



BOARD OF GOVERNORS

STUDENT SUCCESS COMMITTEE

Thursday, April 8, 2021

11:30 a.m.-1:15 p.m.

Lifelong Learning Center, Suites F & G

STUDENT SUCCESS COMMITTEE

Donovan Ellis, Chairperson
Arlan Kuehn
Terry Nelson
Nicole Sedlacek
Steve Anderson, ex-officio

OTHER BOARD MEMBERS

Del Ames
Dirk Petersen
Julie Robinson
Jeff Scherer
Carol Sibbel
Gene Willers

STAFF

Dr. Leah Barrett	Richard Chrisman
Scott Gray	Shanelle Grudzinski
Paul Feilmeier	John Liewer
Amanda Nipp	Nathan Simpson
Dr. Michele Gill	Terri Heggemeyer
Dr. Karen Severson	
Dr. Tracy Kruse	
Jim Curry	
Diane Reikofski	
Dr. Wade Herley	
Kris Coan	
Gigi Simonsen	
Brad Vogt	

THE STUDENT SUCCESS COMMITTEE CAN ONLY RECOMMEND ACTION FOR THE BOARD TO CONSIDER DURING PUBLIC MEETINGS OF THE BOARD OF GOVERNORS.

The Committee hereby reserves the right to go into executive/closed session pursuant to Neb. Rev. Stat. §84-1410 of the Nebraska Open Meetings Act.

A G E N D A

1. Convene meeting
2. Consider approval of Minutes of meeting of March 11, 2021 – (attached pgs. 3-4)
3. 2020 Graduate Report – (included in BoardPaq) - Terri Heggemeyer
4. Consider the Information Technology program at Northeast Community College for submission to the Nebraska Coordinating Commission for Postsecondary Education (CCPE) – (attached pgs. 5-18) – Dr. Michele Gill, Dr. Wade Herley, Richard Chrisman, Kris Coan, Brad Vogt, and Gigi Simonsen
5. Consider the Wind Energy program at Northeast Community College for submission to the Nebraska Coordinating Commission for Postsecondary Education (CCPE) – (attached pgs. 19-29) – Dr. Michele Gill, Shanelle Grudzinski, John Liewer, and Nathan Simpson
6. Commencement overview – Amanda Nipp
7. Covid-19 update – Amanda Nipp

8. Enrollment update – Amanda Nipp

9. Other - (information only)

10. Adjourn

**NORTHEAST COMMUNITY COLLEGE
BOARD OF GOVERNORS**

STUDENT SUCCESS COMMITTEE

Thursday, March 11, 2021

STUDENT SUCCESS COMMITTEE

Donovan Ellis, Chairperson	PRESENT
Arlan Kuehn	ABSENT
Terry Nelson	PRESENT
Nicole Sedlacek	PRESENT
Steve Anderson, ex-officio	PRESENT

OTHER BOARD MEMBERS

Del Ames	PRESENT
Dirk Petersen	PRESENT
Julie Robinson	ABSENT
Jeff Scherer	PRESENT
Carol Sibbel	PRESENT
Gene Willers	PRESENT

STAFF

Dr. Leah Barrett
Scott Gray
Paul Feilmeier
Amanda Nipp
Dr. Michele Gill
Dr. Karen Severson
Dr. Tracy Kruse
Jim Curry
Diane Reikofski

MINUTES

1. Donovan Ellis, Chairperson of the Student Success Committee, convened the meeting at 2:29 p.m. via Zoom video conferencing.
2. Recommended approval of the Minutes of the February 11, 2021 meeting as distributed.
3. Dual credit enrollment statistics for academic years 2018-2019 and 2019-2020 have been banner years for Northeast with 1,346 and 1,726 enrollments respectively. Dual credit courses provide an opportunity for high school students to get a jump to begin obtaining college credit while still enrolled in high school. 28% of the high school seniors taking Northeast dual credit courses matriculated to Northeast in Fall 2019 and 27% matriculated in Fall 2020. Of the students who took Northeast's dual credit courses, the majority came from Northeast's 20-county service area.

Degree matriculation percentages reveal that 35% of 2018-2019 and 27% of 2019-2020 dual credit enrolled students took courses toward an associate of science degree in programs such as pre-professional nursing, pre-vet tech, pre-physical therapy, ag transfer, pre pro-medicine, etc.

Top colleges to which students transfer are Wayne State College, University of Nebraska-Lincoln, University of Nebraska-Omaha, University of Nebraska-Kearney, and University of South Dakota. Articulation agreements are in place with each of these institutions.

Mission

Northeast Community College is dedicated to the success of students and the region it serves.

Northeast Community College's recruitment team is preparing a plan to reach out to high school seniors who are enrolled in dual credit courses but have not enrolled at any college. In addition, Northeast will be studying data to identify reasons why students are not taking dual credit classes to entice them to take advantage of this opportunity. President Barrett added that as the data is studied, we need to understand if barriers are financial, first generation status, etc. As we talk about economic mobility, we know that lower income students are not going to college and we need to give them a pathway to enroll in college by using resources that we have such as stimulus money, Mackenzie Scott gift, other scholarships, etc.

Del Ames inquired about the male/female breakout of dual enrollment students as well as costs. Data will be reviewed, and information brought back to the Board of Governors over the next few months.

4. Discussions continue regarding the COVID-19 vaccination plan. A majority of Northeast employees have indicated that they have received or will receive the vaccination. Fall 2021 planning includes a return to full campus operations with face-to-face classes. Facemasks will remain a requirement for in-person classes. Residence life is anticipated to be at or near full capacity.

All athletic events are occurring this spring. Northeast is a member of the Iowa Community College Athletic Conference (ICCAC) who voted to allow each athlete to have four guests at each sporting event. Attendance at sporting events will be revoked on March 1st.

Del Ames inquired about commencement and Amanda Nipp reported that discussions are currently being held by members of the Commencement Workgroup to review various options for providing a safe, face-to-face commencement ceremony.

Steve Anderson inquired if the student population in residence life would be required to have the vaccination. Ms. Nipp reported that one of the challenges with requiring the vaccination is that it is still considered an experimental vaccine. Another issue is that if we do require the vaccination, we are unsure if students would receive the vaccination prior to moving into the residence halls. On-campus housing requires certain vaccinations and a statement has been added that additional vaccinations may be required due to Covid.

5. Northeast Community College will be fully operational in the fall with face-to-face classes. Residence life will be back to 100% occupancy. Plans are in place in case we need to provide quarantine facilities.

On March 8th, 225 employees received the Covid vaccination. Employees who were not available on Monday were able to contact the Human Resources office and they worked with employees to receive their vaccination in another way.

Details are being worked out to provide multiple commencement ceremonies in May.

6. With no further business to discuss, the meeting was adjourned at 2:55 p.m.



CCPE/Program Review

Cost Center/Program of Study

155100/Information Technology

Date Completed

April 8, 2021

Cost Center/Program Faculty Signatures

Coordinating Commission for Postsecondary Education Review of Existing Instructional Programs

Institution: Northeast Community College

Program: Information Technology

I certify the following:

- the information provided regarding this program is accurate
- the above named institution has in place a procedure for reviewing instructional programs
- such review took place was presented to the institution's governing board on _____
- the governing board's action was: _____

Signed: _____
(Chief Academic Officer or designated representative) (Date)

Evidence of Demand and Efficiency

		15-16	16-17	17-18	18-19	19-20	5 yr avg
Student Credit Hours (SCH)		2,138	2,124	1,993	2,203	2,385	2,169
Faculty Full-time Equivalency (FTE)		7.76	7.45	6.91	7.41	7.55	7.42
SCH/Faculty FTE		275.52	284.97	288.36	297.31	316.00	292.43
Number of Degrees and Awards (list degrees/awards separately)	Certificate	31	32	35	45	48	38
	Diploma	-	-	-	-	-	-
	AAS	9	15	11	12	12	12
	AA/AS	1	1	6	5	6	4

Evidence of Need (provide a statement below or attach documentation)

See attached narrative.

Justification if the program is below CCPE thresholds (provide a statement below or attach documentation)

Program is meeting CCPE thresholds of 10 completers or 275 SCH/FTE

For CCPE use: reviewer/date

Justification if the program is below CCPE thresholds—check one or more boxes and provide a detailed explanation or attach a document)

- ☐ Program is critical to the role and mission of the institution
- ☐ Program contains courses supporting general education or other programs
- ☐ Interdisciplinary program (providing the program meets the requirements set in the existing policy for interdisciplinary programs)
- ☐ Student or employer demand, or demand for intellectual property is high and external funding would be jeopardized by discontinuing the program
- ☐ Program provides unique access to an underserved population or geographical area
- ☐ Program meets a unique need in the region, state, or nation
- ☐ Program is newly approved within the last five years (no additional justification needed)
- ☐ Other

Introduction

In accordance with the Nebraska Coordinating Commission for Post-Secondary Education (CCPE), the following pages represent a summary of the quantitative and qualitative review of the Information Technology program at Northeast Community College that was conducted during the spring of 2021. This document will identify the need and demand for the Information Technology program within the 20-county service area of Northeast Community College and the state of Nebraska. It will illustrate the justification for the program based on the CCPE thresholds of an average of ten graduates over the past five years and an annual average generation of 275 student credit hours per FTE faculty member.

As you review the material for the Information Technology program, you will understand the value of the program to Northeast Community College and the region it serves. The program prepares individuals to perform information technology activities, providing students with a highly employable, highly sought-after set of skills. The AAS, AA and certificate programs are offered on the Norfolk campus and the AA program on the South Sioux City campus. Some courses are offered in an online or virtual format. Also, limited courses have been offered for early college enrollment as virtual/online or in person at Norfolk Public High School.

The Information Technology program offers a certificate, an Associate of Arts degree, and an Associate of Applied Science degree. The AAS program is designed so students can create or “build” their own degree by choosing two of five different certificate areas. Those certificate areas are Web & Visual Application Development, IBMi Application Development, Technical Services Support, CISCO Networking Academy and Information Security. The first semester for all concentrations consists of the same five, core classes. Upon successful completion of the five classes, students will receive a General Information Technology certificate. Upon successful completion of their AAS degree, students will receive their AAS degree plus a certificate in each of the two areas of concentration. This allows students to focus on the specific, specialty areas of Information Technology that appeal to them. The program also offers a choice of two Associate of Arts degree paths. Students may choose Computer Information Systems or Computer Science. The two AA options have been articulated for transfer with Wayne State College.

The National Security Agency and Department of Homeland Security has designated Northeast Community College as an institution for CAE-2Y, National Center of Academic Excellence in Cyber Defense 2-Year Education. The Information Security concentration paired with any of the four remaining concentrations, Technical Services Support, Cisco Networking, Web & Visual Application Development or IBMi Application Development, will result in recognition as a CAE-2Y degree. This designation provides additional transfer options to CAE-4Y (Center of Academic Excellence in Cyber Defense 4-Year Education) colleges in Nebraska, specifically University of Nebraska-Omaha, and Bellevue University.

The Information Technology program, currently, is part of the Business and Technology Division of Northeast Community College. The current division dean is Dr. Wade Herley. All questions and concerns relating to the contents of this document or the review of the program should be directed to Dr. Herley.

Information Technology Program Need

The Information Technology Advisory Committee members agree that there is a definite need for program continuation. This was expressed clearly during the most recent meeting when they agreed that the modification to the IT degree offerings that was implemented in the fall of 2014 has made a significant impact to student success and workforce readiness.

On a state level, information technology is currently in high demand. According to the Nebraska Department of Labor, the projections for all information technology occupations will continue to be in high demand through the year 2028.

On a national level, information technology will continue to be in high demand. According to the US Bureau of Labor Statistics all computer occupations are projected to grow at a rate of 11% from 2019 to 2029. Specifically, the career areas at Northeast are projected to grow anywhere from 4% to 31% depending on the career choice.

According to the US Bureau of Labor Statistics from 2019 to 2029:¹

"Employment in computer and information technology occupations is projected to grow 11 percent, much faster than the average for all occupations. These occupations are projected to add about 531,200 new jobs. Demand for these workers will stem from greater emphasis on cloud computing, the collection and storage of big data, and information security."

"Employment of computer systems analysts is projected to grow 7 percent. The further adoption of cloud computing by both large and small businesses and an increasing use of IT services in healthcare settings is expected to increase demand for these workers."

"Employment of computer support specialists is projected to grow 8 percent. More support services will be needed as organizations upgrade their computer equipment and software."

"Employment of information security analysts is projected to grow 31 percent. Demand for information security analysts is expected to be very high. Cyberattacks have grown in frequency and sophistication over the last few years, and many organizations are behind in their ability to detect these attacks. Analysts will be needed to come up with innovative solutions to prevent hackers from stealing critical information or creating havoc on computer networks."

"Employment of network and computer systems administrators is projected to grow 4 percent. Demand for information technology (IT) workers is high and should continue to grow as firms invest in newer, faster technology and mobile networks."

"Employment of software developers is projected to grow 22 percent. Software developers are likely to see new opportunities because of an increase in the number of products that use software. For example, more computer systems are being built into consumer electronics and other products, such as cell phones and appliances."

¹ <https://www.bls.gov/ooh/computer-and-information-technology/home.htm>

"Employment of web developers and digital designers is projected to grow 8 percent. Demand will be driven by the continued popularity of mobile devices and ecommerce."

Additionally:

According to the Nebraska Department of Labor each area of concentration that we offer in Information Technology here at Northeast Community College provides students skills to seek employment in high wage, high demand, and high skill occupations².

Nebraska Statewide Projections 2018-2028				
Occupation Title	2018 Estimated Employment ¹	2028 Projected Employment ¹	Percent Increase in Job Demand ¹	National Growth Outlook 2019- 2029 ²
Computer Systems Analysts	3,929	4,264	8.53%	7%
Computer User Support Specialists	4,055	4,497	10.90%	8%
Information Security Analysts	677	887	31.02%	31%
Network and Computer Systems Administrators	3,359	3,609	7.44%	4%
Software Developers, Applications	4,864	6,044	24.26%	22%
Web Developers	1,079	1,226	13.625	8%
Sources: ¹ http://h3.ne.gov/resources.xhtml				
² https://www.bls.gov/ooh/				

"According to research by the consultancy IDC, the global information technology industry is on track to reach a value of \$5.2 trillion this year (2020). The United States is the largest technology market in the world, currently representing 32% of that total, or approximately \$1.7 trillion for 2020. The technology sector accounts for a significant portion of economic activity around the globe, as economies, employment, and personal lives become more digital, more connected, and more automated."³

² <http://h3.ne.gov/>

³ <https://itchronicles.com/2020/05/18/>

In final support:⁴

"The computer science field includes a wide array of interesting and diverse occupations — from software developers to database administrators to web developers. In addition to the more traditional opportunities within the field, another expanding area is the world of artificial intelligence. This is the next big frontier for computer scientists who will be developing computers "that simulate learning and reasoning ability." Cybersecurity is another rapidly developing area where computer science professionals are in great demand to protect businesses, government, and individuals from the growing threat of cybercrime."

"Computer scientists can be found in many different working environments, including "academia, research, industry, government, private, and business organizations." This variety provides significant flexibility when it comes to finding the right fit for where and how a person prefers to work."

In addition to jobs created by growth, additional opportunities will be created by the need to replace retiring information technology workers and individuals who want a career change.

⁴ <https://www.nu.edu/resources/are-computer-science-jobs-in-demand/>

Information Technology Program Demand by Students

Prior to Fall 2014, the Information Technology AAS degree was split into two separate tracks: PC Support and Networking or Computer Programming. There were few overlapping classes and no set of core courses between the two programs. Fall 2014 was the first semester that students were able to build their own AAS Information Technology degree with the new stackable certificate model. Additional advisement by department faculty, during a student's first semester, also assists students in choosing the best direction for their career. Since students all take the same first semester courses in the AAS program, students can easily change their concentration areas during their first semester without having a negative impact on their completion date. Students are very receptive to the opportunity to choose the areas that best fit their career goals or skill set and the flexibility to change their path if necessary. The change to stackable certificates in the AAS program has aided in retaining more students from semester to semester.

Enrollment numbers stay somewhat steady from year to year due to limited classroom space and a limited number of full-time faculty. The enrollment maximum for freshmen is usually limited to 32-48 students, with 32 being the usual number. Full-time faculty in the department currently teach anywhere from 18-27 credits per semester to cover all courses in the program. Adjunct faculty are very hard to find. However, several adjunct faculty do teach 9-10 credits, required in the AAS program, in an academic year.

	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Five-Year Average
Program Enrollment	54	60	50	71	69	61

The enrollment in the AA transfer programs remains steady. Most of the enrollment remains in the AAS program. We have started to encourage the transfer students to dual major in AA and AAS programs. This provides the students with an opportunity to gain entry-level employment after two years and complete their bachelor's degree while employed. Many employers provide continuing education benefits which allow students to complete a bachelor's degree without as much debt. The AA degree alone does not provide the student with enough skills to enter the workforce. The intent is for students to complete the AA degree and transfer to a four-year college.

Information Technology Program Efficiency

Instructors

The Information Technology program utilizes four full-time instructor/advisors, several critical, adjunct faculty and many support faculty from the Business & Technology division. Instructor credentials are as follows:

Kris Coan

- Bachelor of Science in Business Administration: Wayne State College
- Associate of Applied Science in Information Technology: Northeast Community College
- Work experience in information technology, specifically software development and systems analysis and design.
- MOS certified in Microsoft Word, Excel, PowerPoint, and Access
- ITIL Foundation Certification
- 38 years of experience at Northeast Community College. 36 years in the Information Technology department.

The courses Kris teaches include: Programming in RPG, Interactive RPG programming and subfiles, Project Management, Systems Analysis and Design, Web Development II, Programming in C++, Microcomputer Applications, Access Database Applications, and Microsoft Office.

Richard Chrisman

- Master of Business Administration: Chadron State College
- Bachelor of Arts – Computer Science: Chadron State College
- Associate of Science – Computer Science: Western Nebraska Community College
- 20 years of work experience in information technology, specifically software development and database design and implementation
- Microsoft Certified Solutions Developer (MCSD)
- Microsoft Certified Trainer (MCT)
- MOS certification in Access
- Microsoft Certified Professional (MCP) – Visual Basic .net, C# .Net, Azure, Web Development
- 25 years teaching experience

The courses Richard teaches include: Advanced Web Programming in ASP.net, Programming in Java, Programming in C#, Programming in C++, Database Concepts and Design, and Operating Systems. Richard has also been the sponsor of the Vex Robotics teams which have competed and placed at the state and national Skills USA competitions.

Gigi Simonsen

- Associate of Applied Science in Information Technology: Northeast Community College
- Work experience in information technology, specifically systems analysis and design.
- MOS certified in Microsoft Word, Excel, and Access
- 26 years of experience at Northeast Community College. 21 years in the Information Technology department.
- IC3 Digital Literacy Certification

The courses Gigi teaches include: IBMi Control Language, HTML, CSS, and JavaScript, Microsoft Excel, Introduction to Information Technology, and Microcomputer Applications.

Brad Vogt

- Master of Business Administration (Management Information Systems): University of South Dakota
- Bachelor of Arts with Economics minor– Business Administration: Doane University
- International work as a Data Commercial Analyst intern at Indigo NV (4 months), Maastricht the Netherlands
- Market Representative intern (1 year), Sandhills Publishing
- 20 years of teaching experience
- 20 years of work experience as an Excel Spreadsheet consultant for multiple organizations
- 28 Microsoft Office certified in Word, Excel, PowerPoint and Access from MOS 2000 Word Expert up through Microsoft Office 2016 Master
- CompTIA A+ certification
- CompTIA Security+ certification
- Cisco Certified Network Associate certified trainer
- IC3 Digital Literacy certification
- Point of Contact for Center of Academic Excellence for Cybersecurity Education (CAE2Y)
- Administrator for CompTIA Learning Academy

Courses Brad teaches include: PC Systems Maintenance & Repair (with lab), Principles of Information Security (with lab), Microcomputer Applications 2, CompTIA A+ certification, CISCO Networking 1-4, Fundamentals of Information Technology, Basic Computer Applications, Excel Spreadsheet Applications, Spreadsheet Accounting, Microsoft Office Certification

All full-time faculty collaborate in the development of curriculum, assessment, and advising within the Information Technology program in addition to ensuring adjunct faculty are teaching courses in alignment with program standards and expectations.

The following adjunct instructors are critical to the success of our program and students:

Trevor Bailey

- Systems Administrator, Northeast Community College
- 13 years of industry experience
- Bachelor's Degree in Computer Information Systems: Wayne State College
- Associate of Applied Science Degree in PC Support and Networking: Northeast Community College
- Certifications: ITIL Foundation, RedHat, CompTIA A+, HDI Desktop Support Technician, Python
- Currently teaches the Operating Systems II course.

Lucas Reichlinger

- Systems Administrator, Northeast Community College
- Associate of Applied Science in PC Support and Networking: Northeast Community College
- 12 years of industry experience
- Certifications: ITIL Foundation, CompTIA A+
- Currently teaches the Network Servers course.

Kirk Christian

- Self-employed IT consultant and advisor
- 15 years industry experience
- Bachelor of Science in Information Technology, Security & Forensics: Walden University
- Associate of Applied Science in PC Support and Networking: Northeast Community College
- Certifications: CompTIA A+, Microsoft Certified Professional (MCP), Microsoft Certified Desktop Support Specialist, MOS Excel 2010 Expert, ITIL Foundation, HDI Desktop Support Technician, MOS Outlook 2016, Accessibility Mastery from Butler University.
- Currently teaches Web Page Development I and Computer Support Technology courses.

In addition to the full-time instructor/advisors and adjuncts, several other support faculty teach courses that are relevant to the program. They include:

- Cara Hoehne: Business Communications
- Linda Miller: Survey of Accounting, Principles of Accounting I
- Lori McClaren (South Sioux City): Business Communications,

Advisory Committee

The Information Technology program utilizes an advisory committee that meets annually to help develop program outcomes and discuss curriculum decisions to ensure the institution is offering students a degree that is applicable in today's information technology environment.

Committee members include:

Jim McKenzie	City of Norfolk
Dan Spray	Precision IT
Rick Colwell	Continental Tech
Steve Groetken	DayCo
Brian Sterud	Faith Regional Health Services
Trevor Doyle	Midwest Bank
Matthew Arens	Norfolk High School
Jason King	Norfolk Iron & Metal
Todd Dickey	Power Sports Nation
John Mandel	Vulcraft
Mike Lewis	Werner Enterprises
Ron Pilcher	Crete Carrier
Rich Meester	Fareway Food Stores
Paul Korbel	Northeast Community College
Renee Peters	Northeast Community College

Information Technology Assessment of Student Learning

During the 2015 – 2016 academic year, programs at Northeast Community College underwent a comprehensive curriculum mapping process identifying core competencies, program objectives, and learning outcomes. Each objective and learning outcome was mapped to specific courses within the program. Through this process, each course within the program was analyzed to ensure courses introduce, reinforce, develop competency, and assess program outcomes and core competencies. Assessment measures were then further refined and updated to reflect adequate measurement of program outcomes and core competencies.

Student's abilities and comprehension were assessed in each of the five curriculum areas using several tools. A faculty generated comprehensive measurement covering concepts at the end of the IBMi Command Language course on operating system and control language programming concepts was used. Information Security students were evaluated using the CompTIA Security+ practice test. Technical Services Support students were evaluated using the CompTIA A+ Essential practice test. Cisco Networking students were evaluated using the CCNA practice exams. A final interactive programming assignment was evaluated to assess student skills and competencies regarding RPG programming skills. A rubric was used to rate the ability of students to design and implement a normalized database application and design and implementation of a website using MVC patterns. And finally, students in the Cisco Networking concentration were assessed at the end of each semester with a skills-based assessment.

Information Technology Program Objectives:

- Students taking the Web and Visual Programming Option will be able to design and implement a normalized database application.
- Students taking the Web and Visual Programming Option will be able to design and implement websites using a variety of technologies.
- Students in the IBMi application development option will demonstrate the skills necessary to interact with the IBMi operating system
- Students in the IBMi application development option will demonstrate the skills necessary to develop appropriate IBMi applications.
- Students in the Information Security option will demonstrate a working knowledge of current security issues as outlined by the industry recognized CompTIA Security+ certification. These issues include viruses, hackers, spam, and disaster recovery.
- Students in the Technical Services Support option will demonstrate and correctly apply PC repair and networking skills.
- Students in the Cisco Networking option will display working knowledge of networking devices and terminology including cabling, ACL's, V-LAN's on switches.

In addition to specific program objectives, students at Northeast are also expected to demonstrate competency in critical thinking and problem solving, speaking communication, written communication, and social and cultural awareness through global perspectives.

Information Technology Program Graduates

The Information Technology program has averaged 51 graduates over the past five years. This average includes AAS, AA and Certificate graduates. The AAS program has averaged 12 graduates over the past five years. This is within the CCPE threshold of an average of 10 graduates per year over the past five years. The table below identifies the graduates by degree and certificate for each year of the five-year cycle.

The COVID-19 pandemic began in March of the Spring semester of 2020. While this did not cause a significant negative effect on the graduation numbers for 2020, it may have an influence on future graduation numbers. It remains to be seen if this will become a positive or negative effect.

	2015- 2016	2016 2017	2017 2018	2018 2019	2019 2020	Five-Year Average
Certificate	31	31	35	45	47	38
Web & Visual App Dev	4	5	5	5	7	5
IBMi App Dev	4	4	6	6	4	5
Technical Services Support	3	6	2	4	10	5
CISCO Networking Academy	4	3	2	6	2	3
Information Security	3	4	5	4	9	5
IT General	13	9	15	20	15	12
Associate of Applied Science (AAS)	9	15	11	12	12	12
Associate of Arts (AA)	1	1	6	5	6	4
Total of Certificates & Degrees	41	47	52	62	65	54

Source: Office of the Registrar

Information Technology Program Employment Report

The following graduate report indicates the number of graduates tracked by the Career Services department, how many are employed and how many are continuing their education. The data for placement is always one year behind.

	Spring 2015	Spring 2016	Spring 2017	Spring 2018	Spring 2019	Five-Year Average
Graduates employed	5	4	12	5	7	7
Graduates continuing education	14	16	9	22	22	17
Related employment	60%	50%	50%	60%	57%	

Source: Northeast Career Services Graduate Employment Report



CCPE/Program Review

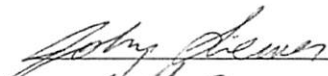

Cost Center/Program of Study

154150 Wind Energy

Date Completed

April 1, 2021

Cost Center/Program Faculty Signatures

Coordinating Commission for Postsecondary Education Review of Existing Instructional Programs

Institution: Northeast Community College **Program:** Wind Energy

I certify the following:

- the information provided regarding this program is accurate
- the above named institution has in place a procedure for reviewing instructional programs
- such review took place and was presented to the institutions governing board on _____
- the governing boards action was: _____

Signed: _____
(Chief Academic Officer or designated representative) (Date)

Evidence of Demand and Efficiency

		15-16	16-17	17-18	18-19	19-20	5 yr. avg.
Student Credit Hours (SCH)		483	318	257	502	432	398
Faculty Full-time Equivalency (FTE)		2.32	2.29	2.44	2.29	2.29	2.32
SCH/Faculty FTE		208.19	138.86	105.28	219.60	188.98	172.18
Number of Degrees and Awards <i>(list degrees/ awards separately)</i>	AAS	10	4	4	3	4	5
	Diploma	1	1	0	1	2	1

Evidence of Need (provide a detailed explanation below or attach documentation)

Please see the attached narrative.

Justification if the program is below CCPE thresholds—complete page 2

For CCPE use: reviewer/date

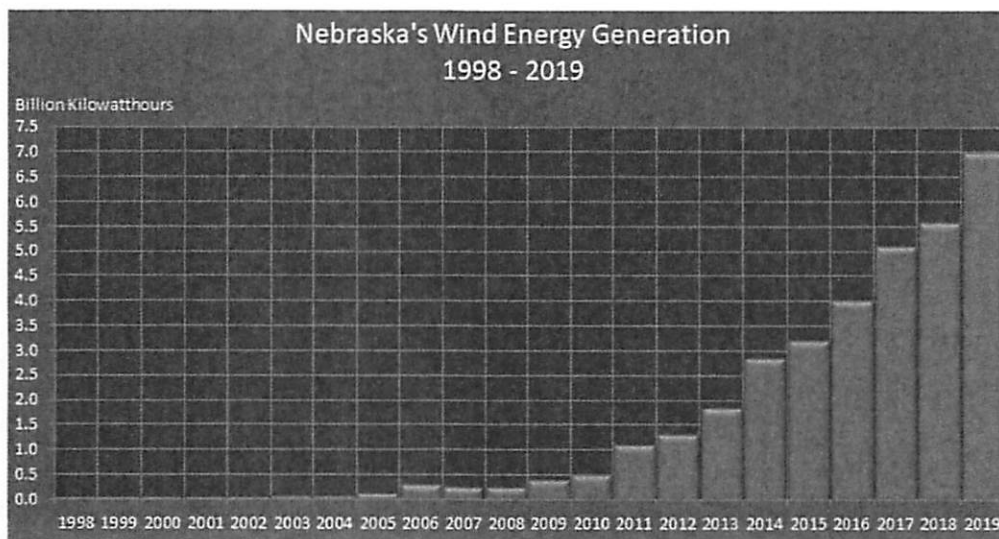
Justification if the program is below CCPE thresholds—check one or more boxes and provide a detailed explanation or attach a document)

- ☒ Program is critical to the role and mission of the institution
- ☐ Program contains courses supporting general education or other programs
- ☐ Interdisciplinary program (providing the program meets the requirements set in the existing policy for interdisciplinary programs)
- ☒ Student or employer demand, or demand for intellectual property is high and external funding would be jeopardized by discontinuing the program
- ☐ Program provides unique access to an underserved population or geographical area
- ☒ Program meets a unique need in the region, state, or nation
- ☐ Program is newly approved within the last five years (no additional justification needed)
- ☐ Other

Wind Energy

The Wind Energy program began in response to a surge in renewable energy development and specifically the advancement in wind energy generation. In the mid 2000's, with the construction of two generation facilities in the state and a dozen more being studied, a demand for qualified technicians to maintain them was foreseeable. According to the American Wind Energy Association, wind energy provided 14.1 percent of all in-state electricity production in 2019. Nebraska ranked sixteenth in the nation for total installed wind capacity and seventh in the nation in remaining wind power capacity, or the amount of wind power that is technologically possible to have installed in a given region.

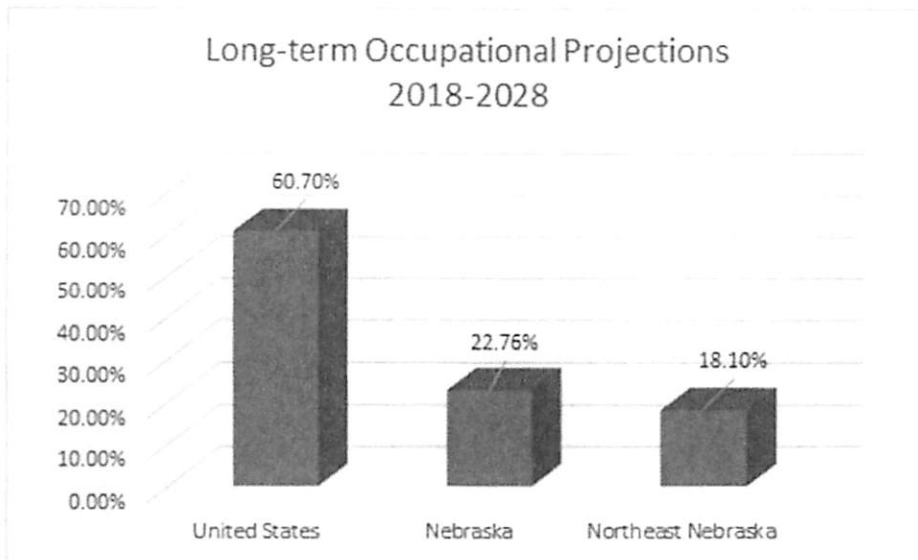
Table 1



*Nebraska Energy Office – neo.ne.gov/programs/stats/inf/89.htm#table2

From two facilities in 2009 to 29 operating wind farms today, 14 of those facilities commenced operations since 2016. Twelve of the 29 sites are located within Northeast Community College's immediate service area.

Table 2



Hiring rates among Northeast graduates remain strong further revealing the need for a trained workforce in the region as displayed in Table 3.

Table 3
Placement - AAS/Diploma

	Spring 16	Spring 17	Spring 18	Spring 19	Spring 20	Five-Year Average
Graduates Employed	11	9	4	4	4	6
Graduates Continuing Education	1	1	1	-	-	1
Related Employment	27%	89%	100%	75%	100%	78%

Data Source: Office of Institutional Research – Northeast Community College (2020, October 7)

Wind Energy Program Demand by Students

With strong job opportunities both nationally and locally and good wages and benefits packages enrollment in the Wind Energy program remains good. One challenge with recruiting students is the lack of understanding of the profession and the technology itself. A second challenge remains with retention. With rapid expansion and growth, companies need workers now. Students often are pulled into the industry prior to completing their degrees. The persistence rates in Table 4 align with periods when new wind farms begin in the area and an immediate workforce is necessary.

Table 4
Wind Energy Program Enrollments/Persistence

	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Five-Year Average
Enrollment*	17	12	12	17	19	15
Persistence Rates	67%	100%	100%	50%	33%	67%

*Enrollment data represents both freshman and sophomore students enrolled in the program.
Data Source: Office of Institutional Research – Northeast Community College (2020, October 7).

As wind technologies increase in sophistication, companies will further seek technicians that have completed a formalized training program. With greater formalized training, salaries are expected to improve drawing individuals in to the career field. Northeast's graduates reported an entry level base salary of around \$44,000-\$65,000 per year. The addition of industry recognized credentials to the curriculum, in addition to a degree, represents a draw for students as well as employers.

Table 5
Wind Technician Occupational Wages



CareerExplorer

Advisory Committee and Partnerships

The Wind Energy program has established many valuable relationships with businesses, boards, and other workforce agencies both within Northeast's 20-county region and outside of the 20-county region. The Wind Energy advisory board plays a key role in the assessment of student learning by helping to establish student learning outcomes for the curriculum, assessing student learning in field experiences and internships, and guiding curriculum enhancements to incorporate the latest technologies, tooling, and techniques. Currently 10 industry professionals, along with Northeast faculty and staff, serve as educational advisors to the program.

The program advisory board supports academic program accountability by providing guidance and feedback regarding student learning of recently hired individuals, substantiating the findings outlined in the assessment report, providing recommendations for improvement and curriculum

changes, and providing assessment of students completing an internship. The advisory board further confirms the professional standards for which students are being measured.

The advisory board provides focused input regarding current practices, issues, and changing technologies that are affecting the industry. Based upon industry's feedback instructional staff will adjust the current curriculum.

Local wind farms and their managers have been very supportive through donations of instructional materials and advisory committee participation. They are; Vestas- Elkhorn Ridge and Crofton Bluffs of Bloomfield, Clearway Energy- Laredo Ridge of Petersburg, Invenergy- Prairie Breeze and Upstream of Antelope County, NPPD- Ainsworth Wind Energy Facility, RENEW Energy-Sioux Falls SD, We have also developed good working relationships with new wind farms to the area such as Vestas - Grande Prairie in O'Neill NE, Enel - Rattlesnake Creek near Allen NE, Nextera - Sholes Wind Farm near Randolph NE, Orsted - Plum Creek near Winside NE and they have played an integral role in keeping us up to date with new technologies, as well as safety and procedural standards and policies as well as provided valuable internships for our students and assisted us in training and curriculum development.

Assessment and Improvements

The wind assessment plan learning outcomes objectives align with the American Wind Energy Association and National Occupational Competency Testing Institute (NOCTI) standards. The American Wind Energy Association (AWEA) is the national trade association for the U.S. wind industry – the country's fastest growing energy industry. With thousands of wind industry members and wind policy advocates, AWEA promotes wind energy as a clean source of electricity for American consumers. NOCTI is a leading provider of high-quality technical competency assessment products and services for secondary and post-secondary educational institutions in the United States and around the world. The services include job and task analysis, standards development, assessment development and delivery, scoring and analysis services, and student recognition. NOCTI also has expertise in specialized reporting, professional development services, and state assessment program management at both the local and state levels. NOCTI is an independent third-party tester. Proctors from local and regional wind farms deliver the assessments at the college facility. Instructors have limited or no access to delivery and testing procedures. Both national averages and criterion-referenced cut scores are included on the standard score reports for all job ready and pathway assessments. This information can be a helpful resource when analyzing score results for gauging student knowledge, determining program improvement areas, and recruiting purposes as well.

The program advisory committee, in addition to reviewing curriculum, helps to identify strengths and weakness in student's knowledge, skills, and abilities of student interns and graduates of the program. Such feedback, when included in assessment, serves as supporting data for trends identified in the classroom further justifying changes. While the program uses assessment of student learning to identify areas of improvement, many of the implemented recommendations from previous assessments require time to establish sufficient information to measure the effectiveness of those changes. The program therefore looks at recommended changes and improvements systematically to ensure that the information being evaluated represents true student learning, and not an anomaly that is occurring during a transition.

Resources:

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6. Northeast Community College. (2020, October). *Fall 202 Internal Program Review Data*. <https://share.northeast.edu/sites/technology-services/Analytic-Services/Reports%20%20Analysis/Internal%20Program%20Review%202019-20.pdf#search=Internal%20Program%20Review%20Data>
7. Sokanu. (n.d.). *Wind Turbine Services Technician Salary*. Career Explorer. Retrieved April 1, 2021, from <https://www.careerexplorer.com/careers/wind-turbine-services-technician/salary/>
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**Program Review Executive Summary
Wind Energy
April 2021**

A. Program Introduction

The Wind Energy program prepares students for a high demand career in the wind energy field ranging from development to construction with emphasis on maintenance, service, and troubleshooting requiring a multitude of skills. The diverse range of courses prepare students to recognize familiar concepts and excel in their career progression while in the field. Students acquire knowledge and skills in safety, mechanics, electronics, electrical installation and troubleshooting, communications, as well as safe access and rescue at heights to name a few. The Wind Energy Program also prepares students with soft skills and general work practice skills.

B. Demand and Efficiency

Wind Energy Program Demand and Efficiency

	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	Five-Year Average
Enrollment*	17	12	12	17	19	25
Persistence	67%	100%	100%	50%	33%	67%
AAS Degree	10	4	4	3	4	5
Diploma	1	1	-	1	2	
Graduates Employed	11	9	4	4	4	10
Graduates Continuing	1	1	1	-	-	1
Related Employment	27%	89%	100%	75%	100%	78%
Student Credit Hours (SCH)	483	318	257	502	432	398
Faculty Full-time Equivalency (FTE)	2.32	2.29	2.44	2.29	2.29	2.32
SCH/Faculty FTE	208.19	138.86	105.28	219.60	188.98	172.18

Note:

- *Enrollment data represents both freshman and sophomore students enrolled in the program.
- Data Source: Office of Institutional Research – Northeast Community College (2020, October 7).
- Placement information is one year behind.

C. Facilities and Equipment

The program transitioned into the Arlo Wirth Building during the 2015/2016 academic year considering it to be temporary placement for our program. We have now been in the facility for 6 years and as a temporary facility, we struggle to fully adapt the space to meet all of our needs. A taller ceiling and a permanent structure would be ideal for advancing our climbing and rescue training, as well, as an integrated crane or taller hoist would greatly benefit our mechanical courses by allowing for hands on training with larger equipment. Consolidation of all labs into

one common space could increase efficiency. Additional need for a more adaptive motor control and wiring lab space would be anticipated in the future as well.

D. Program Need

Wind energy generation facilities are expanding rapidly throughout our state and region resulting in very high demand for locally raised and trained mechanical technicians. Ten new wind farms built in Northeast's service area over the last eight years has resulted in an estimated 100 new technician jobs, two facilities currently under construction, and several more in development. Industry demand for qualified technicians is high and projected to remain high. Wind industry employers place an emphasis on hiring local talent to fill local jobs in an effort to reduce workforce turnover on sites. This offers a unique opportunity to train rural talent to fill local jobs and help bolster the population and economy of our 20-county service area.

Table 1

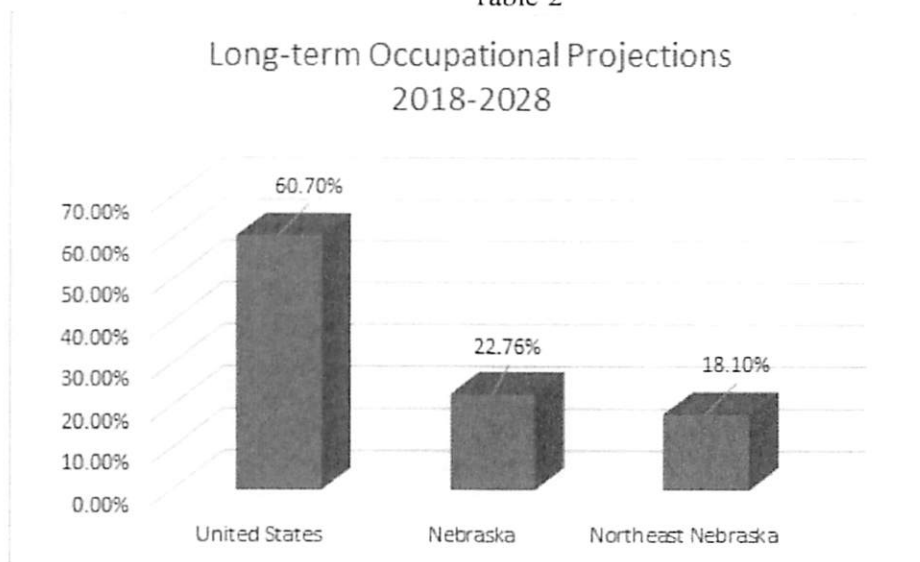
OCCUPATION	GROWTH RATE, 2019-29	2019 MEDIAN PAY
<u>Wind turbine service technicians</u>	61%	\$52,910 per year
<u>Nurse practitioners</u>	52%	\$109,820 per year
<u>Solar photovoltaic installers</u>	51%	\$44,890 per year
<u>Occupational therapy assistants</u>	35%	\$61,510 per year
<u>Statisticians</u>	35%	\$91,160 per year
<u>Home health and personal care aides</u>	34%	\$25,280 per year
<u>Physical therapist assistants</u>	33%	\$58,790 per year
<u>Medical and health services managers</u>	32%	\$100,980 per year
<u>Physician assistants</u>	31%	\$112,260 per year
<u>Information security analysts</u>	31%	\$99,730 per year
<u>Data scientists and mathematical science occupations, all other</u>	31%	\$94,280 per year
<u>Derrick operators, oil and gas</u>	31%	\$46,990 per year
<u>Rotary drill operators, oil and gas</u>	27%	\$54,980 per year
<u>Roustabouts, oil and gas</u>	25%	\$38,910 per year
<u>Speech-language pathologists</u>	25%	\$79,120 per year
<u>Operations research analysts</u>	25%	\$84,810 per year
<u>Substance abuse, behavioral disorder, and mental health counselors</u>	25%	\$46,240 per year
<u>Forest fire inspectors and prevention specialists</u>	24%	\$45,270 per year
<u>Cooks, restaurant</u>	23%	\$27,790 per year
<u>Animal caretakers</u>	23%	\$24,780 per year

*U.S. Bureau of Labor Statistics – bls.gov/ooh/fastest-growing.htm

The U.S. Bureau of Labor Statistics growth rate for the nation is impressive, but just as impressive is the job growth opportunities for the State of Nebraska and for Northeast Nebraska. As shown in Table 2, job growth opportunities for Nebraska resound at an impressive 22.8% with 18.1% of that growth slated to

occur in Northeast Community College's service area. When viewing the statistics, much of that growth is from new opportunities rather than retirements or occupational transfers.

Table 2



Nebraska Department of Labor: Long-term Occupational Employment Projections

E. Summary

A comprehensive program review has been completed by the program faculty and submitted to the Dean of Applied Technology. The Dean and Vice President of Educational Services have met with the faculty and find the wind energy program to be strong and viable program that is meeting the needs of employers across the region and state.

The Vice President of Educational Services recommends to the President that this program continue based upon the results of the program review that has been completed by the faculty, dean, and the vice president of educational services.

Dr. Michele Gill, Vice President of Educational Services