Introduction:

The Cyber Operations program was initiated in 2013 as a technical off-shoot of the Computer Network Security (CONS) program and states four objectives:

1. Demonstrate proficiency in foundational information assurance disciplines,
2. Demonstrate proficiency in foundational computer science disciplines,
3. Demonstrate proficiency in the most technical areas of cyber security,
4. Find ready employment in the field.

To assess how well we are achieving these objectives, this assessment plan outlines a variety of activities to measure how well the program equips students to take on cyber security responsibilities in industry and government.

Assessment Plan:

Goal 1: Demonstrate proficiency in foundational information assurance disciplines:

Student Outcome:

1. Working knowledge in confidentiality, integrity, availability, and other foundational areas of cyber security related to software and network systems.

Assessment Criteria:

a. Course Grades: 75% of the students will successfully complete CIS 245 with a grade of B or higher.
b. Assessment Exam: 75% of graduates will successfully complete the portions of the Cyber Operations assessment exam related to these foundational areas of cyber security.

Student Outcome:

2. Working knowledge in common operating systems including installation and the use of common system utilities.

Assessment Criteria:
a. Course Grades: 75% of the students will successfully complete CIS 328 with a grade of B or higher.
b. Assessment Exam: 75% of graduates will successfully complete the portions of the Cyber Operations assessment exam related to these operating systems areas.

Student Outcome:

3. Proficiency in networking, including installation, maintenance, monitoring, resource management, user management, and performance issues.

Assessment Criteria:

a. Course Grades: 75% of the students will successfully complete CIS 383 and CIS 385 with a grade of B or higher.
b. Assessment Exam: 75% of graduates will successfully complete the portions of the Cyber Operations assessment exam related to networking.

Goal 2: Demonstrate proficiency in foundational computer science disciplines:

Student Outcome:

1. Ability to use programming to create software applications in a variety of programming languages that meet a wide spectrum of functional and non-functional requirements.

Assessment Criteria:

a. Course Grades: 75% of the students will successfully complete CSC 150, CSC 250, and CSC 260 with a grade of B or higher.
b. Assessment Exam: 75% of graduates will successfully complete the portions of the Cyber Operations assessment exam related to computer programming.

Student Outcome:

2. Ability to use computer science courses to gain a better understanding of the role of the operating system and computer architecture as it relates to cyber security.

Assessment Criteria:

a. Course Grades: 75% of the students will successfully complete CSC 300, CSC 314, and CSC 456.
b. Assessment Exam: 75% of graduates will successfully complete the portions of the Cyber Operations assessment exam related to operating systems and computer architecture.
Goal 3: Demonstrate proficiency in the most technical areas of cyber security:

Student Outcome:

3. Ability to exploit an organization's information assets including software and network resources to gain administrative control over the asset.

Assessment Criteria:

c. Course Grades: 75% of the students will successfully complete CSC 434 and CSC 436 with a grade of B or higher.
d. Assessment Exam: 75% of graduates will successfully complete the portions of the Cyber Operations assessment exam related to cyber attacks.

Student Outcome:

2. Ability to identify, investigate, and draw conclusions on malicious software and network activity.

Assessment Criteria:

a. Course Grades: 75% of the students will successfully complete CSC 432 and CSC 444 with a grade of B or higher.
b. Assessment Exam: 75% of graduates will successfully complete the portions of the Cyber Operations assessment exam related to malware and reverse engineering.

Goal 4: Find ready employment in the field.

Student Outcome:

1. Graduates will find ready employment in the field.

Assessment Criteria:

a. Placement Results: 90% of graduates registered with the DSU Placement Office will find employment or be accepted for graduate programs within four months of graduation.