students can access internet anywhere on campus within the buildings via Wi-Fi connection provided by the department of Information Technology.

On the other hand, there are three spacious rooms for non-class activities. Besides there is one room as cafeteria with hot and cold drinks, snacks and sandwiches. In addition, there is a mosque in the ground floor for prayers. The building has 6 lifts in each floor with 15-persons capacity. Details of facilities available to the College of Computer and Information Sciences, Computer Science department are provided in the given tables:

Facilities Available at the College of Computer and Information Sciences –

| No. | Type of Facility | Facility Number | Capacity |
|-----|-------------------|-----------------|----------|
| 1 | Small class room | 7 | 20 |
| 2 | Medium class room | 5 | 30 |
| 3 | Large class room | 5 | 60 |
| 4 | Computer lab | 4 | 25 |
| 5 | Auditorium | 1 | 830 |
| 6 | Non-class room | 3 | 10 |
| 7 | Meeting rooms | 4 | 10 |





| No. | Type of Facility | Facility Number | Capacity |
|-----|---|-----------------|----------|
| | (for departments , vice deans and dean) | | |
| 8 | Lifts | 6 | 15 |
| 9 | WC | 6 | 3 |
| 10 | Library | 1 | |
| 11 | Photocopying/Scanning Room | 1 | 1 |

Facilities Available at the College of Computer and Information Sciences – Girl Campus

| No. | Type of Facility | Facility Number | Capacity |
|-----|---|-----------------|----------|
| 1 | Small class room | 5 | 30-35 |
| 2 | Medium class room | 1 | 40-45 |
| 4 | Large class room | 1 | 60-70 |
| 4 | Computer lab | 11 | 30 |
| 5 | Auditorium | 0 | 0 |
| 6 | Non-class room | 0 | 0 |
| 7 | Meeting rooms (for departments, vice deans and dean) | 1 | 1 |
| 8 | Lifts | 2 | 15 |
| 9 | WC | 2 | 7 |
| 10 | Library | 1 | |
| 11 | Photocopying/Scanning Room | 0 | 0 |

b. Computing Resources

In main campus, the program's courses are taught in four labs (Lab 101, Lab 102, Lab 103 and Lab 104). Each Lab has a whiteboard and a data show. Lab 101 has eighteen VDI PCs, Lab 102 has twenty-one VDI PCs and Lab 103 and Lab 104 have fifteen VDI PCs. The labs are available from 8 am to 4 pm. Lab 103 is opened for students for free using. In girl's campus, the program's courses are taught in eleven labs. Each lab is equipped with thirty-two PC for students and one for teacher. The students of CS program not only enjoy the use of its own computing resources, but also benefit from through facilities provided by the faculty and Jouf Library. Jouf University main campus internet bandwidth is currently 100 Mbps. Wireless internet access is installed





at the faculty reaching all points of the faculty including staff and faculty offices and class rooms. Students of Jouf University can access the wireless network without passwords. Department of Information Technology at main campus provides the IT technical support for hardware, software, and network support and handles requests.

Wireless internet access is installed at the faculty reaching all points of the faculty including staff and faculty offices and class rooms. Students of Jouf University can access the wireless network without passwords. Department of Information Technology at main campus provides the IT technical support for hardware, software, and network support and handles requests. The following faculty-wide and university-wide computing resources are available to staff and students:

1. E-Learning and Distance Learning Systems: The E-learning facility through Deanship of E-Learning and Distance Learning provides services to students and faculty through the links: <https://del.ju.edu.sa/>. Faculty members use Black Board system to monitor their students' academic progress and insert grades. Once the faculty/student is logged in, he should be able to see all the courses allocated to him for the current semester.
2. The Deanship of Admission and Registration provides its academic services system students and faculty through the link <http://dar.ju.edu.sa/>. Students can register courses online; monitor their academic progress, view and print transcripts/grades.

The above-mentioned facilities are adequate to support the scholarly and professional activities of the students and faculty in our program.

c. Guidance

The course instructors or technicians of the department of Information Technology of Jouf University are responsible for the instructional activities along with relevant safety advising in laboratories. Each laboratory has its own instructions including:

1. Instructions for individual experiments.
2. Safety instructions (Electricity, high voltage equipment, heavy machines, Steam and hot equipment).
3. Tools and equipment use and handling.
4. Computers and internet instructions.

All the laboratories have signs showing equipment and safety instructions. Safety procedures are discussed before every practical class and observed at all times.

d. Maintenance and Upgrading of Facilities

Upgrading

Annually the department requirements for laboratory equipment are requested with coordination with the department of Information Technology of Jouf University. Laboratory fund is made on request basis during the academic year. Various departments of the college of Computer and Information Sciences submit their laboratory requests to the department of Information Technology of Jouf University,





which reviews these requests, and follow them up until they get approved. Simple installations and maintenance are usually done by the technicians of the department of Information Technology of Jouf University.

Maintenance

If there is any problem in a laboratory, the instructor does the following:

1. Open the web site of Jouf University (<http://www.ju.edu.sa/en/home/>) and select Faculty Services.
2. From Faculty Services web page, select E-Services.
3. Login with his username and password.
4. From the web page <http://mps.ju.edu.sa/MyJU/ju/index.xhtml>, open the technical support link and describe the problem.
5. Submit the request to the department of Information Technology of the Jouf University.
- e. Library Services

The Deanship of Library Affairs at the Jouf University manages nine libraries. The entire library system has a distinguished collection of both printed and electronic resources to support faculty, researchers, undergraduate and graduate students. The Deanship also provides different online tools and dedicated portal for accessing its resources. These include:

- E-Resources: Portal for search of 5 electronic databases that Jouf University subscribes to.
- Library Catalog: This enables one to find resources from books and with a link for full text display.

In addition to the resources, the following services are also provided by the Deanship:

- Interlibrary loan.
- Subject liaison librarians to assist University faculty.
- Information Literacy (IL) programs ranging from one-on-one sessions to undergraduate courses for Common First Year students.
- Integrated Library Systems (ILS), provision of self-service “check-out”, “scanning and photocopying” online renewal and reservation of library material.
- Computer labs, Wi-Fi and assistance in device connectivity and technical support.
- Scanning and photocopying facilities.

More details about the Deanship and Jouf University library is available at: <http://www.ju.edu.sa/en/administrations-portal/deanships/deanship-of-library-affairs/home>.





f. Overall Comments on Facilities

Each laboratory is equipped with the required safety facilities. For example, each laboratory has emergency phone numbers, personal protective equipment, general safety signs and instructions, equipment specific safety instructions and safety labels, fire alarms, and fire extinguishing. There are emergency exits very close to the laboratories. It is clear that all available facilities in our university are great and enough which provide an adequate atmosphere conducive to learning such as classrooms, offices, laboratories, associated equipment, computing resources, and Adequate library services

3. Procedures to ensure a healthy and safe learning environment

(According to the nature of the program)

The course instructors or technicians of the department of Information Technology of Jouf University are responsible for the instructional activities along with relevant safety advising in laboratories. Each laboratory has its own instructions including:

1. Instructions for individual experiments.
2. Safety instructions (Electricity, high voltage equipment, heavy machines, Steam and hot equipment).
3. Tools and equipment use and handling.
4. Computers and internet instructions.
5. All the laboratories have signs showing equipment and safety instructions. Safety procedures are discussed before every practical class and observed at all times.

Furthermore,

- Fire evacuation policy and fire drills are practiced in all places ([safety and security guide](#)).
- First aid kits are available in CS department.
- The College has emergency plans, [safety signs, and emergency exit signs](#)





G. Program Quality Assurance:

1. Program Quality Assurance System

Provide a link to quality assurance manual.

[Computer science program quality assurance manual](#)

2. Procedures to Monitor Quality of Courses Taught by other Departments

1. The courses Specifications that are taught through other scientific departments are accordance with the program specification, and taking correlation of these programs Specification with the mission and goals of the program.
2. Program management is provided with Courses reports taught through other scientific departments. Improvements and additions to course specification can be made based on feedback from the course report in each semester
3. Visiting.

3. Procedures Used to Ensure the Consistency between Main Campus and Branches (including male and female sections).

4. Preparing the course report for all the courses in a grouped manner, in which the male and female students and the branches are explained every semester
5. Preparing the program report in a grouped manner in which the male and female students are explained annually.
6. Preparing the performance indicators report for the program.
7. Preparing an improvement plan to achieve Consistency between the two parts.
8. Appointing a coordinator for the female section to assist the department head in communication and coordination in the female section.
9. Appointing a coordinator for the female section in the formation of committees and units to ensure effective communication and coordination and follow-up of activities in both sections.
10. Representing committees from both sections, where they participate in planning and making various decisions in the program.
11. Monitoring and follow up.



4. Assessment Plan for Program Learning Outcomes (PLOs),

1. Learning outcomes are measured at the program level annually by direct method (all kinds of tests) and indirect method (questionnaires).
2. Calculating performance indicators of learning outcomes annually.
3. Based on the results of measuring learning outcomes and performance indicators of learning outcomes, an improvement and development plan that is applied in the following year has been prepared and a report of this plan is written in the program report for the following year.

5. Program Evaluation Matrix

| Evaluation Areas/Aspects | Evaluation Sources/References | Evaluation Methods | Evaluation Time |
|---------------------------|--|--|------------------------------|
| Leadership | Students, graduates, alumni, faculty Staff, administrative staff, employers | Surveys | End of Academic Year |
| Effectiveness of teaching | Students, graduates, alumni, program leaders, program leaders | Surveys, visits | Mid and End of Academic Year |
| Stockholder's opinions | Students, graduates, alumni, faculty Staff, program leaders, independent reviewers | Surveys, interviews, visits, independent reviewers | End of Semester |
| learning resources | Students, graduates, alumni, faculty Staff | Surveys | End of Semester |

Evaluation Areas/Aspects (e.g., leadership, effectiveness of teaching & assessment, learning resources, services, partnerships, etc.)

Evaluation Sources (students, graduates, alumni, faculty, program leaders, administrative staff, employers, independent reviewers, and others.)

Evaluation Methods (e.g., Surveys, interviews, visits, etc.)

Evaluation Time (e.g., beginning of semesters, end of the academic year, etc.)



6. Program KPIs*

The period to achieve the target (4) year(s).

| No. | KPIs Code | KPIs | Targeted Level | Measurement Methods | Measurement Time |
|-----|-------------|--|----------------|---|----------------------|
| 1 | KPI-P-01 | Students' Evaluation of quality of learning experience in the program | 4 | Surveys | End of Semester |
| 2 | KPI-P-02 | Students' evaluation of the quality of the courses | 4.5 | Surveys | End of Semester |
| 3 | KPI-P-03 | Completion rate | 60% | Reports of Academic System | End of Academic Year |
| 4 | KPI-P-04 | First-year students retention rate | 100% | Reports of Academic System | End of Academic Year |
| 5 | KPI-P-05 | Students' performance in the professional and/or national examinations. | NA | Reports from Alumni Unit | End of Academic Year |
| 6 | KPI-P-06 | Graduates' employability and enrolment in postgraduate programs. | 50% | Reports from Alumni Unit | End of Academic Year |
| 7 | KPI-P-07 | Employers' evaluation of the program graduate's proficiency | 4 | Surveys | End of Semester |
| 8 | KPI-P-08 | Ratio of students to teaching staff | 15:1 | Reports from Deanship of Teaching Staff Affairs | End of Academic Year |
| 9 | KPI-P-09 | Percentage of publications of faculty members | 100% | Reports from Scientific Research Unit | End of Academic Year |
| 10 | KPI-P-10 | Rate of published research per faculty member | 2 | Reports from Scientific Research Unit | End of Academic Year |
| 11 | KPI-P-11 | Citations rate in refereed journals per faculty member | 1 | Reports from Scientific Research Unit | End of Academic Year |
| 12 | ADD-KPI-P-1 | Number of research groups in the program | 6 | Reports from Scientific Research Unit | End of Academic Year |
| 13 | ADD-KPI-P-2 | Number of funded research projects in the program | 14 | Reports from Scientific Research Unit | End of Academic Year |
| 14 | ADD-KPI-P-3 | The percentage of students participating in extra-curricular activities | 30% | Surveys | End of Academic Year |
| 15 | ADD-KPI-P-4 | Employer's satisfaction about program vision, mission and goals | 5 | Surveys | End of Academic Year |
| 16 | ADD-KPI-P-5 | Percentage of the student's graduation projects related to the surrounding community | 50% | Reports from community service Unit | End of Academic Year |

*including KPIs required by NCAAA

H. Specification Approval Data:

| | |
|--------------------|-----------------------|
| COUNCIL /COMMITTEE | CS Department council |
| REFERENCE NO. | 25/1445 |
| DATE | 10/9/1445 |

