Introduction:

The Bachelor of Science degree program in Network and Security Administration covers topics ranging from network protocols to the design and administration of systems and networks. The degree program is intended to provide graduates with a strong background in computer networking theory, Microsoft Windows-based networks, UNIX/Linux network operating systems, mission-critical applications (e.g., electronic mail systems), virtualization, and computer and network security. Graduates will have the skills necessary to manage the information technology infrastructure required to operate a modern business, with job titles that include as system administrator, network system engineer, systems analyst, network analyst, network application developer, and technical consultants. The employment outlook for networking professionals is strong as companies continue to build up and update their network infrastructure.

Student’s mastery in individual courses will be assessed by the following: appropriate written/oral/practical examinations and assignments. It is also expected that students in the B.S. degree program will complete an internship or senior project to further enhance the concepts of the coursework. Students who do not demonstrate mastery will be required to remediate any deficiencies by an appropriate method -- most often, repeating the course and earning a passing grade. Students who do not successfully remediate deficiencies or otherwise fail to meet academic expectations will be dismissed from the program. All DSU students also complete a major-field exit exam prior to graduation.

Student Knowledge and Competencies:

1. Students will develop advanced knowledge in networking technologies for a career in networking and system administration.
2. Students will develop advanced knowledge in system administration technologies for a career in networking and system administration.
3. Students will develop an understanding of programming concepts with an advanced knowledge in scripting for a career in networking and system administration.
4. Students will develop the interpersonal skills that foster professional responsibility, leadership, and team work.

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

Assessment Plan:

Goal 1: Graduates of the program will be able to apply cognitive learning to networking technologies, secure system administration and programming.

Student Outcome:
1. Students will develop advanced knowledge in networking concepts for a career in networking and system administration

**Assessment Criteria:**

a. Assessment Exam: 75% of graduates will successfully complete the portions of the exit exam related to networking technologies with a 60% or higher.
b. Course Grades: 75% of students will successfully complete CIS 383, CIS 385, CIS 387, with a grade of B or higher.
c. Practical Examination: 75% of students will successfully complete a lab demonstrating firewall concepts in CSC438 with a grade of at least 75%.d. Practical Examination: 75% of students will successfully complete a lab demonstrating a culmination of routing and switching concepts in CIS387 with a grade of at least 75%.
e. Alumni Survey: 70% of graduates will indicate they are satisfied or very satisfied with their ability to learn on the job.

**Student Outcome:**

2. Students will develop advanced comprehension and application in system administration technologies for a career in networking and system administration.

**Assessment Criteria:**

a. Course Grades: 75% of students will successfully complete CIS 466, CIS 468, CIS 387, CIS 460, CIS 462 with a grade of B or higher.
b. Practical Examination: 75% of students will complete a project in CIS466 demonstrating a culmination of system interoperability based on course content and previous courses with a grade of at least 75%.
c. Employer Survey: 85% of employers will indicate that DSU graduates exceed their expectations in knowledge of their academic area as it relates to his/her position.
d. Alumni Survey: 70% of graduates will indicate that they are satisfied with their overall professional capabilities.

**Student Outcome:**

3. Students will develop advanced knowledge in programming for a career in networking and system administration.

**Assessment Criteria:**

a. Assessment Exam: 75% of graduates will successfully complete the portions of the exit exam related to programming with a 60% or higher.
b. Technology Exam: 75% of graduates will complete the programming portion of the general education technology exam with a 60% or higher.
c. Practical Examination: 75% of students will successfully complete a lab demonstrating programming concepts implemented within a system-administration specific scripting task with a grade of at least 75%
d. Alumni Survey: 85% of graduates will indicate that they are satisfied or very satisfied with their ability to select and apply appropriate technology

Goal 2: Graduates will be able think logically, analytically, and objectively, while demonstrating the appropriate soft skills for a successful career in networking and system administration.

Student Outcome:

1. Students will develop the interpersonal skills that foster professional responsibility, leadership, and team work.

Assessment Criteria:

a. Employer Survey: 85% of employers will rate DSU graduates’ oral communication skills as good or very good.
b. Employer Survey: 85% of employers will indicate that DSU graduates’ interpersonal skills (e.g. working in a team setting) exceed their expectations.
c. Alumni Survey: 70% of graduates will indicate they are satisfied or very satisfied with their oral communication skills.
d. Alumni Survey: 70% of graduates will indicate that DSU contributed to their verbal communication skills.

Student Outcome:

2. Students will effectively communicate with peers of other business units outside the realm of IT.

Assessment Criteria:

a. Employer Survey: 85% of employers will rate DSU graduates’ oral communication skills as good or very good.
b. Alumni Survey: 70% of graduates will indicate they are satisfied or very satisfied with their oral communication skills.
c. Alumni Survey: 70% of graduates will indicate that DSU contributed to their verbal communication skills.

Goal 3: Students will be well-prepared academically for an entry-level position in the career field.

Student Outcome:
1. Graduates will find ready employment in the field.

Assessment Criteria:

a. Placement Results: 85% of the NSA graduates registered with the DSU Placement Office will find employment in the field or be accepted to a graduate program within four months of graduation.

b. Employer Survey: 85% of employers will indicate that DSU students need less than the usual additional job-related training.

c. Employer Survey: 85% of employers will rate DSU graduates’ ability to learn on the job as good or very good.

d. Alumni Survey: 70% of graduates will indicate they are satisfied or very satisfied with their ability to learn on the job.

e. Alumni Survey: 70% of graduates will indicate DSU contributed to their ability to learn on the job.

Goal 4: Graduates will be able to adapt to the ever-changing field of information technology

Student Outcome:

1. Students will have the ability to quickly and effectively learn and demonstrate skill and understanding with new or previously unknown technologies.

Assessment Criteria:

a. Employer Survey: 85% of employers will rate DSU graduates’ ability to adapt to changes in computing environment as exceeding expectations.

b. Employer Survey: 85% of employers will rate DSU graduates’ ability to select and apply appropriate technology as exceeding expectations.

Student Outcome:

2. Students will increase understanding of IT systems already in place within an organization in which the student has not previously been exposed.

Assessment Criteria:

a. Employer Survey: 85% of employers will rate DSU graduates’ ability to learn on the job as exceeding expectations.

b. Employer Survey: 85% of employers will rate DSU graduates’ need for additional training in technology skills as Less than usual.

Student Outcome:
3. Students will show a desire to increase understanding and grow professionally to better serve the needs of the business environment.

Assessment Criteria:

a. Employer Survey: 85% of employers will rate DSU graduates’ ability to seek out opportunities for professional growth as exceeding expectations.

b. Employer Survey: 85% of employers will rate DSU graduates’ ability to learn on the job as exceeding expectations.