



COMPUTING ACCREDITATION COMMISSION

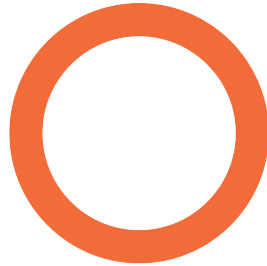
**Summary of Accreditation Actions**

2019–2020 Accreditation Cycle

Northern Arizona University  
Flagstaff, AZ, United States

**Computer Science (BS)**

Accredit to September 30, 2026. A request to ABET by January 31, 2025 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, 2025. The reaccreditation evaluation will be a comprehensive general review.



**ABET**

COMPUTING ACCREDITATION COMMISSION

**NORTHERN ARIZONA UNIVERSITY**

FLAGSTAFF, AZ, UNITED STATES

**FINAL STATEMENT OF ACCREDITATION**

2019-20 ACCREDITATION CYCLE

# NORTHERN ARIZONA UNIVERSITY

Flagstaff, AZ, United States

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ABET COMPUTING ACCREDITATION COMMISSION

## FINAL STATEMENT

VISIT DATES: SEPTEMBER 22-24, 2019

ACCREDITATION CYCLE CRITERIA: 2019-2020

## INTRODUCTION & DISCUSSION OF STATEMENT CONSTRUCT

The Computing Accreditation Commission (CAC) of ABET has evaluated the computer science program at Northern Arizona University during the 2019-20 cycle for possible accreditation under the CAC/ABET "Criteria for Accrediting Computing Programs" dated November 2, 2018.

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 program listed above was evaluated by the peer review team shown below.

- **Program Evaluator** Jesse Eickholt, Central Michigan University
- **Visit Team Chair** John K. Estell, Ohio Northern University

- **Editor 1** Yaakov Varol, University of Nevada, Reno (Retired)
- **Editor 2** Rajendra K. Raj, Rochester Institute of Technology

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 Science program.
- **Post-30-Day Due-Process Response** Information was received in the post-30-day due-process response period relative to the Computer Science program.

## INSTITUTIONAL SUMMARY

Northern Arizona University is a four-year public research university in Flagstaff, Arizona that offers more than 200 different bachelor, master, and doctoral degrees. Degree programs are also accessible at 29 statewide locations and online. Established in 1899 as the Northern Arizona Normal School, the institution has had several intermediate changes in name and mission culminating in 1966 when the Arizona Board of Regents recommended the current name of Northern Arizona University. The total university enrollment is approximately 29,400 students of which slightly more than 23,100 are enrolled at the Flagstaff Campus. There are approximately 1,180 full-time faculty members and over 4,900 total faculty and staff. The university is regionally accredited by the Higher Learning Commission (HLC).

The College of Engineering, Informatics, and Applied Sciences offers a total of nine undergraduate degree programs, including ones in Computer Science, Civil Engineering, Computer Engineering, Electrical Engineering, Environmental Engineering, and Mechanical Engineering; these aforementioned programs were evaluated during this visit. In Fall 2019, the college employed approximately 90 full-time faculty members to deliver its curricula to a total undergraduate college enrollment of 2,660. The college produced 393 B.S. graduates during the 2018-19 academic year.

# Computer Science

## BS Program

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

### INTRODUCTION

The BS in Computer Science program is offered at the Flagstaff campus through the School of Informatics, Computing, and Cyber Systems in the College of Engineering, Informatics, and Applied Sciences. The school also offers bachelor's programs in Applied Computer Science, Informatics, Computer Engineering, and Electrical Engineering. Three programs — Computer Science, Electrical Engineering, and Informatics — are offered at the master's level, and an interdisciplinary program in Informatics and Computing is offered at the doctoral level. The total number of undergraduates enrolled in the school is 985, and the enrollment in the BS in Computer Science program is 509. Supporting the program are 16 full-time and one part-time faculty members. Based on the reviews of the website, transcripts and university catalog, the program is clearly identified and differentiated from other programs offered at the university. The status of the two currently accredited programs within the School — Computer Science and Electrical Engineering — are clearly differentiated from each other and from the School's non-accredited programs.

### PROGRAM WEAKNESS

#### Criterion 8. Institutional Support

This criterion states that the resources, including institutional services, provided to the program must be adequate to meet program needs. Academic advising for all undergraduates is centralized through the University Advising office. Six professional academic advisors, plus a senior program coordinator, are assigned to serve the programs within the College. The visit team found that the quality of the advising being provided was inadequate and advisors sometimes lacked sufficient knowledge of the curriculum. Furthermore, although the institution advertises on its University Advising web page that each individual student is assigned a professional advisor, the team found that assigned advisors were frequently changed, thus impacting the quality of advising being provided. Interviews with the senior program coordinator and administrators within the college confirmed that there is significant turnover in advisors assigned to the programs, and that this turnover is primarily due to salary issues. Thus, as the evidence indicates that insufficient resources are being provided by the institution to ensure that students receive adequate academic advising, the strength of compliance with this criterion is lacking.

#### 30-Day Due-Process Response

The program reported that the institution has taken multiple steps toward promoting increased retention of their academic advisors. In November 2019, all academic advisors received a salary increase ranging from 3% to 7%, dependent upon time in the position and other factors, on top of

previously received salary increases awarded to all university personnel in July 2019. Starting salaries for academic advisors were also increased by 7%. Within the academic advising team dedicated to the College, an Advising Coordinator position was established and an advisor was promoted into a senior-level position; both of these positions are designed to provide additional leadership and mentoring to junior advisors. Finally, communications between the advising team and the program are being strengthened by including the Advising Coordinator as a non-voting member for various curriculum committee meetings within the College.

### **Status**

The program weakness is unresolved. The aforementioned changes are likely to provide both a greater financial inducement to counteract staff turnover and increase the advising team's level and currency of curricular knowledge. However, these changes have not been fully implemented and their impact in addressing the identified academic advising issues have not been demonstrated yet.

### **Post-30-Day Due-Process Response**

The program submitted documentation of (1) advisor retention data for the past three academic years, and (2) results from a student satisfaction survey regarding their advising experiences. For (1), a greater retention rate was achieved during the most recent academic year than in the two previous years. For (2), de-identified data was presented on the satisfaction level associated with each advisor. On a 5-point scale, strong levels of satisfaction were demonstrated across the board, with the lowest individual rating being 4.42 and the average of all ratings being 4.68.

### **Status**

The program weakness is now cited as a program concern. While the evidence presented now indicates current compliance with this criterion, it is uncertain whether this constitutes the start of two trends of compliance, or if one or both constitute blips in the data. Accordingly, the potential exists that the program might once again face significant advisor turnover and/or student dissatisfaction with advising, thereby jeopardizing future compliance with this criterion.

# **NORTHERN ARIZONA UNIVERSITY**

Flagstaff, AZ, United States

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## **FINAL STATEMENT**

VISIT DATES: SEPTEMBER 22-24, 2019

ACCREDITATION CYCLE CRITERIA: 2019-2020

## **SUMMARY**

The following is a summary of this evaluation for Northern Arizona University during the 2019-2020 cycle:

### **Computer Science Program**

#### Program Concern

- Criterion 8, Institutional Support. Both advisor retention and student advising satisfaction have the potential to revert back to unsatisfactory levels.