COMPUTING ACCREDITATION COMMISSION

Summary of Accreditation Actions

2021–2022 Accreditation Cycle

Jordan University of Science and Technology
Irbid, Jordan

Computer Information Systems (Bachelor of Science)
Computer Science (Bachelor of Science)

Accredit to September 30, 2028. A request to ABET by January 31, 2027 will be required to initiate a reaccreditation evaluation visit. In preparation for the visit, a Self-Study Report must be submitted to ABET by July 1, 2027. The reaccreditation evaluation will be a comprehensive general review.

These are newly accredited programs. Please note that this accreditation action extends retroactively from October 1, 2020.

ABET

COMPUTING ACCREDITATION COMMISSION

JORDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

IRBID, JORDAN

FINAL STATEMENT OF ACCREDITATION

2021-22 ACCREDITATION CYCLE

JORDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

Irbid, Jordan

ABET COMPUTING ACCREDITATION COMMISSION

FINAL STATEMENT

VISIT DATES: NOVEMBER 1-3, 2021
ACCREDITATION CYCLE CRITERIA: 2021-2022

INTRODUCTION & DISCUSSION OF STATEMENT CONSTRUCT

The Computing Accreditation Commission (CAC) of ABET has evaluated the computer information systems and computer science programs at Jordan University of Science and Technology during the 2021-22 cycle for possible accreditation under the CAC/ ABET "Criteria for Accrediting Computing Programs" dated October 30, 2020.

The statement that follows consists of two parts: the first addresses the institution and its overall educational unit, and the second addresses the individual programs.

A program's accreditation action is based upon the findings summarized in this statement. Actions depend on the program's range of compliance or non-compliance with the criteria. This range can be construed from the following terminology:

- **Deficiency** A deficiency indicates that a criterion, policy, or procedure is not satisfied. Therefore, the program is not in compliance with the criterion, policy, or procedure.

- **Weakness** A weakness indicates that a program lacks the strength of compliance with a criterion, policy, or procedure to ensure that the quality of the program will not be compromised. Therefore, remedial action is required to strengthen compliance with the criterion, policy, or procedure prior to the next review.

- **Concern** A concern indicates that a program currently satisfies a criterion, policy, or procedure; however, the potential exists for the situation to change such that the criterion, policy, or procedure may not be satisfied.

- **Observation** An observation is a comment or suggestion that does not relate directly to the current accreditation action but is offered to assist the institution in its continuing efforts to improve its programs.

REVIEW TEAM

The programs listed above were evaluated by the peer review team shown below.

- **Program Evaluator** Jaber JEMAI, Higher Colleges of Technology
- **Program Evaluator** Michael A Gennert, Worcester Polytechnic Institute (Retired)
- **Visit Team Chair** Carolyn M. Jacobson
- **Editor 1** Kevin Huggins, Harrisburg Unversity of Science and Technology
- **Editor 2** Jean Ragan Stephenson Blair, United States Military Academy

Please note that program accreditation decisions are made solely by the respective Commissions of ABET. Reference to the professional affiliations of the volunteer peer evaluators in no way constitutes or implies endorsement or recommendation of the programs by the listed professional affiliations.

INFORMATION RECEIVED AFTER THE REVIEW

- **Seven-Day Response** No information was received in the seven-day response period.
- **30-Day Due-Process Response** Information was received in the 30-day due-process response period relative to the Computer Information Systems (Bachelor of Science) and Computer Science (Bachelor of Science) programs.
- **Post-30-Day Due-Process Response** Information was received in the post-30-day due-process response period relative to the Computer Information Systems (Bachelor of Science) and Computer Science (Bachelor of Science) programs.

INSTITUTIONAL SUMMARY

Jordan University of Science and Technology is a national public university operated by the Ministry of Higher Education and Scientific Research. The university was established in 1986 as an autonomous national institute of higher learning. Today, it is comprised of 12 faculties or colleges, one institute, and 61 academic departments. Over 27,000 students are enrolled in 45 undergraduate and 100 graduate programs at the university. Almost 14 percent of the student body is drawn from 51 countries around the world.

The Faculty of Computer and Information Technology offers degrees in computer engineering, computer information systems, computer science, network engineering and security, and software engineering. The computer information systems program, computer science program, and network engineering and security program are seeking initial ABET accreditation. The computer engineering program is currently ABET accredited, and the software engineering program is not ABET accredited. At the time of the visit, the Faculty of Computer and Information Technology had 2,225 undergraduate students and 221 graduate students, 76 full- time faculty, 16 full- time lecturers, 34 full- time engineers and 11 support staff. During the 2020-2021 academic year, the faculty awarded 248 bachelor's degrees and 17 advanced degrees.

The following strengths apply to both the BS in Computer Information Systems and the BS in Computer Science.

INSTITUTIONAL STRENGTHS

1. During the summer following the junior year, students take a required 12- week practical training course. This field training, under the supervision of qualified practitioners, provides an opportunity for students to apply the knowledge acquired in prior coursework to real- life applications. The knowledge gained enhances the overall learning experience and better prepares students to work or pursue advanced degrees in their chosen fields following graduation.

2. The university houses a Center of Excellence for Innovative Projects which provides students, faculty, and the local community with a unique technical environment to support and sponsor a wide range of innovative projects. Established in 2016, the Center has a range of facilities and services including a Technical Incubator, Training Department, Marketing Department, and a Technology Transfer Office which documents innovative ideas, registers patents, and manages patents. The Center is thus a hub for creativity, innovation, and excellence, nurturing future industry leaders and intrepid entrepreneurs, and offering both students and faculty members resources not typically available in an academic setting.

3. The university encourages and supports its high achieving graduates from all disciplines to pursue graduate studies and research at renowned institutions in North America, Europe, and the United Kingdom by fully funding their education for the entire duration of their studies. This investment in education and scholarship over the years has resulted in Jordan University of Science and Technology becoming one of the premier institutions in the region, especially in STEM-related fields.

Computer Information Systems

Bachelor of Science Program

Evaluated under CAC Program Criteria for
Information Systems and Similarly Named Computing Programs

INTRODUCTION

The Bachelor of Science in Computer Information Systems was first offered in 2000 under the Department of Computer Science and Information Systems. In 2003, the Computer Information Systems department was established as part of the Faculty of Computing and Information Technology. The BS in Computer Information Systems is currently undergoing initial accreditation review by the Computing Accreditation Commission of ABET. The department also offers master's degrees in data science and health informatics.

Currently, the department has 12 faculty members, seven lecturers, and nine teaching assistants. Since the program's inception, 1,282 students have graduated from the computer information systems program, and it currently has 288 undergraduate students. In the academic year 2020-2021, 35 BS degrees in Computer Information Systems were awarded.

PROGRAM WEAKNESS

Criterion 4. Continuous Improvement

This criterion states that the program must regularly use appropriate, documented processes for assessing and evaluating the extent to which the student outcomes are being attained. The assessment and evaluation processes are well documented; however, the assessment process uses aggregate student course grades to measure attainment of course learning outcomes, and these results are then used as the direct assessment of student outcomes. This does not allow the program to differentiate among the levels of attainment of each student outcome when a course learning outcome contributes to more than one student outcome. Consequently, it is not possible to evaluate the overall attainment of some student outcomes apart from other student outcomes. Because it is not possible to determine the level of attainment of a given student outcome, the results of these evaluations do not clearly identify areas for program improvement. Thus, the program lacks strength of compliance with Criterion 4.

30-Day Due-Process Response

The program has identified a set of courses that enable the student outcomes. For each course, course learning outcomes will be revised to map to a single student outcome, with care being taken that course learning outcomes cover all aspects of each student outcome. Assessment activities will be designed to measure all aspects of each student outcome such that the level of attainment of each student outcome can be clearly determined and used to enable continuous improvement of the program. However, this plan has not yet been implemented.

Status

The program weakness is unresolved.

Post-30-Day Due-Process Response

The program has provided a table listing each required course with its associated student outcome(s) and the associated course learning outcome(s). Each course learning outcome maps to a single student outcome. The course learning outcomes collectively address all aspects of each student outcome. Assessment activities clearly show the level of attainment of each student outcome. Assessment results are evaluated and used as input for the continuous improvement of the program.

Status

The program weakness has been resolved.

Computer Science

Bachelor of Science Program

Evaluated under CAC Program Criteria for
Computer Science and Similarly Named Computing Programs

INTRODUCTION

The Bachelor of Science in Computer Science was first offered in 1997-1998 when the Computer Science Department was founded. The Computer Science Department is located within the Faculty of Computer and Information Technology along with several related departments. The BS in Computer Science is currently undergoing initial accreditation review by the Computing Accreditation Commission of ABET. In addition to the undergraduate program, the Computer Science Department offers a Master of Science in Computer Science.

The Computer Science Department is comprised of 18 tenure-track faculty members and four full-time teaching faculty members. All of these faculty members are responsible for the delivery of the BS program in Computer Science. Undergraduate enrollment has grown from 344 students in 2016 to 432 in 2021. In the 2020-2021 academic year, 48 BS degrees in Computer Science were awarded.

PROGRAM WEAKNESSES

1. **Criterion 4. Continuous Improvement**

   This criterion states that the program must regularly use appropriate, documented processes for assessing and evaluating the extent to which the student outcomes are being attained. The assessment and evaluation processes are well documented; however, the assessment process uses aggregate student course grades to measure attainment of course learning outcomes, and these results are then used as the direct assessment of student outcomes. This does not allow the program to differentiate among the levels of attainment of each student outcome when a course learning outcome contributes to more than one student outcome. Consequently, it is not possible to evaluate the overall attainment of some student outcomes apart from other student outcomes. Because it is not possible to determine the level of attainment of a given student outcome, the results of these evaluations do not clearly identify areas for program improvement.

   Thus, the program lacks strength of compliance with Criterion 4.

30-Day Due-Process Response

The program has identified a set of courses that enable the student outcomes. For each course, course learning outcomes will be revised to map to a single student outcome, with care being taken that course learning outcomes cover all aspects of each student outcome. Assessment activities will be designed to measure all aspects of each student outcome such that the level of attainment of each student outcome can be clearly determined and used to enable continuous

improvement of the program. However, this plan has not yet been implemented.

Status

The program weakness is unresolved.

Post-30-Day Due-Process Response

The program has provided a table listing each required course with its associated student outcome(s) and the associated course learning outcome(s). Each course learning outcome maps to a single student outcome. The course learning outcomes collectively address all aspects of each student outcome. Assessment activities clearly show the level of attainment of each student outcome. Assessment results are evaluated and used as input for the continuous improvement of the program.

Status

The program weakness has been resolved.

2. **Criterion 5. Curriculum**

This criterion specifies that the curriculum requirements must include substantial coverage of algorithms and complexity, computer science theory, concepts of programming languages, and software development. The program currently relies on the introductory programming courses CS101, CS102, CS112, CS113, and CS211 for the coverage of concepts of programming languages. Although basic concepts of programming languages are covered in these introductory programming courses, that does not rise to the level of substantial coverage of concepts of programming languages. Therefore, the program lacks strength of compliance with Criterion 5.

30-Day Due-Process Response

The program has identified four required upper level courses that currently provide substantial coverage of concepts of programming languages.

Status

The program weakness has been resolved.

JORDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

Irbid, Jordan

ABET COMPUTING ACCREDITATION COMMISSION

FINAL STATEMENT

VISIT DATES: NOVEMBER 1-3, 2021
ACCREDITATION CYCLE CRITERIA: 2021-2022

SUMMARY

The following is a summary of this evaluation for Jordan University of Science and Technology during the 2021-22 cycle:

Computer Information Systems Program

No deficiencies, weaknesses, or concerns were found.

Computer Science Program

No deficiencies, weaknesses, or concerns were found.