PROGRAM Assessment - Data to be provided by the person responsible for program assessment

For each section below, please provide the requested information for the degree program under consideration.

Program: **Computing & Information Technology Networking Program**
Department: **Computing & Information Technology**
Program contact person: **Department Chair: Margaret Taylor, Networking Program Director: Karen Ahern**
Current Academic Year: 
(Please use your assessment data submitted most recently in October: results and analysis shown below should be that which was reported for the prior academic year, and outcomes, methods and improvement plan should be drawn from the current academic year assessment plan)

### MEASURABLE OUTCOMES

<table>
<thead>
<tr>
<th>Measurable Outcome</th>
<th>Method for Assessing Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Differentiate the functions of networking components.</td>
<td>Students complete skill-based labs in an online and hands-on environment.</td>
</tr>
<tr>
<td>Assemble a computer networking system.</td>
<td>Students are required to create a computer networking system in a virtual environment.</td>
</tr>
<tr>
<td>Specify configuration parameters to include: IP addressing, AAA, QoS prioritization, capacity, and redundancy</td>
<td>Students are required to complete several skill-based labs. Skills are assessed using both online and hands-on lab environments.</td>
</tr>
<tr>
<td>Modify operating system configurations in client, server, and intermediary devices.</td>
<td>Students are required to complete several skill-based labs. Skills are assessed using both online and hands-on lab environments.</td>
</tr>
<tr>
<td>Optimize hardware configurations in client, server, and intermediary devices.</td>
<td>Students are required to complete several skill-based labs. Skills are assessed using both online and hands-on lab environments.</td>
</tr>
<tr>
<td>Optimize operating system configuration in Microsoft server environment.</td>
<td>Students are required to complete several skill-based labs. Skills are assessed using both online and hands-on lab environments.</td>
</tr>
</tbody>
</table>

### RESULTS AND ANALYSIS

(based on current year assessment data; please also comment on results obtained based on outcomes designed and measured as a result of prior year findings):

The measurements concluded that 27-30% of students did not achieve outcomes at an acceptable level.

The previous year did not produce data as the measurement tasks were developed.

### IMPROVEMENT PLAN

(please be specific and ensure that improvement plan is data-driven):

It was determined that the outcomes and assessment methodology would be reviewed by faculty and the Advisory Council. A committee was formed that included faculty and representatives from both the private and government sectors. The committee is scheduled to report their outcomes to the Advisory Council this semester.
Academic Program Review
Networking Degrees
College of Southern Nevada
2017
ACADEMIC EVALUATION WORKSHEET: PROGRAM

Date Submitted: ______________
Submitted by: ______________ Margaret Taylor

PROG. CODE: See List
PROGRAM: __See List
DEPARTMENT: Computer & Information Technology (CIT)

Data for Semester: __Fall 2017__ ASSOC. PREFIX: __CF, CIT, CS, CSCO, IS__

PROGRAM Performance Indicators - Data to be provided by Institutional Research & Chair/Program
Dir/Lead Faculty

DECLARED MAJORS ENROLLED

| Headcount (unduplicated) | 336 |

SUPPLY AND DEMAND (Limited Entry Programs only)

| Is this a limited entry program? | NO |
| Students attempting to gain limited entry (unduplicated) | |

*IR does not provide this data. This data should be provided by the department or program where it is relevant.

GRADUATES AND DEGREES/CERTIFICATES IN PRIOR GRADUATE YEAR (Aug, Dec, and May)
Graduate Year: __2016-2017__

| Graduates* | 24 |
| Degrees/Certificates* (total) | 24 |
| Degrees: | 24 |
| Certificates: | 0 |

*If more than one program catalog code is included, IR will list each program separately.

STUDENT SUCCESS

| Placement/transfer rates (where applicable) | |
| Licensure success rates (where applicable) | |

*IR does not provide this data. This data should be provided by the department or program where it is available.

HISTORICAL DATA - PROGRAM

<table>
<thead>
<tr>
<th>Note</th>
<th>1 year change</th>
<th>3 year change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Declared majors</td>
<td>-7%</td>
<td>29%</td>
</tr>
<tr>
<td>Graduates (prior grad year)</td>
<td>25%</td>
<td>63%</td>
</tr>
<tr>
<td>Degrees/Certificates (prior yr)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degrees:</td>
<td>25%</td>
<td>63%</td>
</tr>
<tr>
<td>Certificates:</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

*If more than one program catalog code is included, IR will list each program separately.*
Notes and Comments:

1. This page combines all of the CIT Networking Degrees listed below. All of these are different iterations of the same degree.

<table>
<thead>
<tr>
<th>Degree Code</th>
<th>Degree Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CITNETWAAS, CITNTWHAAS</td>
<td>Computer Information Technology (Networking)</td>
</tr>
<tr>
<td>CITNCS-AAS, CITNCSHAAS</td>
<td>Computing and Information Technology (Networking – Client/Server)</td>
</tr>
<tr>
<td>CITNETLAAS</td>
<td>Computing and Information Technology (Networking – Linux)</td>
</tr>
<tr>
<td>CITNRS-AAS, CITNRSHAAS</td>
<td>Computing and Information Technology (Networking – Router/Switch)</td>
</tr>
<tr>
<td>CITNET-CT</td>
<td>Computing and Information Technology (Networking)</td>
</tr>
</tbody>
</table>

2. Note: I do not have the actual declared majors for all three time periods. The numbers stated are Enrolled Majors as specified on the IR reports. There were 741 Networking declared majors as of Fall 2017.
CORE MISSION:

1. How does this program relate to the Mission and Core Themes of the College? (See appendix)
   The Computing & Information Technology Networking Program includes three AAS degrees: Client/Server, Linux, and Router/Switch. The program prepares students to assist in providing support for information technology, cyber security, forensics, or data network technician. The Computing & Information Technology Networking Program provides students with the educational foundation and technical experience for network technology and related professions. Such as: network security engineers, network administrators, network support technicians, network infrastructure manager, and data center network manager. Students are introduced to and taught industry standard Local Area and Wide Area Network infrastructure and topology, Internet planning and design using advanced secure switching, routing and troubleshooting techniques, and project management.

   The Computing & Information Technology Networking Program AAS provides graduates opportunities to pursue a four-year degree and several institutions. This supports the mission of CSN and the School of Advanced and Applied Technologies to change lives by preparing students to obtain employment or to transfer to a four-year program of student.

2. To the best of your knowledge, how and to what extent is this program essential because of state laws, regulations, outside agency regulations, Board of Regents or Legislative priorities?
   
   N/A

3. How and to what extent does this program relate to programs at other NSHE institutions (for example, overlapping programs, articulation or transfer relationships, etc.)?
   The Computing & Information Technology Networking Program requires general education courses in Communication, English, History, Mathematics, and Science to complete the degree. Graduates with the AAS degree can pursue a bachelor’s of applied science (BAS) degree in Engineering Technology Management – Computer Information Option at Nevada State College or the new BAS degree in Project Management at CSN.

4. How and to what extent does this program relate to programs at non-NSHE colleges in Southern Nevada?
   The Computing & Information Technology Networking Program graduates are well positioned to pursue a bachelor’s degree at several non-NSHE colleges. Students learn a core of skills they can apply to the required general education courses across the academic spectrum. The technical courses may be applied to several degrees offered by non-NSHE college programs.

5. How and to what extent does this program depend upon prerequisite courses from other disciplines at CSN?
   The Computing & Information Technology Networking Program many prerequisite courses are in the areas of Communications, English, and Mathematics.

6. How and to what extent does this program utilize other college resources for academic support (for example, library, technology, counseling, disability resource center, tutoring, writing or math centers, etc.)?
   The Computing & Information Technology Networking Program, like all other degree programs, depends upon college services such as the library, counseling, Disability Resource Center, Centers for Academic Success, and the writing and mathematics centers. All of the Computing and Information
Technology courses depend upon the services provided by the Office of Technology Services at CSN. Many of these classes are offered in Distance Education and Hybrid format.

QUALITY:
7 Does this program have an advisory board, or does the department have an advisory board relevant to this program? Describe briefly.

The Computing & Information Technology Department has a Cyber Security/Networking Advisory Board and a Software Advisory Board. Each of these entities meet a minimum of once each semester the combined group meets annually or more often as deemed appropriate by the Board Chairs. Currently the Cyber Security Advisory Board has created a sub-committee to review all forensics course and degree outcomes with the intent of making recommendations to the department.

8 If this program has a specialized accreditation, is this accreditation necessary for alumni licensure or employability?

This program does not have specialized accreditation. Students that earn professional certifications are critical to the marketing of the program to potential employers of our graduates. Students are encouraged to test for industry certifications upon completion of the appropriate courses. At the end of each semester students have the opportunity to earn vouchers to test and earn professional certifications.

9 How and to what extent does this program contribute to CSN’s regional or national reputation?

The designation as a Center of Academic Excellence Cyber Defense Education Two-Year (CAE-2Y) has brought national attention to CSN’s Cyber Security Program. Many of the basic knowledge and skills required for Cyber Security begin with Networking Program core courses, as a result, the Computing & Information Technology Networking Program also benefits from the CAE-2Y designation.

DEMAND:
10 Describe the level and nature of external demand for this program (for example, occupational data, labor statistics, employer surveys, student surveys, etc.)?

DETR information from 2016-26 job forecasts.

- Computer Network Architects: 6% growth and annual median pay of $104,650
- Network and Computer Systems Administrators: 6% growth and annual median pay of $81,100
- Computer Support Specialist: 11% growth and annual median pay of $52,810

Many local companies recruit and employ our students before they graduate.

11 Describe the level and nature of external financial or practical support for this program (for example, grants, donations, employer or clinical partnerships, etc.)?

Over the past few years the Computing & Information Technology Networking Program has received significant funding through Grants.

- Perkins Grants: part of $59,000 for this academic year
- Donations: Gifts of approximately $10,000 have been received this year

12 What other options exist for students in the region to earn this degree or certificate?

There are several options for the Computing & Information Technology Networking Program graduates have several options to continue their education.

- Students completing any of the Cyber Security Degrees are eligible to enter the BAS – Engineering Technology – Computer Information Emphasis Program at Nevada State College
NSC. CSN and NSC have in place a 3+1 agreement. These student have complete the prerequisite for either the Networking Infrastructure Analyst or Virtualization Analyst tracks.

- Students are also prepared to enter CSN’s new **BAS – Project Management** program.
- There are also matriculation agreements that allow students to pursue a Bachelor’s Degree at:
  - Capella University
  - Regis University
  - Southern Utah University
  - University of Phoenix
  - University of Maryland
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