



كلية علوم الحاسب ونظم المعلومات  
COLLEGE OF COMPUTER SCIENCE AND INFORMATION SYSTEMS



هيئة تقويم التعليم والتدريب  
Education & Training Evaluation Commission



## Program Accreditation Eligibility Requirements (4)

### Student and Staff Manuals

### 4.1 Program Handbook



كلية علوم الحاسب ونظم المعلومات  
COLLEGE OF COMPUTER SCIENCE AND INFORMATION SYSTEMS

## DEPARTMENT OF INFORMATION SYSTEMS

HandBook  
Information Systems  
Program  
Department of  
Information Systems  
Najran University  
2020–2021



## DEAN'S MESSAGE

Praise be to Allah alone and blessing and peace be upon his prophet, Mohammed bin Abdullah, and upon his family and companions

People at all levels have become aware of the significance of computers and information technology feeling the great leap that the computer has brought to civilization. In just a few years, most people in the Kingdom have become aware of the Internet and its networks, where hundreds of millions of computers across the world is connected. It has become the means of communicating and transmitting information between the vast and rapidly expanding parts of the world. There is no doubt that this information contains various contents that contribute in shaping human culture and play a vital rule in running the cultural civilization of societies.

In view of the above, The College of Computer Science and Information Systems was launched from early days of establishing Najran University.



Dean of the College of Computer Science and Information Systems  
Dr. Abdullah Ali Alabas

## MESSAGE OF THE VICE DEAN FOR ACADEMIC AFFAIRS

Praise be to Allah alone and blessing and peace be upon his prophet, Mohammed bin Abdullah, and upon his family and companions.

It is my great pleasure and honor to welcome you in the college Vice-Deanship for Academic Affairs website at the college of Computer Science and Information System. The college Vice-Deanship seeks to supervise students' educational process, through its committees and units. Moreover, the college Vice-Deanship works to overcome students' obstacles by activating the Academic advising unit and help students to solve problems related to their schedules and courses etc.

Due to the rapid changes in the various fields of technology and the need for the continuous improvement the college Vice-Deanship is keen to keep updated with the rapid changes in the field by continue improving the current programs in the college.



Vice Dean for Academic Affairs  
Dr. Hani Mohammed Alskaini Alshahrani

## MESSAGE OF THE VICE DEAN FOR DEVELOPMENT AND QUALITY

Praise be to Allah alone and blessing and peace be upon his prophet, Mohammed bin Abdullah, and upon his family and companions

I am pleased to meet you on the website of the Vice-Deanship for Development and Quality at the College of Computer Science and Information System (CCSIS) at Najran University. The Vice-Deanship seeks to spread the culture of development and quality and to ensure that NCAAA and ABEAT standards are met for all college programs. Therefore, the College of Computer Science and Information Systems at Najran University is considered as one of the distinguished colleges at Najran University in terms of its academic programs educational quality.

The College has proudly adopted the concepts of quality assurance and continuous improvement in the learning outcomes and teaching practices to achieve its noble mission. Currently, programs of Computer Science and Information Systems are working towards obtaining the accreditation from the National Center for Academic Accreditation and Assessment (NCAAA), as well as from the International Accreditation Board for Engineering and Technology (ABET).

We are pleased to receive any constructive suggestions regarding to the development and quality process.



Vice-Dean for Development and Quality  
Dr. Mohammed Ali Hamdi

## MESSAGE OF THE VICE DEAN FOR FEMALE SECTION

The rapid growth in the field of computing and Information Technology increased the importance of this area of study. World is now called global village where technological developments are advancing so rapidly, and Knowledge transfer and information sharing requires advanced and compatible institutes and knowledge houses.

This college provides a big opportunity for the students of Najran, Saudi Arabia to acquire the technological knowledge in relation to world advancement in the field of computing & technology. Our aim is to produce future computer researchers, project leaders, problem solvers and well-behaved citizens of this global community.

Our college is not only giving the theoretical knowledge but also enriches the student's personal, social and cognitive skills. We provide an effective blend of theory and practice that enables students to continue to advance their knowledge after graduating from the college. We offer the best atmosphere at the college having Computer Labs equipped with the latest technological resources along with specialized and experienced faculty.



Vice Dean for Female Section  
Dr. Hanan Halawani

## THE COLLEGE OF COMPUTER SCIENCE AND INFORMATION SYSTEMS

The College of Computer Science and Information Systems at Najran University was established in 1427H starting with only two department: The Department of Computer Science and Information Systems. In a few years, the College has expanded its number of programs in the field of computer and information technology to participate in building a strong local industry market to keep up to date of technological developments, and to meet the requirements of higher education in our country.

Computer Science and Information Systems field is considered as one of the modern and renewable specialties. It plays an important role in building modern societies with strong economies and can help in advancing the country rank placing it among the industrialized and technical countries of the 21st century. Furthermore, it is one of the most innovative and fast-changing scientific fields that assists professionals to be familiar with ever changing technical information.

Acting diligently based on motivations mentioned above, the College of Computer Science and Information Systems at Najran University seeks to place the College among the leading colleges in the Kingdom of Saudi Arabia. Doing so can only be achieved by its active contribution in providing graduates with high academic capabilities in the fields of computer science and information systems. The College works to equip its graduates with adequate and appropriate information that help them pursue distinguished positions in organization related to their specialization. In addition, they continue developing their knowledge to keep up with developments in the field, as well as in the fields of scientific research. The College is also working toward reaching outstanding scientific research that support the priorities of the Kingdom in terms of scientific, industrial, and economic fields as well as raising the artistic level of the technical community in the field of computer science.

The College of Computer Science and Information Systems has two active main departments: The Department of Computer Science and the Department of Information Systems. Moreover, there are two other departments in the process of establishment and students will soon join them.



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COLLEGE OF COMPUTER SCIENCE AND INFORMATION SYSTEMS

## COLLEGE'S VISION, MISSION AND OBJECTIVES

### COLLEGE'S VISION

Leadership in computing education and researches and effective contribution to community development.

### COLLEGE'S MISSION

- Prepare high quality graduates through well-chosen and continuously developed programs.
- Conduct consistent high-quality scientific research for the academic and community development.
- Provide high quality training and consultation services to meet the community needs.

### COLLEGE'S OBJECTIVES

- Enhance the college's educational recognition at the national level.
- Prepare competent graduates to meet nation's needs.
- Reach national prominence in scientific research at the national level
- Strengthen the partnership with the community.



## HEAD OF THE DEPARTMENT

Praise due to Allah alone, and peace and blessing be upon his prophet, Mohammed, and upon his family and companions.

It is my pleasure to welcome you in the website of Information Systems Department at the College of Computer Science and Information Systems (CCSIS) at Najran University. Computing Technology constitutes an integral part of the life of human beings, nowadays. For that reason, Najran University, represented by the CCSIS, has established the Information Systems Department from the early days of its initiation.

The Information Systems Department has equipped our graduates with the knowledge in Computer Sciences and information Systems theory, in addition to the strong practical background. This role is aligned with the education, research, and community service strategy of our department.

In order to guarantee our education process is on the right path, our department has applied the best procedures and practices for quality assurance and continuous improvement, and it is my pleasure to say that the department is on track to get accredited by NCAAA and ABET. Moreover, we take it very earnestly in hiring the best qualified people to join our teaching and administrative staff.

I wish that you find complete answers for whatever questions you have regarding our department, and it is always an honor to serve you.



Head of Department  
Dr. Abdullah Ahmed Alghamdi

## ABOUT THE DEPARTMENT

The Information Systems department of the College of Computer Science and Information Systems at Najran University was established on the eve of 2007 to meet the high demand of the market and keep abreast of current technological developments. Currently the department offers program in computer science. The Information Systems program aims to prepare students to become specialists in this vital area and award students a bachelor's degree in Information Systems. The degree title for those students who satisfactorily complete the program is the bachelor's of Information Systems. This is the only bachelor's degree offered by the program. The study plans of the Information Systems program have been very carefully framed to address the most recent development, and attention is dually given to both theory and practice.

To account for the dynamic growth in the local market as well as the international advancements in the information resources fields, the Information Systems department has endeavored to assure the quality of its academic program by taking a number of major decisions. In this respect, the department established a quality assurance unit which works cooperatively with the university rectorship of development and quality to establish and disseminate quality culture and practices in every aspects of academic programs. In a major step, the department has initiated ambitious goals to obtain academic accreditation for its academic programs from the National Commission for Assessment and Academic Accreditation and the worldwide recognized Accreditation Board for Engineering and Technology.

Motivated by the university and college missions, the department funds research projects and active research groups that are contributing quality research. These research groups have set and defined objectives to conduct research on various domains that includes data mining and artificial intelligence, software engineering, knowledge management, intelligent systems and robotics. Moreover, the department has provided excellent infrastructure in the form of building and space, library, computing facility with the help of a huge number of latest generation computers in a number of PC Labs, very fast accessible networks.

The College of Computer Science and Information Systems understands that it should cope with the rapid and continuous development in the Kingdom of Saudi Arabia in the last twenty years in the field of higher education and academic institutions. It also understands the importance of coping with the industry for both public and private sectors' demand in many areas and scientific disciplines (e.g. information technology). Therefore, the college forms an advisory board for each academic program in the college

to get the valuable opinions of the community. Furthermore, the faculty members are always ready to provide valuable information to the community through meetings, discussions, workshops, orientation programs and newspaper articles.

#### CONTACT US:

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## DEPARTMENT OF INFORMATION SYSTEMS

The major of Information Systems aims to provide students with the necessary knowledge for a career in the fields of Computer Information Systems (CIS) and programming project management, which involve the development and integration of multi-purpose systems. The importance of this major stem from the fact that development of systems builds on a combination of theory and practice, which have to be founded on sound background and methods in the fields dealing with IT.

### Mission of Information Systems Program

To provide quality education through a well-designed information systems curriculum that equips students with the requisite information systems knowledge, and interpersonal skills.

### Goals of Information Systems Program

The Information System program is intended to provide graduates that's able to:

- Be a leader in the job market for information systems
- Follow-up life-long learning in the course of higher education and professional development.
- Function professionally within a team and respect ethical values.

### Graduate Attributes:

Following are the graduate attributes of information systems program:

- Be familiar with professional responsibilities and global impact in computing field based on legal, ethical, security, and social principles.
- Be equipped to seek knowledge and to continue learning throughout their lives
- Be able to work and communicate effectively as an individual and as a member or leader of a team in a variety of professional contexts

## Information Systems Program Learning Outcomes

<b>Knowledges:</b>	
<b>PLO code</b>	PLO description
<b>K1</b>	Apply knowledge of computing and mathematics appropriate to the discipline
<b>K2</b>	Identify security, privacy and social issues in information systems practices
<b>K3</b>	Support the delivery, use, and management of information systems within an information systems environment.
<b>Skills:</b>	
<b>PLO code</b>	PLO description
<b>S1</b>	Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions
<b>S2</b>	Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline
<b>S3</b>	Analyze the local and global impact of computing on individuals, organizations and society
<b>S4</b>	Use current techniques, skills, and tools necessary for computing practice
<b>Competences:</b>	
<b>PLO code</b>	PLO description
<b>C1</b>	Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline
<b>C2</b>	Communicate effectively in a variety of professional contexts
<b>C3</b>	Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles

## DEPARTMENT COUNCIL

The Information Systems Department Council members are:

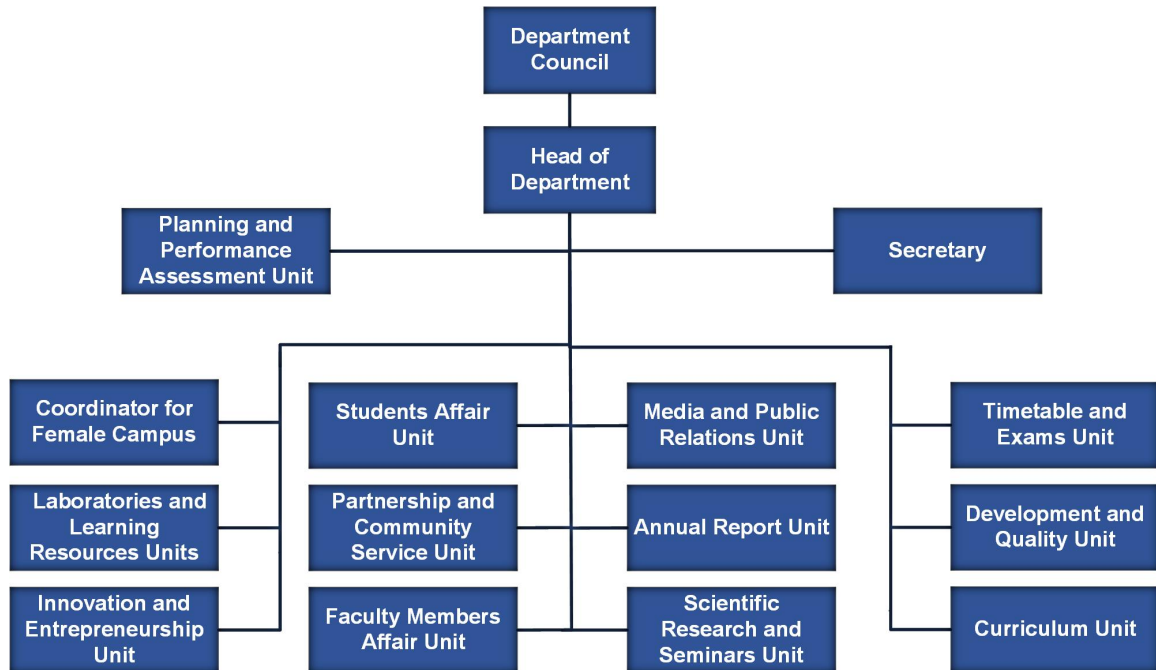
<b>1</b>	<b>Dr. Abdullah Ahmed Algamdi</b>	<b>(Head)</b>
<b>2</b>	<b>Dr. Mesfer Saleh Alrizq</b>	<b>(Secretary)</b>
<b>3</b>	<b>Dr. Mana Saleh AlReshan</b>	<b>(Member)</b>
<b>4</b>	<b>Dr. Turki Nasser Alelyani</b>	<b>(Member)</b>
<b>5</b>	<b>Dr. Mohammed Abdulatef</b>	<b>(Member)</b>
<b>6</b>	<b>Dr. Dr. Ghassan Ahmed</b>	<b>(Member)</b>
<b>7</b>	<b>Dr. Fekry Olayah</b>	<b>(Member)</b>
<b>8</b>	<b>Dr. Dr. Mohammed Abdelgadir</b>	<b>(Member)</b>
<b>9</b>	<b>Dr. Asadullah Shaikh</b>	<b>(Member)</b>
<b>10</b>	<b>Dr. Yahya Ali</b>	<b>(Member)</b>
<b>11</b>	<b>Dr. Maimonah Qasem Algathradi</b>	<b>(Member)</b>

The Department Council meets at least once every two weeks on the request of the Head of the Department. During the academic year, the department council meets in order to discuss various academic and administrative issues.

## Faculty

No.	Faculty Name	Academic Title
1	Dr. Abdullah Alghamdi	Assistant Professor
2	Dr. Mana Saleh AlReshan	Assistant Professor
3	Dr. Turki Nasser Alelyani	Assistant Professor
4	Dr. Mohammed Abdulatef	Assistant Professor
5	Dr. Dr. Ghassan Ahmed	Assistant Professor
6	Dr. Dr. Mohammed Abdelgadir	Assistant Professor
7	Dr. Asadullah Shaikh	Associate Professor
8	Dr. Fekry Olayah	Assistant Professor
9	Dr. Yahya Ali	Assistant Professor
10	Dr. Mesfer Saleh Alrizq	Assistant Professor
11	Mr. Mohammed Haif	Lecturer
12	Mr. Mazen Gazan	Lecturer
13	Mr. Abdulmajid Alqahtani	Lecturer
14	Mr. Ahmed Alhafzi	Lecturer
15	Mr. Mohammed Mana Alyami	Lecturer
16	Mr. Yahya Almazni	Lecturer
17	Mr. Abdullah Abusaq	Lecturer
18	Mr. Fayes Alshahrani	Lecturer
19	Mr. Mousa Alhareth	Lecturer
20	Mr. Ali Ahmed Alzamanan	Teaching Assistant
Female Section		
1.	Dr. Maimonah Qasim	Assistant Professor
2.	Dr. Samar Alqahtani	Assistant Professor
3.	Ms. Zahra Alabas	Lecturer
4.	Ms. Ghaida Mansour	Lecturer
5.	Ms. Ahoud Almaleh	Lecturer
6.	Ms. Asma Alqahtani	Lecturer
7.	Ms. Kawkab Aldoushan	Lecturer

## STRUCTURE OF INFORMATION SYSTEMS





## WORKING UNITS

The Information Systems Department council has decided in its meeting to reform the current working units in the department and form additional new unit to improve the performance of faculty members in achieving the department objectives. Each unit has specific tasks, and, in every semester, it must submit working plan, progress reports and final performance report to the department. The following Table shows the current working units in the department with their specifications.

No.	Name	Head	Coordinators	Tasks
1	Media and Public Relations unit			<ul style="list-style-type: none"> <li>• Gather, organize, and publish news about department activities on department websites.</li> <li>• Prepare and print brochures, manuals, handbooks ... etc.</li> <li>• Update departments websites</li> <li>• Coordinates with college and departments website unit.</li> <li>• Prepare and submit final performance report to the department</li> </ul>
2	Timetable and Exams unit			<ul style="list-style-type: none"> <li>• Prepare timetable for all courses and faculty members</li> <li>• Submit lecturers teaching loads to the head of the department</li> <li>• Coordinate with the lecturers from other colleges</li> <li>• Prepare and submit final performance report to the department</li> <li>• Organize an supervise all activities related to examinations (midterms and final) in the department</li> <li>• Prepare examination budget</li> <li>• Prepare and submit final performance report to the department</li> </ul>

3	Students Affair unit			<ul style="list-style-type: none"> <li>• Collect the students' information and create a way of communication to send important announcements to the department students.</li> <li>• Facilitate academic advising for the current student.</li> <li>• Maintain the communication between the departments and its graduates</li> <li>• Communicate with graduate students and collect their information after graduating.</li> <li>• Organize meeting with the new students' intakes</li> <li>• Study and follow up students' suggestions</li> <li>• Deal with students' complaints and take the necessary actions</li> <li>• Organize all students' activities.</li> <li>• Represent the department in academic advising, graduates, student activities units in college.</li> <li>• Prepare and submit final performance report to the department</li> </ul>
4	Development and Quality unit		<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Organize and supervise all department activities in development and academic accreditation</li> <li>• Coordinate with college unit of development and quality</li> <li>• Train new faculty member in various academic activities</li> <li>• Update and organize the contents of the department website</li> <li>• Translate and update the content of the department English website</li> <li>• Translate department council resolutions</li> <li>• Translate department reports</li> </ul>

				<ul style="list-style-type: none"> <li>• Prepare and submit final performance report to the department</li> </ul>
5	Innovation and Entrepreneurship Unit			<ul style="list-style-type: none"> <li>• Encourage and spread out the idea of innovation and entrepreneurship for faculty members and students.</li> <li>• Organize workshops for both faculty members and students to explain how to file patent and entrepreneurship and its importance.</li> <li>• Organize entrepreneurship workshops for both faculty members and students and share with them the local and global opportunities.</li> <li>• Facilitate the difficulties that both faculty members and students may face in preparing innovations projects.</li> <li>• Handle any tasks assigned by the head of the department.</li> </ul>
6	Planning and Performance Assessment Unit			<ul style="list-style-type: none"> <li>• Improve the quality of the programs</li> <li>• Improve the academic advising system</li> <li>• Promote scientific research</li> <li>• Activate department working unit.</li> <li>• Prepare and submit final performance report to the department</li> </ul>
7	Laboratories and Learning Resources unit			<ul style="list-style-type: none"> <li>• Supervise all lab related to the lab and</li> <li>• Supervise all tasks related to the library</li> <li>• Prepare and submit final performance report to the department</li> </ul>
8	Scientific Research and Seminars unit			<ul style="list-style-type: none"> <li>• Coordinate seminars and workshops</li> <li>• Prepare and submit final performance report to the department</li> </ul>

9	Partnership and Community service unit			<ul style="list-style-type: none"> <li>• Supervise all activities related to the community</li> <li>• Prepare and submit final performance report to the department</li> </ul>
10	Curriculum unit			<ul style="list-style-type: none"> <li>• Prepare the study plan for department programs.</li> <li>• Study recommendations delivered by courses' instructors and make decisions about that.</li> <li>• Handle all equivalency requests.</li> <li>• Represent the department in college equivalence committee.</li> <li>• Handle any tasks assigned by the head of the department.</li> <li>• Prepare and submit final performance report to the department</li> </ul>
11	Annual Report Unit			<ul style="list-style-type: none"> <li>• Collect all of the department information related to the report.</li> <li>• Communicate with all units and committees to sum up the tasks done and submit them properly in the annual report.</li> <li>• Prepare the department annual report.</li> <li>• Represent the department in college annual report committee.</li> <li>• Handle any tasks assigned by the head of the department.</li> </ul>
12	Coordinator for Female Campus			<ul style="list-style-type: none"> <li>• Follow up all department tasks in female section.</li> <li>• Submit all difficulties and problems to the head of the department periodically.</li> <li>• coordinate and follow up with department units to ensure the work is done properly.</li> <li>• Handle any tasks assigned by the head of the department.</li> </ul>

13	Faculty Members Affair unit			<ul style="list-style-type: none"> <li>• Determine the department needs for faculty members in both male and female sections.</li> <li>• Study and make a decision in all employment and contracting applications and submit them to department council.</li> <li>• Annual faculty members evaluation.</li> <li>• Recommendation to contract renewal and termination with faculty members.</li> <li>• Consider scholarship and extension requests and any related affairs and submit them to department council when needed.</li> <li>• Study faculty members requests like: time-off requests, conference attending requests etc.. and submit them to other units.</li> <li>• Handle any tasks assigned by the head of the department.</li> </ul>
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## EDUCATION SYSTEM

The College follows the semester system. Two semesters are offered in each academic year (each semester is called a level). The duration of each semester is fourteen weeks excluding examination, in addition to an optional 8-weeks summer semester.

## STUDENTS ADMISSION

Students who want to be admitted in The Department of Information Systems, Najran University, should satisfy the following requirements:

1. The student shall only be admitted to the University upon the calculation of his/her average as follows: 30% general aptitude, 30% achievement test and 40% general secondary (academic) if the student wishes to enroll in preparatory year. For all the other specializations, the average shall be calculated as follows: 30% aptitude and 70% general secondary.
2. The student should have obtained the general secondary certificate or its equivalent from the Kingdom or abroad.
3. No more than two academic years should have elapsed from the date of his/her obtaining such certificate or its equivalent.
4. The student should have a good conduct and proper behavior.
5. The student should successfully pass any exam or personal interview (if found).
6. The student should be medically fit.
7. The student should obtain approval from his authority to pursue his/her studies, if s/he works for any governmental or private body.
8. The student should not have been expelled from Najran University or any other university for academic or disciplinary reasons.
9. After the student is admitted, if it is turns out that he/she has already been expelled for disciplinary or academic reasons, his/her admission shall be considered as void.
10. The student meeting the requirements should present the documents stipulated by the Deanship of Admission and Registration at the University.
11. The student should not be enrolled for another university degree at the same university or at another university and should not have already obtained such degree.

12. Files of students who are late for admission tests (if found) shall be ruled out.
13. Files of students who are late for personal interviews (if found) and do not present an acceptable excuse shall be ruled out.
14. Students who are late in carrying out the admission procedures within the deadline set by the University, and who do not present an excuse acceptable by the Deanship of Admission and Registration shall have cancelled their admission.

Student Admission and Registration for Information Systems Program (IS) is performed electronically through EDUGATE, supervised by the Deanship of Admissions and Registration by the law of the University. All admission information is described publicly in a clear and understandable way on the program websites, including the requirements, policies and procedures.

Students are entitled to register courses electronically through EDUGATE before the beginning of each semester according to their study plans. Also, all most all faculty members of our IS program play a vital role as an academic advisor to support students during their course registration process and are supervised by College's Academic Advising Unit.

Rules governing admission with credit for previous studies are clearly specified in the student handbook, which is developed for IS program and complete information about the program, including the range of courses, program requirements, services and other relevant information is made publicly available to potential students and families prior to applications for admission through program website. At the beginning of each semester, the College arranges a comprehensive orientation program for prospective students to ensure thorough understanding of program requirements, the range of services and facilities available for them, and about their code of conduct & responsibilities.

## RULES AND REGULATIONS FOR REGISTRATION OF COURSES

The student is automatically registered at the beginning of each semester for a number of units according to his academic standing. Students with lower GPA are eligible to register up to 12 units, while those of higher GPA are eligible for up to 18 units as maximum.

## DROPPING AND ADDING OF A COURSE

The Processes of dropping and adding are performed by the student electronically in the first week of the semester through accessing the academic system of the University Deanship of Admission and Registration:

<https://edugate.nu.edu.sa/nu/init>

No student is allowed to register a course without passing its pre-requisite course. Students, who pass all courses without failures, are registered in the courses of the subsequent level beginning gradually after the lower levels according to the study plans approved.

Students, who fail in some courses, are registered in courses that ensure their minimum study load in each semester taking into account the following points:

No conflicts in the course study schedule.

Satisfying the previous requirements of the course or courses to be registered.

## WITHDRAWAL RULES

The student has the right to withdraw from an academic semester within the withdrawal period announced in the academic calendar for the current semester. No withdrawal is allowed during the last five weeks before the final examination. The student may get chance for the final examination if the college council accepted the student's excuse.

## CLASS ATTENDANCE

For academic accomplishment at the college of computer science and information systems students should attend at least 75% of the lectures, tutorials, and practical and laboratory lessons in regular courses. Students failing to meet this requirement in any



of his registered courses will be prohibited from attending the final examination of those courses and will have F grades that are zero grades for those courses.

## EXAMINATION AND GRADING SYSTEMS

Examination assessment or evaluation system is based on the theoretical and practical exams and homework, exercises, projects and any other scientific activities. Full marks for each course of the curricula for computer science are equal to 100 (hundred) points and is divided into two main sections, namely: course work and final examination.

1. **Course work grade:** The 50 (fifty) points are assigned for grading course work. Methods of grading include two midterm exam, class tests, quizzes, homework, assignments, exercises, mini projects, report writing, presentation of projects, lab report and lab exams, and any other scientific activities. Grades are distributed on different parts by course teacher depending on the nature of the course.

2. **Final exam grade:**

The total points for final exam are 50 points. The method of grading for the final exam includes a theoretical exam.

The pass mark in each course is 60%.

Exam evaluation system at the college is mentioned on the following tables:

### Course (Without lab)

Assessment Process	Class test	Assignment/Project	Midterms	Final	Total
Maximum points	10%	10%	30%	50%	100%

### Course (With lab)

Assessment Process	Class test	Midterms	Lab	Final	Total
Maximum points	06%	24%	20%	50%	100%

## The Grading system of Najran University:

Letter of Grade	Mark (%)	Average Point
A+	95 – 100	5.00
A	90 – 94	4.75
B+	85 – 89	4.50
B	80 – 84	4.00
C+	75 – 79	3.50
C	70 – 74	3.00
D+	65 – 69	2.50
D	60–64	2.00
F	Below 60	1.00

### Average and Cumulative GPA:

The Average and cumulative GPA are calculated every semester for the student automatically by the system.

Calculating the Semester Average:

The GPA is calculated considering the following points:

1. Determining the total points obtained in all courses of the semester.
2. Determining the total number of hours registered in the semester.

The average is calculated every semester according to the following equation:

$$\text{GPA} = \frac{\text{Total Points (Item 1)}}{\text{Numbers of Hours registers in the semester (Item 2)}}$$

A student's grade point average (GPA) is determined by dividing the cumulative point value of all courses attempted by the number of units in the student's semester schedule. An example is the following hypothetical student's report having six subjects in a particular semester.

Course	Credit-Hours	Letter Grade	Value Factor	Product (Total Grade Point)
1	2	B+	4.5	9
2	3	D	2	6
3	3	C	3	9
4	4	D+	2.5	10
5	1	B	4	4
6	4	C	3	12
<b>Total</b>	<b>17</b>			<b>50</b>

This student's semester grade point average is  $(50/17) = 2.94$

CGPA (Cumulative GPA): For first semester, students' GPA is also equaling to students' CGPA.  $[(\text{total grade point for semester 1}) + (\text{total grade point for semester 2}) + \dots + (\text{total grade point for semester n})] / \text{total credit taken in all semesters}$ .

Example of calculating CGPA: In 1st semester student got 32 total grade points for 11 credits, and in 2nd student got 39 total grade points for 14 credits, the CGPA of this student is:

$$[(32) + (39)] / (11 + 14) = 2.84 \text{ CGPA}$$

The cumulative grade point value is translated as follows:

Accumulative Points	Accumulative Grade
4.50 upwards	<b>Excellent</b>
3.75 – 4.50	<b>Very Good</b>
2.75 – 3.75	<b>Good</b>
2.00 – 2.75	<b>Pass</b>
Less than 2.00	<b>Fail</b>

### Restrictions of the Final Examination

No student will be allowed to sit for a final examination after the lapse of 30 minutes from the beginning of the examination. Also, no student will be allowed to leave the examination venue less than 30 minutes after the beginning of the examination.

## TRANSFER STUDENTS AND TRANSFER COURSES

Internal transfer in college of Computer Science and Information Systems:

From	To	Minimum GPA	Max number of students allowing to transfer per semester/ term
Department of Computer Science	Department of Information Systems	2.5	5
Department of Information Systems	Department of Computer Science	3	10

Inter College transfer (from other colleges of Najran University to the College of Computer Science and Information Systems):

From	To	Minimum GPA	Number of students
<b>College of Medicine</b>	College of Computer Science and Information Systems	2.25	6(4 Computer Science+2 Information Systems)
<b>College of Dentistry</b>	College of Computer Science and Information Systems	2.5	6(4 Computer Science+2 Information Systems)
<b>Applied Medical Sciences</b>	College of Computer Science and Information Systems	2.75	4(3 Computer Science+1 Information Systems)
<b>College of Engineering</b>	College of Computer Science and Information Systems	3	4(3 Computer Science+1 Information Systems)

## Transfer Rules from Other Colleges

- Transfer from any theoretical College to College of Computer Science is not allowed.
- Transfer from Colleges that do not require Preparatory year is not allowed. However, students who completed a Diploma in Information Systems (3 years program with 86 credit hours) from a Community College are allowed to join the Information Systems program. Those students are exempted from the preparatory year (27 Credit hours) and 23 credit hours (from IS courses and general courses).

Transfer to/from other national universities to the College of Computer Science and Information Systems is allowed considering the following points:

- Verify the conditions and requirements of Najran University transfer.
- Assure the students finish successfully the Preparatory Year.
- Verify the condition of specialization in Najran University.
- Transfer from similar program to Computer science program.
- GPA must be at least 3.25 out of 5 points.

The transferred courses and credits must also satisfy the following regulations:

- Credit hours for the course to be equalized from the other university must be equal to or greater than the credit hours of the corresponding course in the College of Computer Science and Information Systems.
- The equivalent course grade must be more than 80%.

The above rules are also applied for the visitor students transfer to other/national universities. Therefore, the College of Computer Science and Information Systems have successfully implemented the transfer program of the students.

## UNDERGRADUATE PROJECT

Independent study course whereby a group of students (3 to 4) at level seven selects one of the proposals submitted by department faculty members with a timeline and evidence of research and analysis, meets with an advisor and co-adviser throughout the semester and then provides a final report regarding system requirement, analysis, and design and makes a formal presentation. In the next semester at level eight every group develops, simulates, implements, and tests software, database through the semester and then provides a final report, presents software, and makes a formal presentation.

The major intended learning outcomes of the project or research task:

- 1) Development of skills in planning, analyzing, designing, and carrying out a major research project.
- 2) Development of practical skills of using various computer software, programs, programming languages, databases and implement in professional life
- 3) Improvement of analytical, writing, and communicative skills
- 4) Improvement of skills in effective time management
- 5) Improvement in ability to operate as a team member in a significant project
- 6) Improvement in ability to think critically, research in various aspects
- 7) Improvement in ability to respect social, ethical, and moral issues

## STUDENTS' ACADEMIC ADVISING UNIT

Academic Advising Unit (AAU) of IS program governs by the College of CSIS aimed to provide absolute guidance to the students through efficacious counselling regarding students' academic and personal difficulties. This service is currently internally to academic concerns. Students are formed in a group according to their student ID and each group has been assigned to an academic advisor to ensure that all students get academic counselling throughout the program. All most all faculty members of the program are playing a role as an academic advisor as a part of their job responsibilities by following the guidelines set by academic advising unit and being monitored by the

coordinator of this unit. At present, separate time for student advising in academic advisors' timetable has been implemented and 4 hours have been allotted during the week for Academic advisors to schedule. Each newly enrolled student is encouraged to meet his/her academic advisor and open a student file which should be kept and maintained by academic advisor as record. This file should reflect student progress mainly concerning on student's results. Academic advisors write a summary report on each student progress and based on this progress report, at the end of each semester, academic advisors produce a subject plan for the coming semester for each advisee student. After preparing a subject plan for a student, academic advisors are accountable to forward this plan to the academic advising unit and in parallel consult with the student about the proposed subject plan the graduating/higher level (level 7,8,9) students depending on the student's' necessity. For our along with their expected graduation time frame (part of their program plan). Counselling on career planning take place mostly for the graduating/higher level (level 7, 8, and 9) students depending on the Students' necessity. For this program, Students' academic appeals are mainly categorized by the form of 'Add/drop courses, Absent excuses, Re-checking of exams and Make up exams'. Apart from these academic appeals, other appeals are also considered by the academic advising units by an adopted mechanism. Each student is accountable to place an appeal through his/her academic advisor using case specific appeal form. All appeal forms are available on the university's website from where student can fetch. These forms are also available with academic advisors. Academic advisors are accountable to consult with the student in detail to spot students' need and provide guidance to fill out the appeal form. During this consultation process, academic advisors are responsible to fetch necessary record from corresponding student file to support his/her opinion.

In the end, Student Advising and Counselling services of our program currently internally to academic concerns. At present, we do not have facilities to provide counselling regarding students psychological/health problems, financial matters and family problems, but we can transfer them to Deanship of Student Affairs.

#### Students Distribution Mechanism:

The Academic Unit distributes the list of students at the beginning of each academic year or semester wisely to academic advisors so that each advisor has a less than or equal twenty students. It conducts a meeting in the first week of each academic year/semester with new students and transferees to provide them with the necessary information for undergraduate study.

In addition, it introduces all students with their advisors and explains the responsibilities of advisors and advisees. Then it opens a file for each student with his advisor. Besides, it provides all students' documents (academic transcripts, timetable, and marks) to the advisors to follow-up students. Ultimately, the advisor will follow-up service required by the student, and find out the appropriate response to it.

Faculty members are assigned students majoring in their field of expertise and are trained in counselling students regarding program requirements. Student meets with academic advisor either in the group or individually at any time throughout the semester. Advisor has no more than 10 students to advice for the independent study.

#### Advisors major responsibilities are:

- 1) To make individual student file and keep students records
- 2) To offer courses for regular and summer semesters
- 3) To manage students' sick leaves
- 4) To handle excuses during semester
- 5) To keep the records of internal, midterms, lab, and final exams' marks
- 6) To declare marks of internal, and midterms to the students
- 7) To manage departmental procedures if any student wants to take summer courses in any other universities within the kingdom
- 8) To monitor students' academic and moral progress
- 9) To advice the students about program planning and career planning

#### Complaints and Appeals System:

Information Systems program adopted effective policies and regulations to establish fair and consistent processes of student study, with effective safeguards for independent consideration of complaints and appeals.

Student appeal and complaint procedures are specified in regulations and made widely known at the time of orientation. The College of CSIS developed different case specific academic appeal templates to make clear ground of academic appeals.

#### Procedure to Handle Students' Complaints

The College of Computer Science and Information Systems developed a comprehensive system to handle students' complaints. Complaints are normally categorized in the following classes:



### 1. General Complaints:

These types of complaints that are made by students and have no specific allegation and are normally related to classroom facilities, difficulties with class schedule, etc. Students have to visit their academic advisors to make this type of complaint and discuss their issues. Academic advisors will pass the students complaints to the Academic Advising Unit coordinator. The coordinator will review the complaint and, if necessary, will pass it to the decision-making authority. The decision-making authority will in turn pass the decision back to the academic advisor via the Academic Advising Unit coordinator. The advisor will then notify the student about his/her complaint outcomes.

### 2. Blind Box Complaints:

These types of complaints are normally case specific with pointed allegation. They are handled with high confidentiality. There is a specific template/form for this type of complaint. The college provides a complaint and suggestion box (Blind Box) in the Computer Science and Information System building, beside the Dean's office. Students write down their complaints and/or suggestions using the suggested form and drop them in the box. The box is usually opened on the 25th of each month by the Complaint Handling Committee (in presence of at least 2 members). The committee passes the complaints (if any) to the college council for further actions. The Complaint Handling Committee consists of 7 members as follows:

- The Dean
- The Vice Dean
- Director of Administrative staff
- College Coordinator
- Coordinator of Student Advising Unit
- Department Head (CS)
- Department Head (IS)

### 3. Direct Email Complaints:

In Direct E-mail complaints, students from female campus are allowed to complain directly to the Dean of The College through a specified e-mail address and this kind of complaint is highly confidential and the decision is directly taken by the dean.

## Procedure to Handle Students' Appeals

Students' academic appeals are mainly categorized by the form of 'Add/drop courses, Absent excuses, Re-checking of exams and Make up exams. Apart from these academic appeals, other appeals are also considered by the academic advising units by an adopted mechanism. Each student is accountable to place an appeal through his/her academic advisor using case specific appeal form. All appeal forms are available on the university's website from where student can fetch. These forms are also available with academic advisors. Academic advisors are accountable to consult with the student in detail to spot students' need and provide guidance to fill out the appeal form. During this consultation process, academic advisors are responsible to fetch necessary record from corresponding student file to support his/her opinion.

When an appeal has been finalized and submitted by the student, academic advisors are accountable to attach necessary supporting documents such as student's transcript, medical excuses, add/drop form etc. with this appeal and forward this appeal to the academic advising unit through the University's correspondence tracking system (<https://cts.nu.edu.sa/NajranCTS/start>) for further processing. The coordinator of academic advising unit is accountable to check completeness and to verify the ground of each appeal based on university's regulations, college rules and program requirements. If an appeal complies with all requirements, it has been carrying forwarded to the decision-making authority (Dean of the college), else it has been returned to the correspondent academic advisor.

The decision-making authority provides decision on the majority appeal cases by 7 days that appear in different places/format depending on the nature of the appeal.

All the appeals are automated and hence it facilitates the Advisee student to send their appeals through the system and this has been implemented from the second semester.

Successful appeal for rechecking of exam is forwarded to the college coordinator. College coordinator is accountable to form an evaluation committee and send the review request to that committee. The evaluation committee should consist of at least 3 people (i.e. Program coordinator, subject coordinator, member of that subject's knowledge group) and is accountable to provide the outcome within 3 days.

## STUDENT RECORDS

Najran University adopted fully automated system that inherits well defined regulations to keep up student records. This automated system is centrally organized and operated by University's 'Student Record and Registration Department'. Information Systems (IS) program is also abided by that automated system. This student record system regularly provides aggregated statistical data required for planning, reporting and quality assurance. Clear rules are established and maintained governing privacy of information and controlling access to individual student records. This automated system supports eligibility checking for graduation in relation to program and course requirements.

## STUDENT MANAGEMENT

Information Systems Program adopted effective policies and regulations to establish fair and consistent processes of student management, with effective safeguards for independent consideration of disputes and appeals. Class Attendance requirements are made clear to students at the time of orientation and are monitored & enforced using automatic student attendance system. Student appeal and complaint procedures are specified in regulations, published and made widely known at the time of orientation. The college of CSIS developed different case specific academic appeal templates to make clear ground of academic appeals. These appeal and complaint procedures protect against time wasting on trivial issues, but still provide adequate opportunity for matters of concern to students to be fairly dealt with and supported by student counseling provisions. Appeal and complaint procedures guarantee impartial consideration by persons or committees independent of the parties involved in the issue, or who made a decision or imposed a penalty that is being appealed against. Procedures have been developed to ensure that students are protected against subsequent punitive action or discrimination following consideration of a complaint or appeal. For CS program, appropriate policies and procedures are in place to deal with academic misconduct, including plagiarism and other forms of cheating.

## PROGRAM EVALUATION AND REVIEW

The main objective of the evaluation and review processes is to evaluate the quality of the CS program. More specifically, all aspects that affect the program (e.g. learning outcomes, facilities and resources, teaching strategies, etc.) are reviewed and assessed to improve the quality of the program, to show responsibility to the general community and to prospective students. The evaluation and review processes are designed to ensure that a sustainable and efficient continuous improvement system is applied to meet the following additional goals:

- To monitor the mission and objectives of the program.
- To foster academic excellence.
- To determine the weaknesses and strengths of all aspects related (e.g. academic, community service and research) to the program.
- To define how to improve the quality of the program.
- To ensure rigor implementation of actions in order to improve the program.
- To improve teaching strategies and other educational practices.
- To check and improve the extent to which each learning outcomes at various levels are being attained.
- To monitor and improve academic support and services provided to students.
- To check that resources and facilities are available and used effectively.
- To provide and improve direction related to administrative decisions on issues related to financial planning and employment processes.
- To maintain internal and external benchmarking and determine how the quality of the program has been improved.
- To obtain national and international accreditations (NCAAA and ABET).

The program is reviewed internally and externally through several assessment methods. The internal review system of the program includes the following:

1. Annual Program Report: The NCAAA annual report template is filled out every year and covers all issues related to the program. This report includes evaluation of learning outcomes and a general evaluation of the program using surveys. The information on the enrolment of students, completion rates, records of student completion rates in all courses, and grades distributions are used quality indicators.

2. Curriculum Committee Report About Courses: By the end of each semester, the curriculum committee (CC) reviews all courses' reports (NCAAA format) and prepare a report that contains three sections 1) recommendations to be implemented at the program level 2) recommendations to be implemented for all courses 3) recommendations at specific course level. The recommendations are discussed by the program council and implemented and followed-up.

3. Exit Survey: This survey is filled-up by all students at the time of graduation. Specifically, this survey is given to them before they can make the final presentation of their Graduation Project II (572CIS-3). The purpose of this survey is to measure if the performance indicators for each student outcomes meet the required level of achievement (65% agree or strongly agree) or not. The exit survey explicitly addresses the SOs in terms of their PIs. The exit survey consists of several sections that allow students to give their opinions in advising, learning resources, professional preparation, teaching strategies and educational practices. They also can write comments about the program overall and suggest improvements.

4. University Online Course Survey: By the end of the semester, the quality of the courses is evaluated from the students' perspectives. This survey includes several sections such as 1) content of the course, 2) teaching strategies 3) assessment methods, 4) textbooks and 5) lecture materials etc. Students overall rating on the quality of their courses is discussed with all faculty members and improvement plan is prepared if needed.

5. Current Student Survey: The program adopted the NCAAA current student survey. This survey is distributed to students once a year. Moreover, this survey is used to take the opinions of students about issues such as 1) Academic Advising and Support provided to students, 2) Learning Resources and Equipment 3) Learning and Teaching 4) learning outcomes and 5) overall quality of the program.

6. NCAAA Course Reports: By the end of each semester, each instructor must submit the course report (NCAAA) that contains assessment of Course Learning Outcomes (CLOs) as well as improvement plan based on CLOs assessment. Improvement plan might be related to several aspects in the program such as facilities, teaching strategies, content of the course, etc.

7. Facilities and Resources Survey: This survey is conducted once a year to take the opinions of faculty members regarding the allocation of facilities and resources and their appropriateness and effectiveness. The Faculty and Resources Committee (FRC) are responsible for this survey.

8. Alumni and Employer Surveys: The alumni and employer surveys contain questions and feedback boxes to assess the achievement and the importance of the current Program.

9. Program Advisory Committee (PAC) Meeting and Survey: the chair of the department meets every year with the PAC to know whether the current SOs meet the needs of the labor market. PAC evaluates the importance of learning outcomes through survey and ensures that the outcomes are still in-line with the dynamic needs of the industry. In addition, PAC must be involved of any changes to improve the program.

10. Program Administration Survey: This survey is to take the opinion of faculty members about the administration of the program.

11. Questionnaire about the Internal Quality Assurance System: This questionnaire is conducted every year to evaluate the performance of the quality assurance systems in the college.

12. Textbook Evaluation and Availability Form: This form is filled out by all faculty member every semester to evaluate the relevancy of textbooks and references materials to the academic fields.

13. Evaluation Mechanisms: For each one of the NCAAA standards (6 standards), a set of evaluation mechanisms were developed and used to evaluate the results of the corresponding KPIs and the quality of relevant practices. Mechanisms to evaluate KPIs and standards include data about : when data are collected (e.g. Once a Year), responsible people to collect and evaluate the data (DQU and DSC and CC), Targeted group (Alumni), Assessment methods (Alumni survey), purpose of the mechanism and target (KPI).

Several committees and units are involved in the organization of surveys, data collections, and analysis of results. The DQU and DSC monitor the progress of other committees and ensure that review processes are implemented as planned. The data of the program review processes are collected and evaluated throughout the program by several working committees. Several reports are prepared and reviewed as follows:

- Reports related to the curriculum and academic issues such as courses, learning outcomes are discussed at the curriculum committee and improvement plans are created. The output of the curriculum committee needs approval from the program council and/or college council.
- All evaluation results and reports are discussed at the program council, and if needed, at the college council for approval. Improvement plans are created and followed.

- Major changes in the program must be discussed with all stakeholders of the program including PAC, faculty and students, etc. and finally approved by the program, college and institution councils.
- Minor changes need approval from the program council and can be implemented any time during the program review process (assessment cycle).

The following figure shows the review and evaluation processes of the program. The data are collected for all aspects of the program (KPIs, inputs, processes, outputs and outcomes) from various stakeholders. The data are then analyzed. The evaluation results are discussed by the CC and program and college council. Finally, actions are created and implemented and monitored to improve the quality of the program.

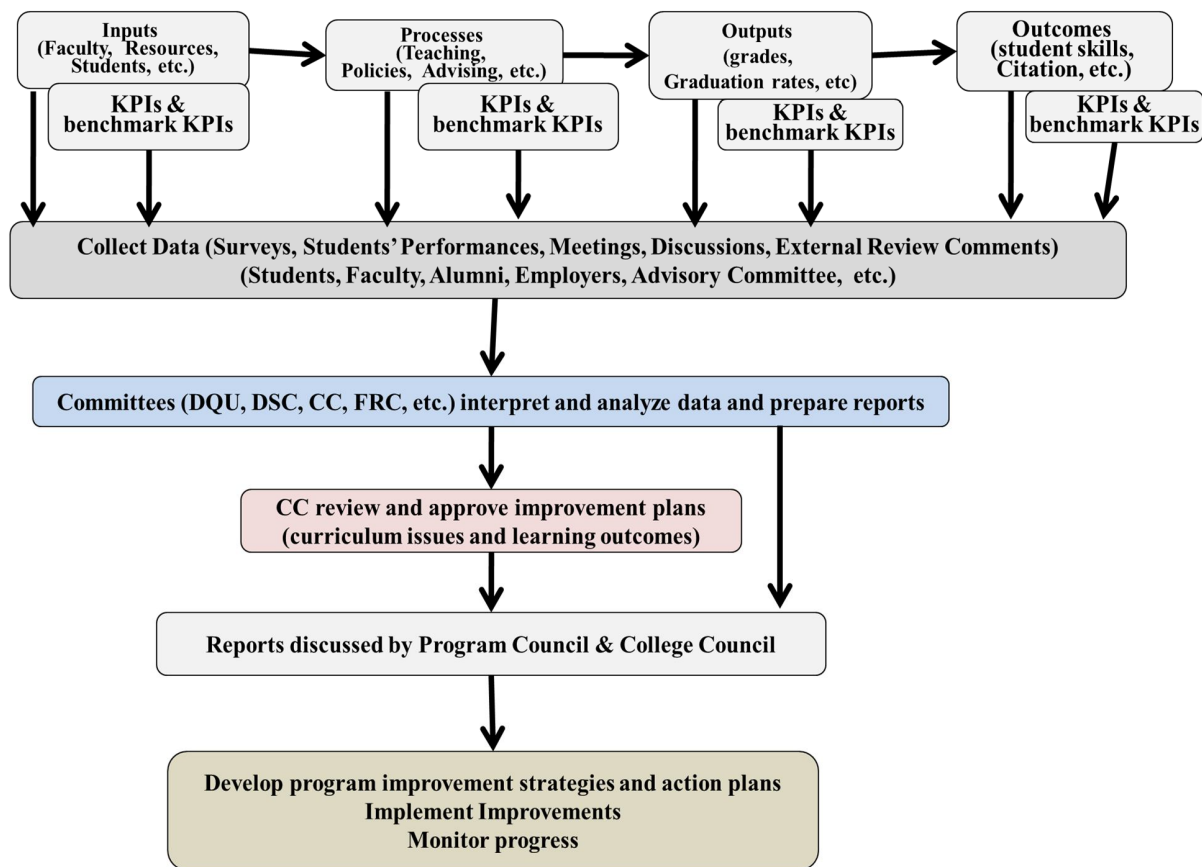


Figure: IS Program Evaluation and Review Processes

## PROGRAM'S KNOWLEDGE GROUP

The curriculum committee has decided and approved 9 knowledge areas for IS program. The knowledge areas are as follows:

- Programming Languages Concepts
- Data Structures and Algorithms
- Information Management
- Operating Systems
- Software Engineering
- Intelligent Systems
- Networking and Distributed Computing
- Social and Professional Issues
- Basic Science

## STUDY PLAN

The education system is semester-based (two semesters in a year) in the department of Information Systems. To be graduated from the department, a student must complete a 149 credit hours length Information Systems program.

Course Code	Course Name	Credit Hour (Theoretical, Practical, and Tutoring)	Prerequisite
<b>Level One</b>			
140TEC-2	Computer Skills	2	
140MATH-2	Introduction of Mathematics	2	
140SKL-2	Learning, Thinking and Research Skills	2	
140ENGG-2	English Language: Reading Skills	2	
141ENGG-2	English Language: Writing Skills	2	
142ENG-2	English Language: Listening and Speaking Skills	2	
143ENG-2	English Language: Grammar	2	
		<b>14</b>	
<b>Level Two</b>			



150TEC-1	Technology	1	
150MAN-1	Occupational Ethics	1	
150MATH-4	Algebraic Sciences	4	
150SKL-2	Communication Skills	2	
150ENGG-3	English Language: Speaking	3	
151ENGG-2	Report Writing	2	
		13	
<b>Level Three</b>			
111ISL-2	Introduction to Islamic Culture	2	
113ACC-3	Fundamentals of Financial Accounting	3	
211CSS-4	Fundamentals of Programming	4 (3 ,1 ,0)	
282MATH-3	Calculus 2	3	
241CIS-2	Fundamentals of Information Systems	2	
201ARAB-2	Arabic Language Skills	2	
		16	
<b>Level Four</b>			
112ISL-2	Introduction to Islamic Culture 2	2	
212CSS-4	Object Oriented Programming	4 (3, 1, 0)	211CSS-4
283MATH-3	Discrete Mathematics	3	
251CIS-3	Information Systems Analysis and Design	3	
231CIS-3	E-Commerce	3 (2, 1 ,0)	
<b>Level Five</b>			
113ISL-2	Islamic Culture 3	2	
202ARAB-2	Arabic Writing	2	
284MATH-3	Linear Algebra	3	
321CSS-3	Data Structures	3 (2 ,1 ,0)	211CSS-4
342CIS-3	Fundamentals of Databases	3 (2 ,1 ,0)	
333CIS-3	Management Information Systems	3	
		16	
<b>Level Six</b>			
285STAT-3	Probability and Engineering Statistics	3	
332CSS-3	Operating Systems	3 (2 ,1 ,0)	211CSS-4

313CIS-3	GUI Programming	3 (2 ,1 ,0)	
343CIS-3	Advanced Databases	3 (2 ,1 ,0)	342CIS-3
314CIS-4	Internet Application and Web Development	4 (3 ,1 ,0)	
		16	
<b>Level Seven</b>			
473CIS-2	Information Systems Ethics	2	
434CIS-3	Multimedia Information Systems	3 (2 ,1 ,0)	
435CIS-3	Distributed Information Systems	3 (2 ,1 ,0)	
461CIS-3	Computer Networks	3 (2 ,1 ,0)	
452CIS-3	Information Systems Engineering	3 (2 ,1 ,0)	251CIS-3
		14	
<b>Level Eight</b>			
415CIS-3	Mobile Applications Development	3 (2 ,1 ,0)	
462CIS-3	Networks Administration	3 (2 ,1 ,0)	461CIS-3
463CIS-3	Information Systems Security	3 (2 ,1 ,0)	
444CIS-3	Human Computer Interaction	3 (2 ,1 ,0)	
445CIS-3	Data Science	3 (2 ,1 ,0)	
		15	
<b>Summer Semester</b>			
570CIS-4	Field Training	4	60 Credit Hours (Excluding Prep Year)
<b>Level Nine</b>			
571CIS-2	Graduation Project 1	2 (1, 1, 0)	452CIS-3
574CIS-3	Managing People and Organizations	2	
536CIS-3	Geographic Information Systems	3 (2, 1, 0)	
546CIS-3	Decision Support Systems	3	
538CIS-3	Selected Topics in Information Systems 1	3	
		13	
<b>Level Ten</b>			
572CIS-3	Graduation Project 2	3 (1, 2, 0)	571CIS-2
537CIS-3	Social Informatics	2	
564CIS-3	Digital Forensic and Cyber Security	3 (2 ,1 , 0)	463CIS-3
539CIS-3	Selected Topics in Information Systems 2	3	

114ISL-2	Islamic Culture 4	2	
		13	

## SYMBOLS USED

Meaning of symbols used in this handbook is identified as follows:

Symbols used in the study plan:

Symbols for Course Code	Interpretation
CSS	Computer Science
CIS	Information Systems
MATH	Mathematics
PHIS	Physics
STAT	Statistics
ISL	Islamic Culture
ARAB	Arabic Language
BIOL	Biology

## GRADUATION PROJECT AND ASSESSMENT SYSTEM

Independent study course whereby a group of students (3 to 4) at level seven selects one of the proposals submitted by department faculty members with a timeline and evidence of research and analysis, meets with an advisor and co-advisor throughout the semester and then provides a final report regarding system requirement, analysis, and design and makes a formal presentation. In the next semester at level eight every group develops, simulates, implements, and tests software, database through the

semester and then provides a final report, presents software, and makes a formal presentation.

The major intended learning outcomes of the project or research task.

- Development of skills in planning, analyzing, designing, and carrying out a major research project
- Development of practical skills of using various computer software, programs, programming languages, databases and implement in professional life
- Improvement of analytical, writing, and communicative skills
- Improvement of skills in effective time management
- Improvement in ability to operate as a team member in a significant project
- Improvement in ability to think critically, research in various aspects
- Improvement in ability to respect social, ethical, and moral issues

Project's study courses offered by the program are mentioned below:

Level No (Semester/year)	Course code	Course Name	Prerequisites
9 (1/5)	571CIS-2	Graduation Project 1	452CIS-3
10 (2/5)	572CIS-3	Graduation Project2	571CIS-2