|  |
| --- |
| Program:  **Bachelor of Science in Data Science** |
| Program Code (as per Saudi university ranking): **061902** |
| Qualification Level:  **Level 6** |
| Department:  **Computer Science** |
| College:  **College of Computing and Informatics** |
| Institution:  **Saudi Electronic University (SEU)** |
| Program Specification: **New**  updated\* |
| Last Review Date: 16/09/2025 |

\*Attach the previous version of the Program Specification.

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# **A. Program Identification and General Information**

|  |  |  |
| --- | --- | --- |
| 1. Program’s Main Location: | | |
| Riyadh | | |
| 2. Branches Offering the Program (if any): | | |
| * Dammam * Jeddah * Yanbu | | |
| 3. Partnerships with other parties (if any) and the nature of each: | | |
| N.A. | | |
| 4. Professions/jobs for which students are qualified | | |
| 1. Data Administrator. 2. Computer Systems Analyst. 3. Data Scientist. 4. Software Developer. 5. Data Analyst. 6. Big Data Analyst. 7. Financial Data Analyst. 8. Machine Learning Engineer. 9. Business Intelligence Analyst. 10. Big Data Administrator. 11. Data Mining Analyst. 12. Big Data Architect. 13. Data Visualization Developer. | | |
| 5. Relevant occupational/ Professional sectors: | | |
| 1. Information and Communication Technology (ICT) 2. Data Science and Analytics 3. Finance and Banking 4. Business Consulting and Intelligence 5. Research and Development 6. Government and Public Administration 7. Healthcare and Bioinformatics | | |
| 6. Major Tracks/Pathways (if any): | | |
| Major track/pathway | **Credit hours**  (For each track) | **Professions/Jobs**  (For each track) |
| 1. Artificial Intelligence | 12 | Machine Learning Engineer  Business Intelligence Analyst |
| 1. Big Data Analytics | 12 | Data Scientist |
| 7. Exit Points/Awarded Degree (if any): | | |
| exit points/awarded degree | | **Credit hours** |
| 1. N.A. | | N.A. |
| 8. Total credit hours: (133) | | |

**B. Mission, Objectives, and Program Learning Outcomes**

|  |
| --- |
| **1. Program Mission:** |
| Offer the highest quality education in the field of data science. It also intent to provide equal opportunities for those whose work conditions and geographical borders prevent them from continuing their educational path without the student having to travel abroad to study courses in foreign universities, also the method of blended learning focuses on merging students and faculty members with a professional and international level. The program targets to qualify students with expert skills in data analysis and data science that will impact the industry and society. |
| **2. Program Goals:** |
| 1. Development of a technically proficient workforce comprising of Saudi citizens capable of carrying out software development projects to the best of international standards. 2. Developing both academic and professional skills in the domain of data science and AI. 3. Enhancing students' experience by enabling them to solve academic and practical problems in their areas of specialization. 4. Implementing best practices to develop comprehensive data analysis projects plans. 5. Preparing students to meet the labor market requirements in data science domains. 6. Integrating academic programs by bridging the gap between theoretical advances and practical applications. |

|  |  |  |
| --- | --- | --- |
| **3. Program Learning Outcomes\*** | | |
| **Knowledge and Understanding** | | |
| K1 | | Recognize the concepts of computing and mathematics related to the discipline. |
| K2 | | Master the current techniques, skills, and tools necessary for the computing practice. |
| K3 | | Demonstrate algorithmic, computational, and statistical models in data science. |
| K4 | | Comprehend the local and global impact of computing on individuals, organizations, and the society. |
| **Skills** | | |
| S1 | Analyze a problem, identify and define the computing requirements appropriate to its solution. | |
| S2 | Apply mathematical foundations, algorithmic principles, and Data science theories in modeling. | |
| S3 | Implement theories and principles using cutting edge technologies in the analysis, design, and implementation and testing of computer-based systems. | |
| S4 | Construct machine learning and AI optimization models using problem-solving strategies for data analytics. | |
| S5 | Communicate effectively with a range of audiences, both orally and in a written form, using appropriate media. | |
| **Values, Autonomy, and Responsibility** | | |
| V1 | Function effectively on teamwork activities to accomplish a common goal. | |
| V2 | Identify the needs for continuous development of professional skills with the ability to engage all group members. | |
| V3 | Develop projects to visualize data for exploration, analysis, and communication. | |

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

**C. Curriculum**

**1. Curriculum Structure**

| **Program Structure** | **Required/ Elective** | **No. of courses** | **Credit**  **Hours** | **Percentage** |
| --- | --- | --- | --- | --- |
| Institution Requirements | Required | **10** | **34** | 25.56% |
| Elective | **0** | **0** |  |
| College Requirements | Required | **9** | **27** | 20.3% |
| Elective | **0** | **0** |  |
| Program Requirements | Required | **20** | **60** | 45.11% |
| Elective | **4** | **12** | 9.02% |
| Others |  |  |  |  |
| **Total** | | **43** | **133** | **100%** |

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

**2. Program Courses**

| **Level** | **Course**  **Code** | **Course Title** | **Required**  **or Elective** | **Pre-Requisite**  **Courses** | **Credit**  **Hours** | **Type of requirements**  **(Institution, College, or Program)** |
| --- | --- | --- | --- | --- | --- | --- |
| **Level**  **1** | ENG001 | English language Skills | Required | ـــ | 8 | Institute |
| CS001 | Introduction to Artificial Intelligent and Computing | Required | ـــ | 3 | Institute |
| COMM001 | Communication Skills | Required | ـــ | 2 | Institute |
| **Level**  **2** | ENG002 | English language Skills 2 | Required | ـــ | 8 | Institute |
| MATH001 | Fundamentals of Math | Required | ـــ | 3 | Institute |
| CI001 | Academic Skills | Required | ـــ | 2 | Institute |
| **Level**  **3** | SCI 101 | General Physics 1 | Required |  | 3 | Department Requirement |
| DS230 | Object Oriented Programming | Required |  | 3 | College Requirement |
| ENG103 | Technical Writing | Required |  | 3 | College Requirement |
| MATH150 | Discrete Mathematics | Required |  | 3 | College Requirement |
| DS231 | Introduction to Data Science Programming | Required |  | 3 | Department Requirement |
| ISLM101 | ISLAMIC FAITH | Required |  | 2 | Institute |
| **Level**  **4** | MATH251 | Linear Algebra | Required | MATH150 | 3 | College Requirement |
| DS240 | Data Structure | Required | DS230 | 3 | College Requirement |
| MATH241 | Calculus | Required | ـــ | 3 | Department Requirement |
| DS242 | Advanced Data Science Programming | Required | DS231 | 3 | Department Requirement |
| DS243 | Computer Architecture and Organization | Required | ـــ | 3 | Department Requirement |
| ISLM102 | PROFESSIONAL CONDUCT & ETHICS IN ISLAM | Required | ـــ | 2 | Institute |
| **Level**  **5** | SCI 201 | General Physics 2 | Required | SCI101 | 3 | Department Requirement |
| DS350 | Introduction to Database | Required | DS240 | 3 | College Requirement |
| DS351 | Operating Systems | Required | DS243 | 3 | College Requirement |
| STAT202 | Introduction to Statistics and Probabilities | Required | MATH150 | 3 | Department Requirement |
| DS352 | Design and Analysis of Algorithms | Required | DS240 | 3 | Department Requirement |
| DS353 | Project Management in Computing | Required | ـــ | 3 | Department Requirement |
| **Level**  **6** | DS360 | Computer Networks | Required | DS243 | 3 | College Requirement |
| DS361 | System Analysis and Design | Required | DS240 | 3 | Department Requirement |
| DS362 | Web Programming | Required | DS350 | 3 | Department Requirement |
| DS363 | Artificial Intelligence | Required | DS352 | 3 | Department Requirement |
| DS364 | Data Curation (Management and Organization) | Required | DS350 | 3 | Department Requirement |
| ISLM103 | ISLAMIC ECONOMIC SYSTEM | Required | ISLAM 101 | 2 | Institute |
| **Level**  **7** | DS470 | Data Security and Privacy | Required | DS364 | 3 | Department Requirement |
| DS471 | Machine Learning | Required | DS363 | 3 | Department Requirement |
| DS472 | Data Mining | Required | DS364 | 3 | Department Requirement |
| DS479 | Senior Project 1 | Required | DS361, DS362 | 3 | Department Requirement |
| DS473 | **Computer Vision** | Elective | DS363 | 3 | Track requirement |
| DS474 | Decision Support Systems | Elective | DS363 | 3 | Track requirement |
| **Level**  **8** | ISLM104 | ISLAMIC SOCIAL SYSTEM | Required | ISLAM 102 | 2 | Institute |
| DS480 | Data Visualization | Required | DS472 | 3 | Department Requirement |
| DS481 | Professional Ethics in Data Science | Required | ـــ | 3 | Department Requirement |
| DS489 | Senior Project 2 | Required | DS479 | 3 | Department Requirement |
| DS482 | Deep Learning | Elective | DS471 | 3 | Track Requirement |
| DS483 | Natural Language Processing | Elective | DS471 | 3 | Track Requirement |
| DS499 | Practical Training | Required | Passing 86 Credit Hours | 3 | College Requirement |

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

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

**3. Course Specifications:**

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

|  |
| --- |
| All course specifications are attached [here](https://seuedu-my.sharepoint.com/:f:/g/personal/cci_cs_seu_edu_sa/EvLmKHwjiQxMhRCxMcZzGi8BtGuGLylXSXVaRAgrilepfg?e=xBCb3X). |

**4. Program learning Outcomes Mapping Matrix:**

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

| **Course code & No.** |  | **Program Learning Outcomes** | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Knowledge and understanding** | | | | | **Skills** | | | | | **Values, Autonomy, and Responsibility** | | | |
| **K1** | | **K2** | **K3** | **K4** | **S1** | **S2** | **S3** | **S4** | **S5** | **V1** | **V2** | **V3** |  |
| CS001 | **I(CLO1)** | |  | **I(CLO2)** |  |  |  |  | **I(CLO3)** | **I(CLO4)** | **I(CLO5)** |  |  |  |
| DS230 | ـــ | | **I**  **(CLO1)** | **M**  **(CLO2)** | ـــ | ـــ | **I (CLO3)** | **I (CLO4)** | ـــ | **M (CLO5)** | ـــ | ـــ | ـــ |  |
| DS231 | ـــ | | ـــ | **M**  **(CLO1)** | ـــ | **M (CLO2)** | **I (CLO3)** | ـــ | **M (CLO4)** | ـــ | ـــ | **I (CLO5)** | ـــ |  |
| DS240 | ـــ | | **P**  **(CLO1)** | ـــ | **M**  **(CLO2)** | **P (CLO3)** | ـــ | **I (CLO5)** | **P (CLO4)** | **I (CLO6)** | ـــ | ـــ | ـــ |  |
| DS241 | **P**  **(CLO1)** | | ـــ | **I**  **(CLO2)** | **P (CLO3)** | ـــ | **P (CLO4)** | **I (CLO5)** | ـــ | ـــ | **P (CLO6)** | ـــ | ـــ |  |
| DS242 | ـــ | | **P**  **(CLO1)** | **P**  **(CLO2)** | ـــ | **M (CLO3)** | ـــ | ـــ | **I (CLO4)** | **P (CLO6)** | ـــ | ـــ | **I (CLO5)** |  |
| DS243 | **P**  **(CLO1)** | | **P**  **(CLO2)** | ـــ | ـــ | **I (CLO3)** | ـــ | **P (CLO4)** | ـــ | **P (CLO6)** | ـــ | **I (CLO5)** | ـــ |  |
| DS350 | **M**  **(CLO1)** | | ـــ | ـــ | **K**  **(CLO2)** | ـــ | **I (CLO3)** | ـــ | ـــ | ـــ | **M (CLO4)** | ـــ | **M (CLO5)** |  |
| DS351 | **P**  **(CLO1), (CLO2)** | | ـــ | ـــ | ـــ | **I**  **(CLO3)** | ـــ | **P (CLO4)** | **I (CLO5)** | ـــ | **I (CLO6)** | ـــ | ـــ |  |
| DS352 | **P**  **(CLO1)** | | **I**  **(CLO2)** | ـــ | ـــ | **I (CLO3)** | **P (CLO5)** | **P (CLO4)** | ـــ | ـــ | **P (CLO6)** | ـــ | ـــ |  |
| DS353 | **P**  **(CLO1)** | | **M**  **(CLO2)** | ـــ | ـــ | **P (CLO3)** | ـــ | **P (CLO4)** | ـــ | ـــ | ـــ | ـــ | ـــ |  |
| DS360 | **P**  **(CLO1)** | | **M**  **(CLO2)** | ـــ | ـــ | ـــ | ـــ | **P (CLO3)** | ـــ | ـــ | ـــ | **P (CLO4)** | ـــ |  |
| DS361 | **M**  **(CLO1)** | | **P**  **(CLO2)** | ـــ | ـــ | ـــ | **P (CLO3)** | **P (CLO4)** | ـــ | **M (CLO5)** | ـــ | ـــ | ـــ |  |
| DS362 | **P**  **(CLO1)** | | ـــ | ـــ | ـــ | **I (CLO2)** | **M (CLO3)** | **M (CLO4)** | **P (CLO5)** | ـــ | **P (CLO6)** | ـــ | ـــ |  |
| DS363 | **M**  **(CLO1)** | | **P**  **(CLO2)** | ـــ | ـــ | **P (CLO3)** | **P (CLO4)** | ـــ | ـــ | ـــ | **M (CLO5)** | ـــ | ـــ |  |
| DS364 | **P**  **(CLO1)** | | **P**  **(CLO2)** | ـــ | ـــ | ـــ | **M (CLO3)** | **I (CLO4)** | ـــ | ـــ | ـــ | ـــ | ـــ |  |
| DS470 | **P**  **(CLO1)** | | **P**  **(CLO2)** | ـــ | ـــ | **M (CLO3)** | **I (CLO4)** | **P (CLO5)** | ـــ | ـــ | ـــ | **M (CLO6)** | ـــ |  |
| DS471 | **I**  **(CLO1)** | | **P**  **(CLO2)** | ـــ | ـــ | **M (CLO3)** |  | **I (CLO4)** | ـــ | ـــ | **M (CLO5)** | ـــ | **M (CLO6)** |  |
| DS472 | **I**  **(CLO1)** | | ـــ | ـــ | ـــ | **M (CLO2)** | **M (CLO3)** | ـــ | ـــ | ـــ | **I (CLO4)** | ـــ | ـــ |  |
| DS473 | ـــ | | **M**  **(CLO1)** | ـــ | ـــ | ـــ | **P**  **(CLO2)** | **I**  **(CLO3)** | ـــ | ـــ | **I**  **(CLO4)** | ـــ | ـــ |  |
| DS474 | **M**  **(CLO1), (CLO2)** | | **P**  **(CLO3)** | ـــ | ـــ | **P**  **(CLO4)** | **I**  **(CLO5)** | ـــ | ـــ | ـــ | **M**  **(CLO6)** | ـــ | ـــ |  |
| DS475 | **P**  **(CLO3)** | | **M**  **(CLO1)** | **P**  **(CLO2)** | ـــ | ـــ | ـــ | **I**  **(CLO4)** | ـــ | ـــ | ـــ | ـــ | **I**  **(CLO5)** |  |
| DS476 | **M (CLO1),**  **P (CLO2)** | | ـــ | ـــ | ـــ | **P**  **(CLO3)** | ـــ | **M (CLO1),**  **P (CLO2)** | ـــ | ـــ | **I**  **(CLO6)** | ـــ | ـــ |  |
| DS479 | ـــ | | **P**  **(CLO1)** | ـــ | ـــ | **M**  **(CLO3)** | ـــ | **I**  **(CLO2)** | **P**  **(CLO4)** | **M**  **(CLO5)** | ـــ | ـــ | ـــ |  |
| DS489 | ـــ | | ـــ | ـــ | ـــ | **P**  **(CLO1)** | ـــ | **M**  **(CLO2)** | ـــ | **P (CLO4),**  **M (CLO5)** | **M**  **(CLO3)** | ـــ | ـــ |  |
| DS480 | **P**  **(CLO1)** | | ـــ | ـــ | ـــ | **M (CLO2)** | ـــ | **M (CLO3), I (CLO4)** | ـــ | ـــ | ـــ | ـــ | ـــ |  |
| DS481 | **M**  **(CLO1)** | | **M (CLO2),**  **P**  **(CLO3)** | ـــ | ـــ | **I (CLO4)** | **M (CLO5)** | ـــ | ـــ | ـــ | **P (CLO6)** | ـــ | ـــ |  |
| DS482 | **M**  **(CLO2)** | | **M (CLO2)** | ـــ | ـــ | ـــ | **P (CLO3)** | ـــ | **P (CLO4)** | ـــ | ـــ | ـــ | **M (CLO5)** |  |
| DS483 | **P**  **(CLO1)** | |  | **P**  **(CLO2)** | ـــ | ـــ | **P**  **(CLO3)** | **P**  **(CLO4)** | ـــ | ـــ | ـــ | ـــ | ـــ |  |

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

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

Describe teaching and learning strategies, including curricular and extra-curricular activities, to achieve the program learning outcomes in all areas.

|  |
| --- |
| The DS program uses several effective teaching strategies that can be summarized as following:   * Class lectures * Research activities * Brainstorming * Class exercises and discussions * Lab programming exercises * Active learning (group-work Case Studies and Projects)   The BSDS program is based on combining traditional learning and online learning. All courses are designed to be conducted by using these two methods. The face-to-face learning is a traditional method. The instructor contacts directly with the students. During the face-to-face classes, the instructor explains the main concepts for the students. In virtual classes, the instructor communicates with the students by using Blackboard software. The Blackboard software offers online communication between the instructor and students. The instructor can use class discussion and active learning strategies in virtual and face to face classes.  In addition, the college has various labs to support practical sides of the educational operation. Further, the college organizes many competitions periodically and encourages students to participate in outside activities such as workshops and conferences. The Deanship of Admission and Student Affairs provides extracurricular activities for All SEU students according to a plan seeking to achieve the SEU educational goals. |

**6. Assessment Methods for program learning outcomes.**

Describe assessment methods (Direct and Indirect) that can be used to measure the achievement of program learning outcomes in all areas.

The program should devise a plan for assessing Program Learning Outcomes (all learning outcomes should be assessed at least twice in the bachelor program’s cycle and once in other degrees).

|  |
| --- |
| * Individual and Group assignments * Quizzes and Discussion boards * Written exams (Midterm and Final) * Senior projects evaluation * Lab exams * Project/Case Study presentation |

# **D. Student Admission and Support:**

**1. Student Admission Requirements**

|  |
| --- |
| * Applicants should have obtained a secondary school certificate or equivalent. * No limited period for obtaining the secondary school certificate is required. * Admission is granted to applicants who satisfy all admission requirements and is based on the applicant's grades in secondary school. |

**2. Guidance and Orientation Programs for New Students**

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

|  |
| --- |
| A full orientation course is available on Blackboard for new students. The course has complete information that will assist students in getting to know what they are expected to do during their journey at SEU, and what do they expect from the University. Further, it provides full information on how to deal with the blended learning technique, how to use the online materials, and all assessment policies. |

**3. Student Counseling Services**

(Academic, professional, psychological and social)

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

|  |
| --- |
| * Students of the BSDS Program have the right to use the health care provided in the health facilities of SEU. * Students of the DS Program take advantage of the available credit services and facilities such as electronic university books, sports facilities, basements, car parking, etc... * Students of the DS Program can apply for training courses, programs, internal and external trips, as well as participate in cultural and community services. * Every BSDS Program student receives the appropriate service and support for his/her needs if he/she has special needs. * The periodic meeting for male and female students is held on a fixed basis at the beginning of each semester, where all students can send direct inquiries and raise inquiries to the Dean of the College through the virtual semester. * An on-line Student Services icon is available on the SEU’s website that offers tremendous support. * The College of Computing and Informatics dean holds a meeting with college students at the branch level, to talk with students about electronic exams, and several aspects were discussed (method and type of questions, the duration of the exam). The dean also answers the students’ inquiries about everything related to electronic tests. * The college holds an awareness lecture for its students about graduation projects, project registration steps and project groups at the beginning of each semester. * A committee works on applying the highest standards and updating the academic curricula periodically in line with the development of technology and the needs of the labor market based on studying the labor market and following up developments in the technical field from scientific sources such as books and published scientific papers and analyzing student, faculty and coordinators' questionnaires regarding each Established. These committees are distributed at the departmental level under the supervision of the Main Quality Committee of the college as follows:   + - Quality Committee, Department of Information Technology. * Quality Committee, Department of Computer Science. * These committees work according to international quality standards: * The college holds several internal meetings at the college level with faculty members to discuss the following:   1. Emphasis on the internal procedures and regulations followed by faculty members within the College of Computing and Informatics, in addition to specifying the tasks of the faculty members.  2. Develop plans for the course of academic subjects during the academic semester by making a course plan for each subject that the course coordinator performs and then submit it to the committee for approving study plans.  3. Meetings for electronic exams. The mechanism for conducting electronic tests and the correct way to put questions for such tests were discussed. The grading distribution mechanism was also discussed, and the tasks of the college’s branch coordinators were discussed to conduct the tests in their branches.   * The university seeks to guarantee students' rights and seeks to educate them about their rights and responsibilities. Therefore, the university established two committees to protect students' rights: * Sub-Committee for the Protection of Student Rights: It considers all educational and administrative grievances and complaints from students, except for administrative matters outside the framework of the college. * Main Committee for Student Rights Protection: It considers all students’ grievances and complaints filed against the administrative authorities at the university and grievances coming from the sub-committees. * Students can get help on their academic plan, understand the pre-request courses and choosing their courses by emailing their branch coordinator, or chairman of their department. * Faculty members announce their contact information as well as office hours on Blackboard. Therefore, students can easily contact them, for any question. * The department adopts an open-door policy, according to which a student is free to meet the department chair, Dean of Student Affairs, Dean or advisor at any time. * The student and academic Affairs Committee is responsible for handling students’ issues and complaints as they arise. * Online Da’am System is available to solve any technical issues faced by students. |

**4. Special Support**

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

|  |
| --- |
| * In collaboration with the Deanship of Admissions and Students Affairs, Students with special needs are provided with dedicated programs designed to serve them on an individual basis. In addition, there is a specialized psychological and social counseling unit to provide help when needed (Email: [pscu@seu.edu.sa](mailto:pscu@seu.edu.sa)). * The college believes in the difference abilities among students. The low achievers can get support through assigning an academic advisor to assist them to overcome their obstacles. Outstanding students received financial incentives and rewards. Moreover, the college is challenging talented students through different completions. This contribution aims to spread the spirit of competition among students and as a kind of motivation for them to excellence and creativity. * In order to select the best graduation projects, the college regularly holds a competition at the level of all branches of the university and is evaluated by a group of faculty members. The competition includes educational and applied fields for undergraduate students and Masters. The college also encourages and supports students to participate in local and international conferences and competitions, such as cybersecurity conferences and competitions, programming competitions, artificial intelligence, and graduation projects. * In order to reach talented and distinguished students to develop their skills and involve them in extracurricular activities and local and international competitions, the college has developed a specific mechanism to reach these students. |

# **E. Faculty and Administrative Staff:**

**1. Needed Teaching and Administrative Staff**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Academic Rank** | **Specialty** | | **Special Requirements/Skills (if any)** | **Required Numbers** | | |
| General | Specific | M | F | T |
| Professor | **Data Science** | **-** | **-** | **3** | **2** | **5** |
| Associate Professor | **Data Science** | **-** | **-** | **6** | **5** | **11** |
| Assistant Professor | **Data Science** | **-** | **-** | **11** | **10** | **21** |
| Lecturer | **Data Science** | **-** | **-** | **8** | **7** | **15** |
| Teaching Assistant | **-** | **-** | **-** | **0** | **0** | **0** |
| Technicians and Laboratory Assistant | **-** | **-** | **-** | **0** | **0** | **0** |
| Administrative and Supportive Staff | **Holding bachelor’s degree** | **-** | **-** | **1** | **1** | **2** |
| Others (specify) | **-** | **-** | **-** | **0** | **0** | **0** |

# **F. Learning Resources, Facilities, and Equipment:**

**1. Learning Resources**

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

|  |
| --- |
| * The Blackboard system includes full course content for faculties and students enrolled for any course. This includes all references needed. In addition, an access to Saudi Digital Library (SDL) for all the students and faculty alike is available. ​​​​SDL is the largest academic gathering of information sources in the Arab world, with more than (310,000) scientific references and hundreds of databases, covering all academic disciplines. ​SDL is also providing advanced information services and digital resources, which can benefit faculty and students. ​ * Further, online books are available from WileyPlus, in with the University has a contract with. The college also offers hard copies of textbooks to faculties. The entity responsible for planning and acquisition of textbooks is the Learning Resource Committee at the college. |

**2. Facilities and Equipment**

(Library, laboratories, classrooms, etc.)

|  |
| --- |
| * The college has provided state of the art facilities to both faculties and students for imparting quality education. The campuses provide modern classrooms with electronic gadgets required for smooth execution of class hours. The students also avail themselves of the opportunities to interact with faculty during visiting hours who are required to be in their allocated office spaces which are also furnished with all facilities needed for the blended learning environment, including hardware and software which is needed. * It is mandatory for all classes to be held in properly designed classrooms during the face-to-face hour. Each class is equipped with an electronic podium which has the facility to record the lecture as well as sound control apart from other features. Each classroom is connected to the internet, and multimedia support is available. In addition, each classroom is equipped with general amenities like air conditioning, sufficient lighting and proper sitting arrangements. All classrooms are regularly monitored to ensure that none of the assets is in bad or disorderly shape. |

**3. Procedures to ensure a healthy and safe learning environment**

(According to the nature of the program)

|  |
| --- |
| * Maintaining a safe and healthy environment is a priority to the SEU. This will create a positive impact on the learners and help them success in their studies. In this regard, the SEU maintains the safety of the university buildings and the safety of university staff from fire situations, God forbid, prevent losses, prevent detention inside elevators, maintain environmental integrity, and follow up and organize the work of the safety project. The SEU [Safety Department](https://seu.edu.sa/aosas/en/university-safety/) ensures that the alarms are valid in coordination with the concerned authority, makes sure the fire equipment is valid, Set up safety and firefighting shifts, prepares evacuation plans for the buildings during the fire, God forbid, and cooperates with civil defense and red crescent. Kindly refer to [https://seu.edu.sa/aosas](https://seu.edu.sa/aosas/) for more details. * In addition, the SEU pays great attention to all aspects of its members' care, especially about the health services, for example there is an evening clinic that treats emergencies. Kindly refer to <https://seu.edu.sa/aoms> for more details. |

# **G. Program Quality Assurance:**

**1. Program Quality Assurance System**

Provide a link to quality assurance manual.

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| --- |
| The quality assurance manual can be accessed [here](https://seuedu-my.sharepoint.com/:b:/g/personal/cci_cs_seu_edu_sa/EU0WgBnVTZJMr9rmZgjhjN0BUZslHqzwbDL9Vl-8ovfSUg?e=xpyU7U). |

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

|  |
| --- |
| * The quality assurance committee collects and reviews all course portfolios (including CRs, students’ work samples, and surveys) from various departments and submits them to the Program chair. * The department council addresses all collected issues and suggested recommendations. * Furthermore, the quality assurance committee fills “Course Report Review” forms for each course in the program and submits all forms to the program chair for approval. * The approved (signed) forms are submitted to the Academic Accreditation department at the SEU. |

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

|  |
| --- |
| The BSDS program, like all other programs at SEU, adopts standardized teaching and assessment methods for all students in all branches. This means that all students study the same course contents, submit the same assignments, and subject to the same assessment method. |

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

|  |
| --- |
| The BSDS program PLOs (under the Knowledge, Skills, and Competence domains) are assessed by the end of each academic semester using the quality system provided by the Vice Rectorate of Planning and Quality. All PLOs are assessed based on the recommendations and issues collected from the CRs and the feedback from students’ surveys, the following actions are periodically performed:   * Updating the program Curriculum. * Updating the College policies and manuals. * Updating Graduation Projects Guidelines. * Updating the lab manuals. |

**5. Program Evaluation Matrix**

| **Evaluation**  **Areas/Aspects** | **Evaluation**  **Sources/References** | **Evaluation Methods** | **Evaluation Time** |
| --- | --- | --- | --- |
| Evaluation of Teaching | Dean, Head of Department, Students surveys, students’ marks | * Dean meetings with the faculty members and students to get their feedback. * Evaluation conducted for instructors by the head of department. * Review student marks, which could give an indication to the used teaching techniques. | End of each academic year |
| Effectiveness of Teaching | Students, graduates, employers | * Students’ surveys. * Exit surveys. * Employers’ evaluation. | End of each academic semester |
| Learning resources | Students, graduates | * Students’ surveys. * Exit surveys. | End of each academic semester |
| Assessments | Students, instructors | * Students’ surveys (evaluate the effectiveness of used assessment methods). * Exam questions (Review the exam questions by the course committee before conducting the exam looking for strengths and weaknesses). | End of each academic semester |

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

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

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

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

**6. Program KPIs\***

The period to achieve the target (4) years.

| **No.** | **KPIs Code** | **KPIs** | **Targeted Level** | **Measurement Methods** | **Measurement Time** |
| --- | --- | --- | --- | --- | --- |
| **1** | KPI-P-01 | Students' Evaluation of Quality of Learning Experience in the Program | 4 | Student Survey | End of year |
| **2** | KPI-P-02 | Students' evaluation of the quality of the courses | 4 | Student Survey | End of year |
| **3** | KPI-P-03 | Completion rate | 4 | Statistical data | End of year |
| **4** | KPI-P-04 | First-year students retention rate | 70% | Statistical data | End of year |
| **5** | KPI-P-05 | Students' performance in the professional and/or national examinations | NA | NA | NA |
| **6** | KPI-P-06 | Graduates’ employability and enrolment in postgraduate programs | NA | NA | End of year |
| **7** | KPI-P-07 | Employers' evaluation of the program graduate’s proficiency | 4 | Survey | End of year |
| **8** | KPI-P-8 | Ratio of students to teaching staff | Less than 25:1 | Statistical data | End of year |
| **9** | KPI-P-9 | Percentage of publications of faculty members | 70% | Statistical data | End of year |
| **10** | KPI-P-10 | Rate of published research per faculty member | 2.5:1 | Statistical data | End of year |
| **11** | KPI-P-11 | Citations rate in referred journals per faculty member | 15:1 | Statistical data | End of year |

\* including KPIs required by NCAAA

# **H. Specification Approval Data:**

|  |  |
| --- | --- |
| **Council / Committee** | CCI Quality and Academic Accreditation Committee |
| **Reference No.** | 01/2025 |
| **Date** | 25/09/2025 |