



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

PROGRAM HANDBOOK

Department of Computer Science

Najran University

2021-2022



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MESSAGE OF THE DEAN

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. Mohammed Ali Hamdi

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.

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 QUALITY & DEVELOPMENT

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

Vice-Deanship for Development and Quality at the College of Computer Science and Information System (CCSIS) at Najran University seeks to spread the culture of development and quality and to ensure that NCAAA and ABET 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 [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 [Female Section]
Dr. Hanan Halawani

MESSAGE OF HEAD OF THE DEPARTMENT

The Department of Computer Science has succeeded in graduating skillfully and scientifically qualified male and female students with satisfactory competence in various fields of computer in the labor market.

The Department of Computer Science includes elite faculty, lecturers and teaching assistants, who have devoted their efforts to elevate the level of the Department on national global scale since the establishment of the university.

Besides, the Department is keen to achieve the academic quality and continuous development of the learning process according to the global standards, depending on intensive efforts of the staff of the department, seeking to obtain academic accreditation for a program of Computer Science either at a national level (NCAAA) or an international level (ABET).



Head of Department
Dr. Yousef Abdullah Asiri

COLLEGE'S VISION, MISSION AND OBJECTIVES

The College of Computer Science and Information Systems at Najran University was established in 1427H starting with only two departments: the Department of Computer Science and Information Systems. In a few years, the College 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.

The Computer Science and Information Systems field is considered 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 specialization. They also 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 three active main departments: The Department of Computer Science, The Department of Information Systems and The Department of Network and Communication Engineering.

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.

ABOUT THE DEPARTMENT

The Department of Computer Science 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 Computer Science program aims to prepare students to become specialists in this vital area and award students a bachelor degree in computer science. The degree title for those students who satisfactorily complete the program is the bachelor of Computer Science. This is the only Bachelor degree offered by the program. The study plans of the computer science program has 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 Computer Science 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 rector ship 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 [NCAAA] and the worldwide recognized Accreditation Board for Engineering and Technology.[ABET]

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 provide 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.

Mission, Goals and Learning Outcomes

Computer Science Program is considered as modern and renewable specialization. Computer Science is one of the important disciplines necessary to build modern societies with strong economies that put the state in the ranks of the industrially and technically advanced in the twenty-first century. Computer Science Program is updated regularly to suit the spirit of the recent changes and new skills.

Mission of Computer Science Program

To provide quality education through a well-designed computer science learning experience that prepare students for professional careers, lifelong learning, research and serving the community in a professional manner.

Goals of Computer Science Program

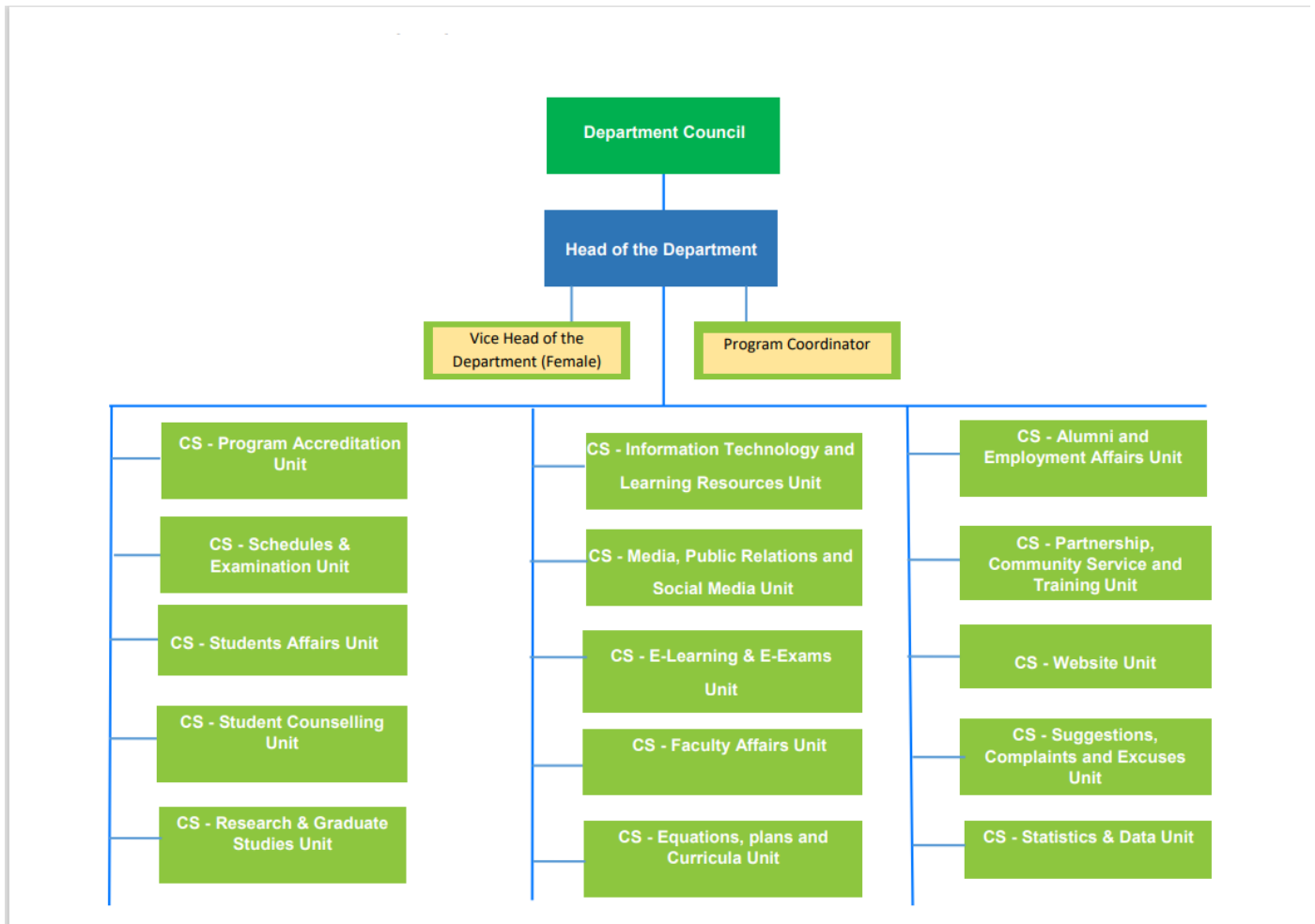
- To enhance students computing capabilities by acquiring knowledge and concepts of computer science.
- To prepare students for the job market by strengthening their problem solving and professional skills.
- To contribute towards the community as a part of a team or individually with accountable, legal, ethical and responsible practices.
- To encourage students for continuously attaining lifelong knowledge of computer science through higher education, research and emerging new technologies.

Graduate Attributes

Our graduates will be

- Professional in computer science.
- Knowledgeable in computer science.
- Problem solver.
- Lifelong learner.
- Effective communicator.
- Team leader/player.

Organizational Structure Department of Computer Science



Department Council

The Computer Science Department council members are:

1	Dr. Yousef Abdullah Asiri	Head
2.	Dr Abdullah Khanfor	Assistant Head & Secretary
3	Dr. Mohammed Humadi	Member
4	Dr. Hani Mohammed Alshahrani	Member
5	Dr. Adel Al Sulaiman	Member
6	Dr. Adel Dabash Rajab	Member
7	Dr. Aisha Mashraqi	Member
8	Dr. Hanan Halawani	Member
9	Dr. Sultan Almakdi	Member
10	Dr Saeed Alahmari	Member
11	Dr Abdulwahab Alazeb	Member
12	Dr Naif Almudawi	Member
13	Dr Sultan Sughair	Member
14	Dr Mohammed Alshehri	Member
15	Dr. Anwar Ali	Member

The Department Council meets at least once every two weeks on the request of the Head of the Department. During the academic year, department council meets to discuss various academic and administrative issues. The department council forwards the reports and requests to the college council for approval.

Departmental Units

The Computer Science department has formulized 15 Units 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 summarized tasks.

No.	Name of the Unit	Tasks
1	Media, Public Relations and Social Media Unit	<ul style="list-style-type: none"> • Gather, organize, and publish news about department activities on department websites. • Prepare and print brochures, manuals, handbooks ... etc. • Update departments websites • Coordinates with college and departments website committees • Prepare and submit final performance report to • the department
2	Student Affairs Unit	<ul style="list-style-type: none"> • Coordination with the Deanship of Student Affairs at the university to participate in various student activities and urge students to participate. • Participate in organizing events, conferences, and student activities for the college. • Nominating students to participate in various cultural and scientific events inside and outside the university. • Announcing the activities held in the college and university at the beginning of each semester and submitting a performance report at the end of each semester. • Contribute to the establishment of various sports matches in all sports competitions. • Discover talents and abilities of students.
3	Teaching tables and Exams Unit	<ul style="list-style-type: none"> • Determining the department's courses in each semester according to the study plan, defining the people and setting schedules. • Setting study schedules and schedules for the final exams for the department's courses according to the students' levels, and organizing classrooms and study periods. • Preparing the study schedules for each faculty member, • Organizing units for the final exams, preparing the controls and providing a sufficient number of observers.
4	Student Counseling Unit	<ul style="list-style-type: none"> • Facilitate academic advising for the current student • Organize meeting with the new students intakes • Prepare and submit final performance report • to the department • Educate students about university regulations on academic issues.
5	Suggestions, Complaints and Excuses Unit	<ul style="list-style-type: none"> • Study and follow up students suggestions • Deal with students complaints and take the necessary actions • Prepare and submit final performance report to the department

		<ul style="list-style-type: none"> • Studying the suggestions submitted by the students and presenting them to the department council or the college council in case of non-dissolution.
6	Program Accreditation Unit	<ul style="list-style-type: none"> • Organize and supervise all department activities in development and academic accreditation • Coordinate with college unit of development and quality • Train new faculty member in various academic activities • Prepare and submit final performance report to the department
7	Research and Graduate Studies Unit	<ul style="list-style-type: none"> • Encouraging and developing the spirit of initiative among faculty members to participate in research and serve the university community or outside it. • Preparing for seminars and lectures that are carried out by the department members in the college or inside or outside the university.
8	Website unit	<ul style="list-style-type: none"> • Supervising the editing, updating and development of the college's website in both Arabic and English, in order to introduce the college and its various departments, programs, employees, publications and research, and highlight all the college's activities, events and activities. • Put all the department documents, which can be published on the site, in a professional manner
9	E-Learning and E-Exams Unit	<ul style="list-style-type: none"> • Communicate with the Deanship of E-Learning regarding the training process on electronic exams and determine training periods for faculty members in the Department of Computer Science. • Follow up on faculty members submitting electronic exams for their courses on the e-learning management system and question banks. • Submit a weekly report on the progress in uploading electronic exams to the electronic exam system. • Setting a schedule for the semester and final electronic exams for the Department of Computer Science. • Attending workshops offered by the Deanship of E-Learning, which are concerned with question banks and test results
10	Information Technology and Learning Resources Unit,	<ul style="list-style-type: none"> • Determining the college's needs of computers and its requirements, such as technical tools, software, and others. • Ensure that the laboratories, halls and all equipment are valid at the beginning of each semester. • Ensure availability of laboratory, hardware and software maintenance plans

11	Equations, plans and curricula unit	<ul style="list-style-type: none"> • Handle all equivalency requests • Prepare and submit final performance report to the department
12	Faculty Affairs Unit	<ul style="list-style-type: none"> • Inventory and record the data of scholarship students and means of contacting them. • Consider the scholarship request for teaching assistants and lecturers and verify the integrity of the programs they wish to enroll in, their consistency with the department's scholarship policy, and the validity of admission papers and other documents.
13	Statistics and Data Unit	<ul style="list-style-type: none"> • Collecting, classifying and analyzing data related to new and registered students, faculty members in the department, department's male and female employees, male and female graduate students from the department, workshops held by the department, results of the quarterly and final exams and submitting a report thereon
14	Partnership, Community Service and Training Unit	<ul style="list-style-type: none"> • Develop practical and scientific programs to enhance the relationship between the department and the local community and follow up their implementation. • Creating distinguished relationships with all computer-related institutions and participating in their activities. • Organizing and encouraging the participation of department members in scientific activities outside the department. • Organizing and encouraging the participation of department members in social activities outside the college.
15	Alumni and Employment Affairs Unit	<ul style="list-style-type: none"> • Building an information base for the department's graduates, while ensuring the means of contacting them. • Collecting and recording data for employers from institutions and companies and means of contacting them. • Seeking to find ways to communicate with alumni (such as the department's alumni association, creating groups in electronic media, etc.)

Faculty Members

No.	Computer Science Faculty Member Name	Academic Title
1.	Dr. Yousef Abdullah Asiri	Assistant Professor
2.	Dr. Mohammed Humadi	Assistant Professor
3.	Dr. Hani Mohammd AlShahrani	Assistant Professor
4.	Dr. Adel Dabash A. Rajab	Assistant Professor
5.	Dr. Sultan AlMakdi	Assistant Professor
6.	Dr. Anwar Ali Yahya Esmail	Associate Professor
7.	Dr. Adel Sulaiman	Assistant Professor
8.	Dr. Saeed Saad Alahmari	Assistant Professor
9.	Dr. Abdullah Khanfor	Assistant Professor
10.	Dr. Sultan Sughair Alamer	Assistant Professor
11.	Dr. Mohammed Saleh H Alshehri	Assistant Professor
12.	Dr. Naif Ali Zahab Almudawi	Assistant Professor
13.	Dr. Abdulwahab Fahad Saed Alazeb	Assistant Professor
14.	Dr. Hanan Talal. Halawani	Assistant Professor
15.	Dr. Aisha Mashraqi	Assistant Professor
16.	Mr. Adaln Balola Ali Alhokri	Lecturer
17.	Mr. Muhammad Akram	Lecturer
18.	Mr. Usaid Alibrahem	Lecturer
19.	Mr. Ibrahim Hassan Alyami	Lecturer
20.	Mr. Sultan Mansour Saad Alajm	Lecturer
21.	Mr. Hattan Hassan Al sharif	Lecturer
22.	Ms. Somaya Alhazmi	Lecturer
23.	Ms. Nyla Khadam	Lecturer
24.	Ms. Eman Abdelkreem Altahir	Lecturer
25.	Ms. Raniah Zaheer	Lecturer
26.	Ms. Saira Banu Mohammed Rasool	Lecturer
27.	Ms. Soad Mohammed Almula	Lecturer
28.	Ms. Awatif Alqahtani	Lecturer
29.	Ms. Albetool Almehtel	Lecturer
30.	Ms. Faryal Alharthi	Lecturer
31.	Ms. Mzoon Kulayb	Lecturer
32.	Ms. Bashair Almansour	Lecturer
33.	Ms. Amal Saeed AlJarah	Teaching Assistant
34.	Ms. Morady Mohammed	Teaching Assistant
35.	Ms. Sahar Saeed AlJarah	Teaching Assistant
36.	Ms. Zahra Alwadie	Teaching Assistant

Details of Faculty members can be seen [here](#)

POLICIES & PROCEDURES OF THE PROGRAM

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.

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

STUDENTS ADMISSION

Students who want to be admitted in the Department of Computer Science, 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 Computer Science Program (CS) 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 plan. Also, almost all faculty members of our CS 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.

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 clash 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.

CLASS ATTENDANCE

For academic accomplishment at the department of computer science students should attend at least 75% of the lectures, tutorials, and practical lessons in regular courses. Students failing to meet this requirement in any of his/her 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.

STUDENT MANAGEMENT

Computer Science 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.

Guidance and Orientation Programs for New Students

At the beginning of each semester, the department of Computer Science arranges a comprehensive orientation program for prospective students to ensure a thorough understanding of program requirements, the range of services and facilities available for them, and about their code of conduct and their rights & responsibilities. 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 made widely known at the time of orientation.

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 and a practical exam.

The pass mark in each course is 60%.

Exam evaluation system at the college is mentioned in 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	10%	30%	20%	40%	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.

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:

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

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
Total	17			50

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

CGPA (Cumulative GPA): For first semester, students' GPA is also equals 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	Excellent
3.75 – 4.50	Very Good
2.75 – 3.75	Good
2.00 – 2.75	Pass
Less than 2.00	Fail

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.

More details can be seen [here](#)

STUDENT TRANSFER REGULATIONS

Internal transfer in the 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	2.5	5

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
College of Medicine	College of Computer Science and Information Systems	2.5	6(4 Computer Science+2 Information Systems)
College of Dentistry	College of Computer Science and Information Systems	2.5	6(4 Computer Science+2 Information Systems)
Applied Medical Sciences	College of Computer Science and Information Systems	2.5	4(3 Computer Science+1 Information Systems)
College of Engineering	College of Computer Science and Information Systems	2.5	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 Computer Science (3 years program with 86 credit hours) from a Community College are allowed to join the Computer Science program. Those students are exempted from the preparatory year (27 Credit hours) and 23 credit hours (from CS 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 student's 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-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:

- 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

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

Level No (Semester/year)	Course code	Course Name	Prerequisites
8 (2/4)	491CSS-4	Graduation Project 1	342CSS-3
9 (1/5)	492CSS-4	Graduation Project2	491CSS-4

STUDENTS' ACADEMIC ADVISING UNIT

Academic Advising Unit (AAU) of CS program governed 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 internal 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. Almost 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' time table 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. 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, Rechecking 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 deals with the 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 and other excuses during semester
- 4) To keep the records of internal, midterms, lab, and final exams' marks
- 5) To declare marks of internal, and midterms to the students
- 6) To manage departmental procedures if any student wants to take summer courses in any other universities within the kingdom
- 7) To monitor students' academic and moral progress
- 8) To advice the students about program planning and career planning

Complaints and Appeals System:

Computer Science 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:

General Complaints:

These types of complaints that are made by students and have no specific allegation and are normally related to class room 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.

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. The committee passes the complaints (if any) to the college council for further actions. The Complaint Handling Committee consists of 5 members as follows:

- The Dean
- The Vice Dean
- Director of Administrative staff
- College Coordinator

- Coordinator of Student Advising Unit
- Program Head (CS)
- Program Head (IS)

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 taken by the dean directly.

Procedure to Handle Students' Appeals

Students' academic appeals are mainly categorized by the form of 'Add/drop courses, Absent excuses, Rechecking 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, 2018-19.

Successful appeal for rechecking of exam is forwarded to the department coordinator.

Department 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.

STUDENTS' ACTIVITIES UNIT

The objective of Students Activities Unit at the College of Computer Sciences and Information Systems is to help students improve their skills, raise their knowledge level, and enhance students' personality. Students have always the power and passion to learn new things and because of that activities unit has existed. The unit provides students with what they need in order to develop their abilities. The unit also work to find students with different hobbies and try preserving these hobbies by conducting activities. Another main goal of Students Activities Unit is to create and spread a mindset of the active student in the college which can benefit not only students but also college.

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'. Computer science (CS) 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.

COLLEGE LEARNING FACILITIES

To serve all the departments of the College of computer science and information systems, the College contains a number of computer laboratories, namely: programming lab, database lab, assembly language lab, UNIX lab, artificial intelligence lab, computer graphics lab, networks lab, open lab, and digital lab. The College's physical facilities include:

- 1) Lecture halls
- 2) Computer laboratories

- 3) Digital laboratory
- 4) Seminar room
- 5) Open lab



PROGRAM EVALUATION AND REVIEW PROCESS

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 enrolment of students, completion rates, records of student completion rates in all courses, and grades distributions are used quality indicators.

2. 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.

3. Overall Course Reports: By the end of each semester, the Program Accreditation unit 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.

4. Exit Survey: This survey is filled-up by all the 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 (492CSS-4). The purpose of this survey is to measure if the performance indicators for each student outcomes meet the required level of achievement (70% 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.

5. 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) text books 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.

6. 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.

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 NCAAA Standard 6 committee is 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: Head 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. Text Book Evaluation and Availability Form: This form is filled out by all faculty member every semester to evaluate the relevancy of text books and references materials to the academic fields.

13. KPI Analysis: 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 (e.g. Alumni Unit) and evaluate the data, Targeted group (e.g. 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 Program Accreditation unit monitors the progress of all the NCAAA Standard committees and ensure that review processes are implemented as planned. The data of the program review processes are collected and evaluated. 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 unit and improvement plans are created. The output of the curriculum unit 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 program and college council. Finally, actions are planned, implemented and monitored to improve the quality of the program.

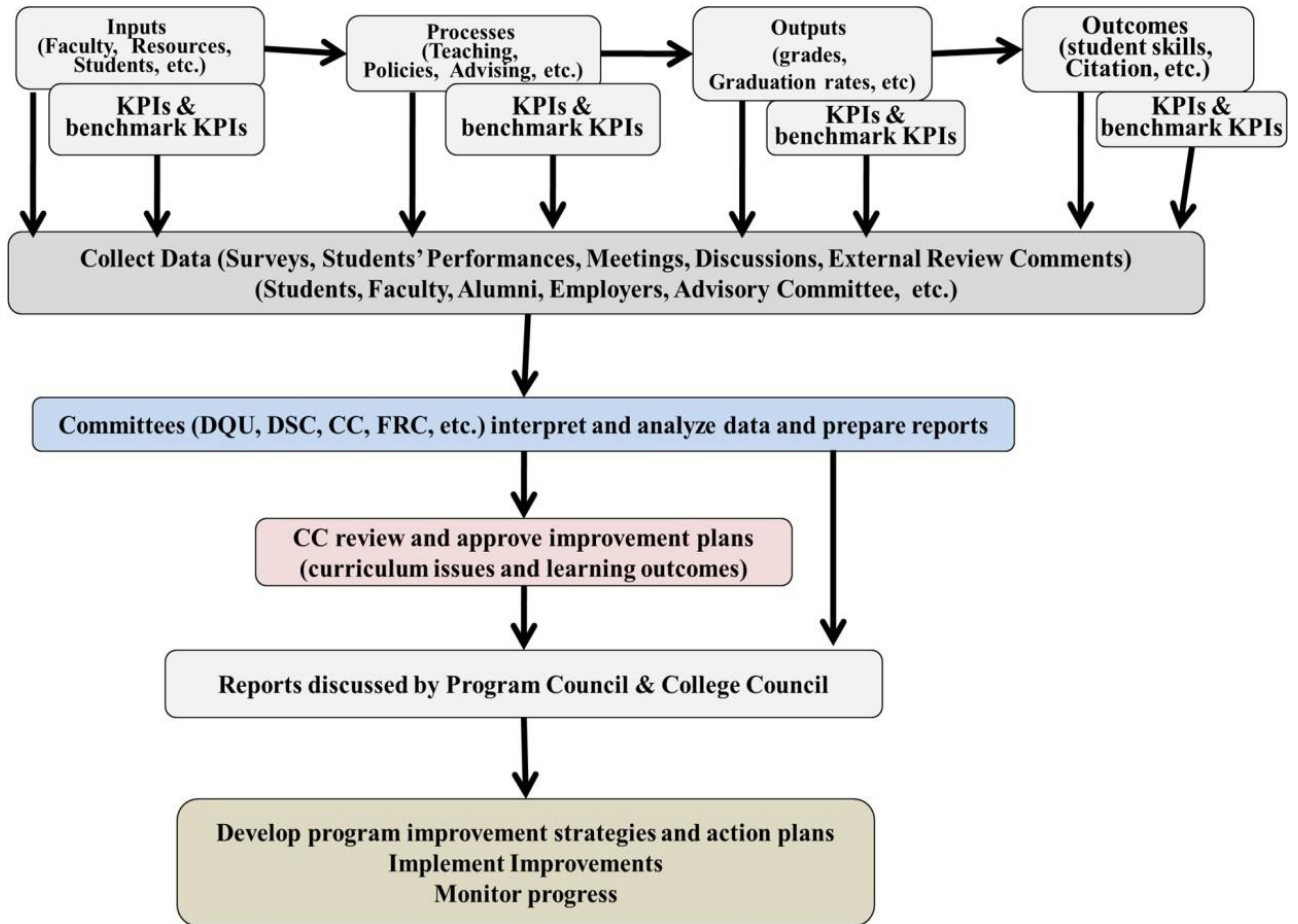


Figure: CS Program Evaluation and Review Processes

PROGRAM'S KNOWLEDGE GROUPS

The curriculum committee has decided and approved 7 knowledge areas for CS program. The knowledge areas are as follows:

- Programming Languages
- Algorithm and Complexity
- Information Management
- Operating Systems and Architecture
- Software Engineering
- Networking and Security
- Social Issues & Projects

Details can be found [here](#)

PROGRAM'S RESEARCH GROUPS

Department of Computer Science is committed to providing an outstanding environment to conduct high quality research. This research can later be measured by research output.

Research objectives include

- To create an innovative research environment for both faculty members and students to generate quality research output.
- To establish a research friendly environment for faculty members and students together to conduct research that can be published in SCIE, SSCI, ESCI, and Scopus Journals.
- To provide adequate research funding to faculty and students to support their research equipment.
- To encourage faculty members to represent the department by participating in international and national events/conferences.
- To arrange fantabulous rewards for faculty members and students upon successful completion of their research projects/output.
- To abide and link the research vision, mission, and goals of the university.

To achieve these objectives, Program has formulized the research groups of faculty members. Details of the groups can be seen [here](#)

STUDY PLAN

The education system is semester based (two semesters in a year) in the department of Computer Science. To be graduated from the department any student must complete 134 credit hours [9 level study plan] and 152 credit hours [10 level study plan] from Computer Science program. The total credit hours are distributed as follows:

Program Study Plan [9-Levels of Study]

Curriculum Structure

Program Structure	Required/ Elective	No. of courses	Credit Hours	Percentage
Institution Requirements	Required	6	12	8.96%
	Elective			
College Requirements	Required	8	26	19.40%
	Elective			
Program Requirements	Required	15	46	34.32%
	Elective			
Capstone Course/Project	Required	2	8	5.97%
Field Experience/ Internship				
Science	Required	4	15	11.19%
Preparatory Year	Required	12	27	20.14%
Total		47	134	100%

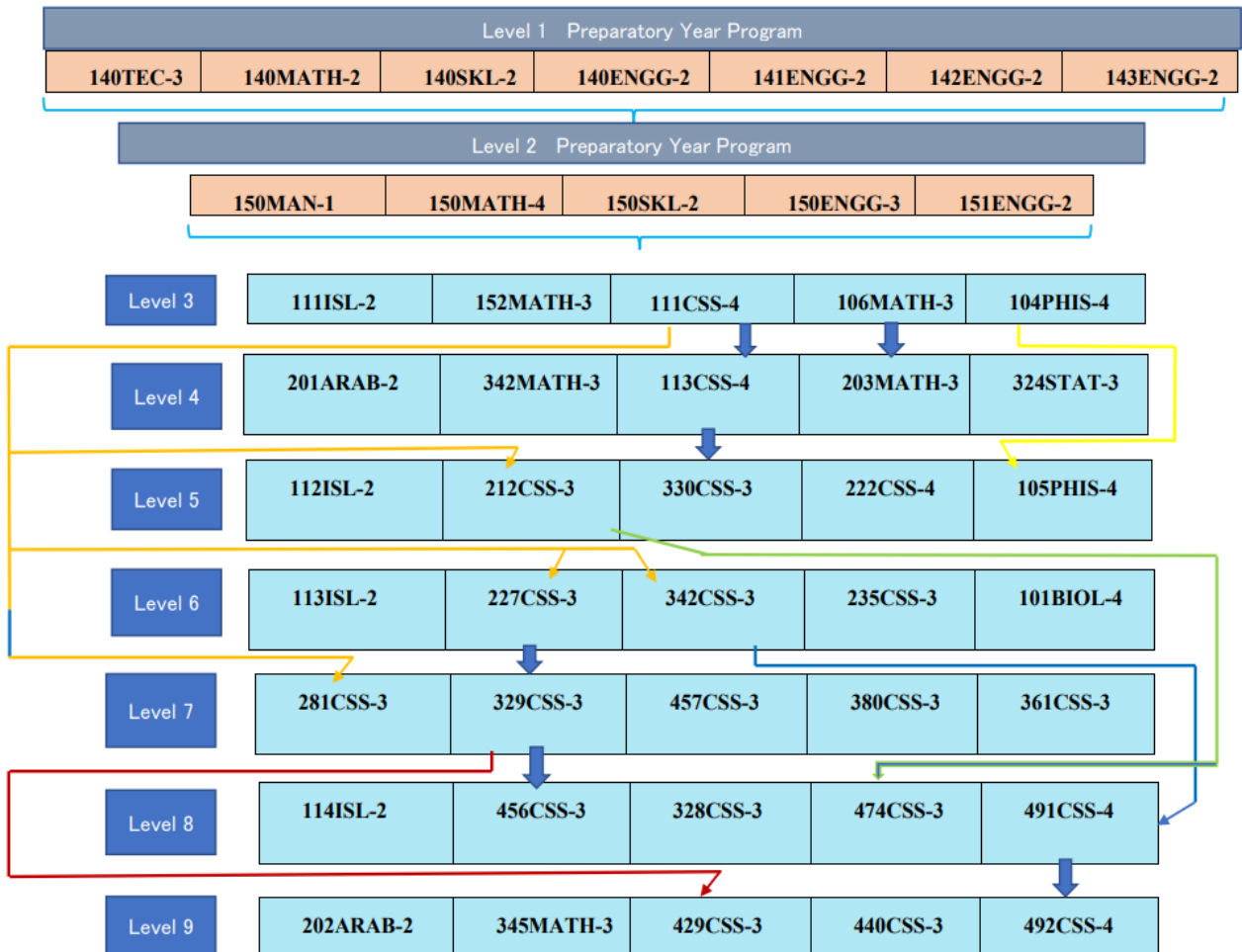
Semester Wise Breakdown of Courses

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements <small>(Institution, College or Department)</small>
Level 1	140TEC-3	Computer Skills	Required	No	3	Preparatory Year
	140MATH-2	Introduction of Mathematics	Required	No	2	Preparatory Year
	140SKL-2	Learning, Thinking and Research Skills	Required	No	2	Preparatory Year
	140ENGG-2	English Language: Reading Skills	Required	No	2	Preparatory Year
	141ENGG-2	English Language: Writing Skills	Required	No	2	Preparatory Year
	142ENGG-2	English Language: Listening and Speaking Skills	Required	No	2	Preparatory Year
	143ENGG-2	English Language: Grammars	Required	No	2	Preparatory Year
Level 2	150MAN-1	Occupational Ethics	Required	No	1	Preparatory Year
	150MATH-4	Algebraic Sciences	Required	140MATH-2	4	Preparatory Year
	150SKL-2	Communication Skills	Required	No	2	Preparatory Year
	150ENGG-3	English Language: Speaking	Required	No	3	Preparatory Year
	151ENGG-2	Report Writing	Required	No	2	Preparatory Year

Level 3	111ISL-2	Introduction to Islamic Culture	Required	No	2	Institute
	104PHIS-4	Fundamental of Physics	Required	No	4	College of Science and Art
	111CSS-4	Programming Language 1	Required	No	4	College
	106MATH-3	Introduction to Integration	Required	No	3	College
	152MATH-3	Discrete Mathematics	Required	No	3	College
Level 4	201ARAB-2	Arabic Skills	Required	No	2	Institute
	342MATH-3	Linear Algebra	Required	No	3	College
	113CSS-4	Object Oriented Programming	Required	111CSS-4	4	College
	324STAT-3	Probabilities and Engineering Statistics	Required	No	3	College
	203MATH-3	Advanced Calculus	Required	106MATH-3	3	College
Level 5	112ISL-2	Islamic Culture 2	Required	No	2	Institute
	212CSS-3	Data Structures and Algorithms	Required	111CSS-4	3	College
	105PHIS-4	Advanced Physics	Required	104PHIS-4	4	College of Science and Art
	222CSS-4	Computer Organization and Architecture	Required	No	4	Department
	330CSS-3	Programming Paradigms	Required	113CSS-4	3	Department

Level 6	227CSS-3	Operating Systems	Required	111CSS-4	3	College
	113ISL-2	Islamic Culture 3	Required	No	2	Institute
	342CSS-3	Software Engineering	Required	111CSS-4	3	Department
	101BIOL-4	General Biology	Required	No	4	College of Science and Art
	235CSS-3	Theory of Computation	Required	No	3	Department
Level 7	281CSS-3	Computer Graphics	Required	111CSS-4	3	Department
	361CSS-3	Artificial Intelligence	Required	No	3	Department
	457CSS-3	Internet Technologies	Required	No	3	Department
	380CSS-3	Fundamental of Database Systems	Required	No	3	Department
	329CSS-3	Data Communication and Computer Networks	Required	227CSS-3	3	Department
Level 8	491CSS-4	Graduation Project 1	Required	342CSS-3	4	Department
	456CSS-3	Parallel and Distributed Systems	Required	329CSS-3	3	Department
	114ISL-2	Islamic Culture 4	Required	No	2	Institute
	328CSS-3	Human and Computer Interaction	Required	No	3	Department
	474CSS-3	Algorithm Design and Analysis	Required	212CSS-3	3	Department
Level 9	492CSS-4	Graduation Project 2	Required	491CSS-4	4	Department
	345MATH-3	Operational Research	Required	No	3	Department
	440CSS-3	Social, Ethical, and Professional Issues	Required	No	3	Department
	429CSS-3	Computer Security	Required	329CSS-3	3	Department
	202ARAB-2	Arabic Writing	Required	No	3	Institute

CS Program's Prerequisite Map [9-Level Study Plan]



Program Study Plan [10-Levels of Study]

The new study plan of the computer science program has been very carefully framed in 2019 to address the most recent development, and attention is dually given to both theory and practice. It was implemented in 2021.

Curriculum Structure

Program Structure	Required/ Elective	No. of courses	Credit Hours	Percentage
Institution Requirements	Required	6	12	7.89%
	Elective			
College Requirements	Required	8	26	17.10%
	Elective			
Program Requirements	Required	21	64	42.67%
	Elective			
Capstone Course/Project	Required	2	5	3.29%
Field Experience/ Internship	Required	1	4	2.63%
Science	Required	4	14	9.21%
Preparatory Year	Required	12	27	17.76%
Total		54	152	100%

Semester Wise Breakdown of Courses

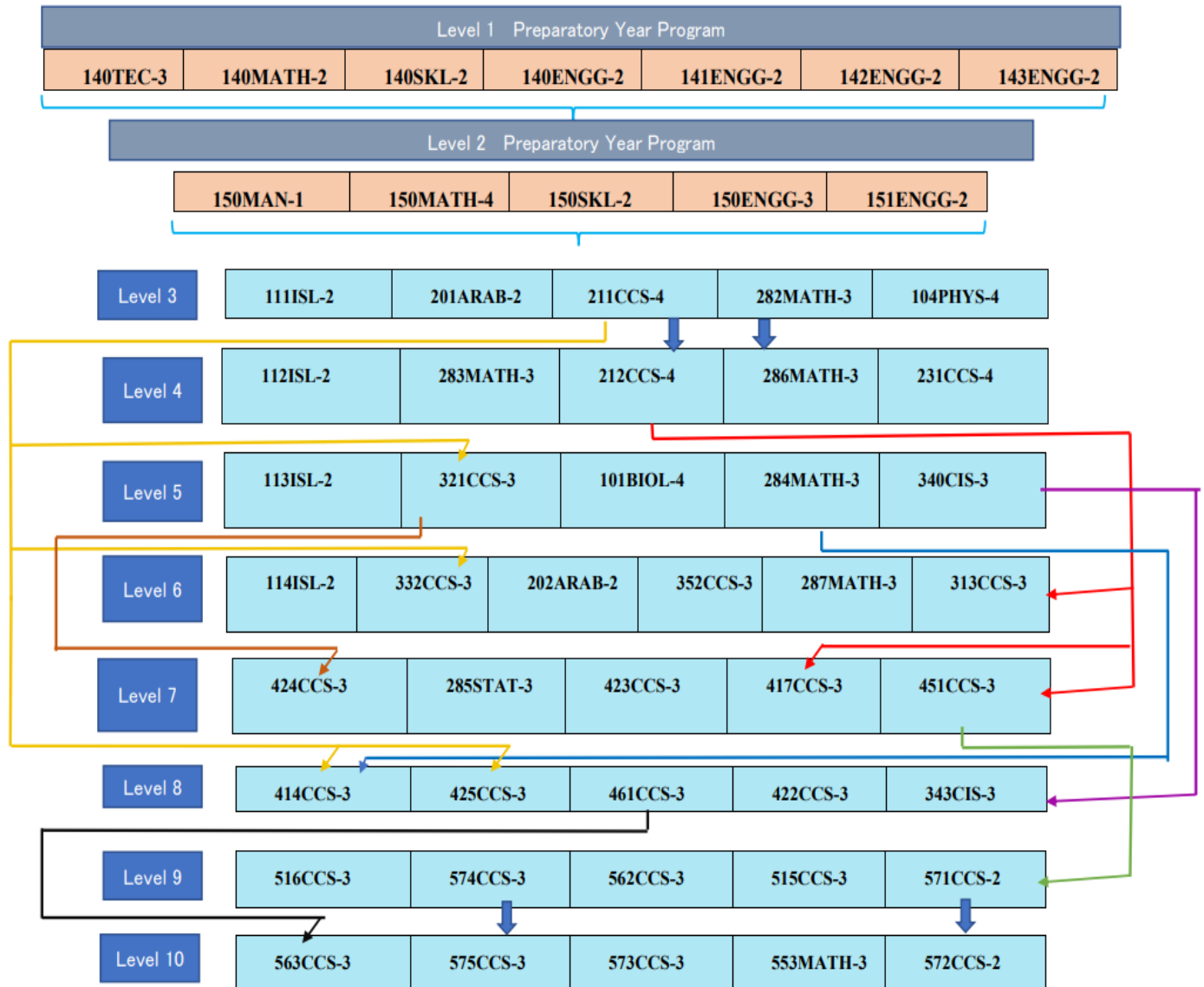
Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements <small>(Institution, College or Department)</small>
Level 1	140TEC-3	Computer Skills	Required	No	3	Preparatory Year
	140MATH-2	Introduction of Mathematics	Required	No	2	Preparatory Year
	140SKL-2	Learning, Thinking and Research Skills	Required	No	2	Preparatory Year
	140ENGG-2	English Language: Reading Skills	Required	No	2	Preparatory Year

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
	141ENGG-2	English Language: Writing Skills	Required	No	2	Preparatory Year
	142ENGG-2	English Language: Listening and Speaking Skills	Required	No	2	Preparatory Year
	143ENGG-2	English Language: Grammars	Required	No	2	Preparatory Year
Level 2	150MAN-1	Occupational Ethics	Required	No	1	Preparatory Year
	150MATH-4	Algebraic Sciences	Required	140MATH-2	4	Preparatory Year
	150SKL-2	Communication Skills	Required	No	2	Preparatory Year
	150ENGG-3	English Language: Speaking	Required	No	3	Preparatory Year
	151ENGG-2	Report Writing	Required	No	2	Preparatory Year
Level 3	104PHYS-4	Principles of Physics	Required	No	4	Science
	282MATH-3	Calculus 2	Required	No	3	College
	211CCS-4	Fundamentals of Programming	Required	No	4	College
	111ISL-2	Introduction to Islamic Culture	Required	No	2	Institution
	201ARAB-2	Arabic Language Skills	Required	No	2	Institution
Level 4	286MATH-3	Calculus 3	Required	282MATH-3	3	Science
	112ISL-2	Islamic Culture 2	Required	No	2	Institution
	212CCS-4	Object Oriented Programming	Required	211CCS-4	4	College
	283MATH-3	Discrete Mathematics	Required	No	3	College
	231CCS-4	Computer Organization and Architecture	Required	No	4	Department

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
Level 5	113ISL-2	Islamic Culture 3	Required	No	2	Institution
	101BIOL-4	General Biology	Required	No	4	Science
	284MATH-3	Linear Algebra	Required	No	3	College
	340CIS-3	Fundamental of Databases	Required	No	3	Department
	321CCS-3	Data Structures	Required	211CCS-4	3	College
Level 6	114ISL-2	Islamic Culture 4	Required	No	2	Institution
	202ARAB-2	Arabic Writing	Required	No	2	Institution
	332CCS-3	Operating Systems	Required	211CCS-4	3	College
	352CCS-3	Human and Computer Interaction	Required	No	3	Department
	313CCS-3	Programming Paradigm	Required	212CCS-4	3	Department
	287MATH-3	Numerical Methods	Required	No	3	Department
Level 7	424CCS-3	Algorithm Design and Analysis	Required	321CCS-3	3	Department
	285STAT-3	Probabilities and Engineering Statistics	Required	No	3	College
	451CCS-3	Software Engineering	Required	212CCS-3	3	Department
	423CCS-3	Artificial Intelligence	Required	No	3	Department
	417CCS-3	Mobile Application Development	Required	212CCS-4	3	Department
Level 8	414CCS-3	Computer Graphics	Required	211CCS-4, 284MATH-3	3	Department
	461CCS-3	Data Communication and Computer Networks	Required	No	3	Department
	425CCS-3	Machine Learning	Required	211CCS-4	3	Department
	422CCS-3	Theory of Computation	Required	No	3	Department
	343CIS-3	Advance Database Systems	Required	340CIS-3	3	Department

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
Summer Training	476CCS-4	Field Training	Required	Minimum 60 Credit Hours Completed (excluding PYP)	4	Department
Level 9	516CCS-3	Simulation and Molding	Required	No	3	Department
	574CCS-3	Special Topics in CS 1	Required	No	3	Department
	571CCS-2	Graduation Project 1	Required	451CCS-3	2	Department
	562CCS-3	Parallel and Distributed Systems	Required	No	3	Department
	515CCS-3	Internet Technologies	Required	No	3	Department
Level 10	553MATH-3	Operational Research	Required	No	3	Department
	563CCS-3	Computer Security	Required	461CCS-3	3	Department
	572CCS-3	Graduation Project 2	Required	571CCS-2	3	Department
	573CCS-3	Social, Ethical and Professional Issues	Required	No	3	Department
	575CCS-3	Special Topics in CS 2	Required	574CCS-3	3	Department

CS Program's Prerequisite Map [10-Level Study Plan]



SYMBOLS USED

Meaning of symbols used for Course Codes in this handbook identified as follows:

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

NUMBERING SYSTEM

The numbering system used for each course at this College is as follows:

Table of example:

Course Code	Course Name
111 CSS-4	Programming Language 1


3 letters, 3 digits, and 1 digit

Explanation:

1. The 3 letters (e.g. CSS) indicate the name of the program
2. The first digit from the 3 digits length number (e.g. 111) represents the level of program, it may be either beginning or medium, or higher(advance) level.
3. The second digit represents the path within the courses of the program.
4. The third digit represents the sequence of the courses of the program.
5. The 1 digit (e.g. 4) represents total credit hours of the course.

Program Learning Outcomes for 9–Levels Study Plan

Knowledge:	
PLO code	PLO description
K1	An ability to apply knowledge of computing and mathematics appropriate to the program’s student outcomes and to the discipline
K2	An understanding of professional, ethical, legal, security and social issues and Responsibilities
K3	An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices
Skills	
PLO code	PLO description
S1	An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution
S2	An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs
S3	An ability to analyze the local and global impact of computing on individuals, organizations, and society
S4	An ability to use current techniques, skills, and tools necessary for computing practice.
S5	An ability to apply design and development principles in the construction of software systems of varying complexity.
Competences	
PLO code	PLO description
C1	An ability to function effectively on teams to accomplish a common goal
C2	An ability to communicate effectively with a range of audiences
C3	An ability to recognize the need for and an ability to engage in continuing professional development

Program Learning Outcomes for 10–Levels Study Plan

Knowledge:	
PLO code	PLO description
K1	An ability to demonstrate the knowledge of computing and mathematics appropriate to the discipline.
K2	An ability to identify security, privacy and social issues in computing Practices
Skills	
PLO code	PLO Description
S1	An ability to analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
S2	An ability to design, implement and evaluate a computing–based solution to meet a given set of computing requirements in the context of the program’s discipline.
S3	An ability to analyze the local and global impact of computing on individuals, organizations and society
S4	An ability to use current techniques, skills, and tools necessary for computing practice.
S5	An ability to apply computer science theory and software development fundamentals to produce computing–based solutions. [CS]
Values	
PLO code	PLO description
V1	An ability to function effectively as a member or leader of a team engaged in activities appropriate to the program’s discipline.

COURSE DESCRIPTIONS

Detail course descriptions for both the study plans can be found on following links

[Course Descriptions for 9 Level CS Study Plan](#)

[Course Descriptions for 10 Level CS Study Plan](#)

CONTACT US

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