

# New Program Request Form

## CA1

### General Information

Institution submitting proposal	Northwest Kansas Technical College
Name, title, phone, and email of person submitting the application <i>(contact person for the approval process)</i>	Ben Schears, President, 785-890-1501 Ben.schears@nwktc.edu
Identify the person responsible for oversight of the proposed program	Lisa Blair, Dean of Academic Advancement
Title of proposed program	Mechanical Engineering Technology
Proposed suggested Classification of Instructional Program (CIP) Code	15.0805
CIP code description	<p><b>Mechanical/Mechanical Engineering Technology/Technician.</b></p> <p>A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers engaged in the design and development phases of a wide variety of projects involving mechanical systems. Includes instruction in principles of mechanics, applications to specific engineering systems, design testing procedures, prototype and operational testing and inspection procedures, manufacturing system-testing procedures, test equipment operation and maintenance, and report preparation.</p>
Standard Occupation Code (SOC) associated to the proposed program	17-3027
SOC description	<p>Mechanical Engineering Technologists and Technicians</p> <p>Apply theory and principles of mechanical engineering to modify, develop, test, or adjust machinery and equipment under direction of engineering staff or physical scientists.</p>
Number of credits for the degree <u>and</u> all certificates requested	Tech Cert C = 53 credits AAS = 68 credits
Proposed Date of Initiation	Fall 2022
Specialty program accrediting agency	None
Industry certification	OSHA10, Tormach/Palmer Hamilton (NC3)

Revised/Approved April 2021

Signature of College Official  Date 3-11-22

Signature of KBOR Official \_\_\_\_\_ Date \_\_\_\_\_

## **Narrative**

Completely address each one of the following items for new program requests. Provide any pertinent supporting documents in the form of appendices, (i.e., minutes of meetings, industry support letters, CA1-1a form).

*\*\*Institutions requesting subordinate credentials need only submit the items in blue. For example, an institution with an approved AAS degree has determined a need for a Certificate C in the same CIP code using the same courses used in the AAS degree program.*

### **Program Rationale**

- Provide an overall explanation and background surrounding the development of the proposed program. Include where the idea came from, who was involved, and why the program is needed.

The Advisory Board for NWKTC's Civil Engineering program has recognized a desire among individuals in the industry to gain skills in mechanical engineering technology that will supplement their skills in civil engineering technology. Based on a common set of courses in the first year of the program, the second year of each program will consist of courses specific to either civil or mechanical engineering technology. By creating a new degree program, NWKTC is opening the door for students to pursue training in one or both areas (by completing one program in two years and then returning for a third year to complete the other program).

The demand for mechanical engineering technicians is growing due to new manufacturing processes. In the past year, the existing engineering program at NWKTC secured a number of grants from the Dane G. Hansen Foundation and the Kansas Department of Commerce to create an 1800 square foot advanced manufacturing lab with many capabilities. The Lab is complete with twenty-five 3D printers that allow students to print over 40 different material types (including Carbon Fiber and various metals), robotic welder, and CNC milling Machines (including 3, 4, and 5 axis capabilities). With the lab, students have the ability and receive the training to make the items they are designing in the classroom and have the ability to work on live projects that community members and businesses bring to the college (reverse engineering, prototyping, small production runs).

The Mechanical Engineering Technology profession is involved in everything that is made, produced, and manufactured. Everything has a plan for creation and engineering technicians are the people who help make it happen. The Mechanical Engineering Technology graduate works on many levels in the engineering and manufacturing world. Graduates qualify for career opportunities with engineering firms, and manufacturing companies. On the drafting level, they create working drawings from rough sketches or layouts that have been prepared by the project leads or engineers. The drawings and 3D models are prepared in accordance to specifications dictated by their company and industry standards. Computers are the tools of their trade. They are proficient on the latest versions of CAD/CAM and modeling software. They are expected to be able to make technical computations involved with layout, dimensioning and detailing. The engineering technician must be able to decipher information and visualize forms and shapes from sketches and existing documents, concentrate on details for long periods of time, and use independent judgment in planning work and solving problems. The engineering technician should enjoy technical work; work that involves close tolerances, organization, working rapidly, working under pressure, and producing quality work.

The creation of a new AAS program in Mechanical Engineering Technology will provide a new pathway for students to supplement their job skills while earning a second associate degree.

## Program Description

- Provide a complete catalog description (including program objectives) for the proposed program.
- List and describe the admission and graduation requirements for the proposed program.

## Catalog Description

The Mechanical Engineering Technology program prepares students for entry into the engineering and manufacturing industry. Core concepts to be covered include the following: Advanced Mechanical Drafting, Manual Machining Operations, Mechanical Engineering Technology Projects II, Additive Manufacturing Design and Operations, and Advanced Manufacturing Processes.

## Program Objectives

1. Demonstrate the ability to visualize objects and layouts, along with possessing good communications skills and integrated math skills.
2. Demonstrate proficiency in completing technical design and drawings with accuracy, legibility, neatness, and speed.
3. Define Terms and elements related to the different engineering industries introduced throughout the program.
4. As a team member, contribute to the project by completing and organizing assigned tasks in a timely manner.
5. As a team leader, manage people and resources to complete assigned projects.
6. Demonstrate mechanical CAD procedures proficiently and accurately.
7. Design for and operate additive and subtractive manufacturing equipment.
8. Perform calculations for proper operation of subtractive manufacturing equipment.
9. Prepare shop-level detail drawings in accordance with industry standards.

## Admission Requirements

Northwest Tech is an open enrollment, public college. Students must meet one of the following requirements for admission:

- Graduated from an accredited high school
  - Earned a General Education Development (GED) Diploma
  - Enrolled as a high school junior or senior with written permission from the high school principal
  - Enrolled as a high school freshman in a recognized gifted program with an individual education plan (IEP) and written permission from the high school principal
- Northwest Tech reserves the right to deny admission or readmission to a student if it is determined to be in the best interest of the college to do so or if the college is unable to provide the services, courses, or program(s) needed to assist the student in meeting educational objectives.
1. Students applying for admission to Northwest Tech—who have not completed previous coursework with the college—should complete the following steps:
    1. Complete and submit an application for admission either online or at the admissions office. Electronic applications are available on the college website

(<http://www.nwktc.edu/admissions/apply-now>) and paper applications are available through the admissions office.

2. Pay the \$25 Application Fee.
3. Request an official high school transcript, including final grades and graduation date, or GED examination results be sent directly to the Registrar's Office, PO Box 668, Goodland, KS 67735.
4. Request official transcripts from all previously attended post- secondary institutions be directly sent to the Registrar's Office, PO Box 668, Goodland, KS 67735. College transcripts will be evaluated in their entirety to determine the transfer of credit on the semester hour system.
5. Request ACT, COMPASS, or SAT scores, taken within the last three years be sent to Admissions, PO Box 668, Goodland, KS 67735. The COMPASS test is available at Northwest Tech. Contact the admissions office to schedule a test time and date.
6. Submit the Federal Application for Student Financial Aid and enter the corresponding school code (005267), if applicable.

To ensure a smooth transition to Northwest Tech, the required documents must to be on file prior to the beginning of the semester. If the admissions requirements are not met, enrollment in the following semester may be denied and an academic hold is placed on the student account so no transcript of completed work will be released.

Students transferring to Northwest Tech from another postsecondary institution must request a high school transcript or GED examination scores as well as official post- secondary transcripts from all institutions previously attended. The transcripts must be sent to the Registrar's Office, PO Box 668, Goodland, KS 67735.

Transfer credits will be evaluated on a course-by-course basis subject to the policies outlined in the Academic Advising and Course Registration section of the college catalog. Credits will be converted to the semester credit hour system, if applicable.

Transfer students with academic sanctions from previous institutions may enroll at Northwest Tech under a probationary status to ensure student success. Transfer students filing for federal financial aid must submit all college transcripts prior to packaging and awarding financial aid to ensure compliance with all regulations.

Northwest Tech adheres to the eligibility guidelines established by concurrent credit partnerships in relation to enrolling secondary students in post-secondary coursework. High school sophomores, juniors, and seniors enrolled in public, private, or homeschool institutions may enroll in college courses with written permission from the high school principal. All high school students must achieve a minimum 2.5 GPA or higher as well as meet established course pre-requisites and/or minimum test scores. All courses use college syllabi and students are responsible for obtaining the appropriate textbooks. Annual cooperative agreements with the school district or homeschool are required for college credit to be granted. Individual student permission forms must be submitted each semester enrolled. Students and parents may contact the high school counselor, high school concurrent credit coordinator, or Northwest Tech Dean of Academic Advancement for more information.

## Graduation Requirements

1. Commencement exercises are held in May and are designed to give the graduating students the recognition deserved for completing a technical certificate program and/or an AAS Degree at Northwest Kansas Technical College. Students completing their education and leaving during the calendar year are encouraged to participate in the May graduation. Following the May commencement, the actual certificate or degree will be mailed to students who graduated prior to May and to students who graduate after the May commencement. A student must have an overall GPA of 2.0 or better, for the entire program of study, to receive the technical certificate or degree.

Revised/Approved April 2021

All graduating students on occupational work experience (OWE) are expected to return to the college in May as designated within each department for final visitation with instructors and graduation.

### **Demand for the Program**

- Using the Kansas Department of Labor’s Long Term Occupational Outlook, (<https://klic.dol.ks.gov>) identify employment trends and projections: occupational growth, occupational replacement rates, estimated annual median wages, and typical education level needed for entry.
- Show demand from the local community. Provide letters of support from at least three potential employers, which state the specific type of support they will provide to the proposed program.
- Describe how the proposed program supports the Perkins Comprehensive Local Needs Assessment.
- Describe/explain any business/industry partnerships specific to the proposed program.  
*If a formal partnership agreement exists, agreement explaining the relationship between partners and to document support to be provided for the proposed program must be submitted to the Board office independently of the CAI materials for review purposes. The agreement will not be published or posted during the comment period.*

### **KLIC.dol.ks.gov data:**

CIP code 15.0805 (Mechanical Engineering Technology/Technician) aligns with SOC code 17-3027 (Mechanical Engineering Technology/Technician).

Employment trends and projections statewide

- **Occupational Growth:** The job outlook for mechanical engineering technicians is expected to increase 6.5% over the next ten years, with a projected 382 annual openings for the next ten years
- **Estimated annual median wages:** The average annual wage is \$50,235.
- **Typical education level needed for entry:** The background needed for entry into this occupation is an associate degree

Letters of support are included at end of this application document.

1. Will Webb – Production Manager – Fuller Industries, One Fuller Way, Great Bend, KS 67530
2. Sam Nicholson – CEO - Miltech Machine Corporation, 15277 West Washington St., Norton, KS 67654
3. Aaron Wolfe – Driggs Design Group PA, 111 W. 12<sup>th</sup> Street, Goodland, KS 67735

### **Perkins Comprehensive Local Needs Assessment**

Based on KLIC data (above) and requests from advisory board members from across the region (both in and out of the state of Kansas), we included the MET program on the Perkins Local Needs Assessment from as a program that does not currently exist but should be created.

### **Business/Industry Partnerships**

NWKTTC has developed partnerships with Fuller Industries and Miltech Machine Corporation. These partnerships extend beyond the normal advisory capacity and will work to allow students exclusive access for company tours and the ability to have students work on company projects to gain experience with real world design and manufacturing problems.

### **Duplication of Existing Programs**

- Identify similar programs in the state based on CIP code, title, and/or content. For each similar program provide the most recent K-TIP data: name of institution, program title, number of declared majors, number of program graduates, number of graduates exiting the system and employed, and annual median wage for graduates existing the system and employed.
- Was collaboration with similar programs pursued:
  - Please explain the collaboration attempt or rationale for why collaboration was not a viable option.

K-TIP listings for similar programs (taken from AY2020 K-TIP report):

While there are no other schools that currently have Mechanical Engineering Technology under CIP code 15.0805, there are a few schools offering similar programs under different CIP codes.

Two schools have Mechanical Drafting under the **CIP code 15.1306**.

- Hutchinson Community College had 13 declared majors, but the remainder of the data on the KTIP report is not provided.
- WSU Tech had 131 declared majors, with 86 concentrators, and 77 pursuing additional education. Seven graduates exited but wage information is not available on this KTIP report.

Two schools have Manufacturing Engineering Technology under the **CIP code 15.0613**.

- Flint Hills Technical College had 16 declared majors and 16 concentrators, with 7 pursuing additional education. Wage data is not provided.
- Hutchinson Community College had 51 declared majors with 31 concentrators, with 20 pursuing additional education and 10 graduates, nine of whom exited. The average annual salary is reported as \$51,946.

### **Collaboration:**

While we explored options for collaborating with other colleges that offer similar programs, it appears at this time that we are not currently working on initiatives that would benefit from mutual collaboration. NWKTC would be glad to collaborate should the opportunity arise.

NWKTC already has in place a number of two + two agreements with FHSU, KSU-Salina, and PSU and we will work to add this new program to the list of articulating programs with these institutions.



### **Program Information**

- List by prefix, number, title, and description all courses (including prerequisites) to be required or elective in the proposed program.
- If the proposed program includes multiple curricula (e.g., pathways, tracks, concentrations, emphases, options, specializations, etc.), identify courses unique to each alternative.
- Provide a Program of Study/Degree Plan for the proposed program including a semester-by-semester outline that delineates required and elective courses and notes each program exit point.
- List any pertinent program accreditation available:
  - Provide a rationale for seeking or not seek said accreditation
  - If seeking accreditation, also describe the plan to achieve it

### **Courses (prefix, number, title and description)**

#### **Core Classes for Year One of Program**

#### **EN105 Applications of Engineering Technology**

This course provides students an orientation for the Engineering Technology program, a short history of Engineering drawing and drafting technology, and an introduction to modern technology used in the various fields and professions that are engineering technology.

#### **EN105A Fundamentals of Drafting**

The student will identify and display the basic use of drafting instruments to complete the exercises in this course. Emphasis is placed on reading the various scales, lines, and lettering, and manipulation of compasses, dividers and other tools.

#### **EN110 Drafting 2D Views and Dimensions**

Technical drawing exercises are produced using the methods of projection and the fundamentals of drafting. Emphasis in accuracy, completeness and time management.

#### **EN115 Engineering Technology Projects I**

The student will be assigned projects which will require application of basic design to develop all drawings from sketches and layouts to complete details of the assigned projects. Some projects will be developed using the team concept with a need for working with others. Emphasis is placed on the followership role.

#### **EN120A. Civil Drafting Fundamentals**

Methods of constructing geometric figures are instructed and used to complete the exercises in this course.

#### **EN130 CAD Fundamentals**

This includes constructing various pictorial drawings using the various methods of projection. Methods applied are axonometric, oblique, and perspective projection. Sectional views include full, half, broken, revolved, thin and removed sections. Dimensions involve complete size description. It includes aligned and unidirectional dimension systems, decimal, metric and fractional dimensions, and notes and standard classification of cylindrical fits.

#### **EN101 OSHA 10**

Basic principles of mechanics including shop safety, first aid, use of repair orders, and proper maintenance of shop equipment.

### **EN150 Topographic Triangulation**

Solution of right and oblique triangles are fundamental. Industrial applications of geometry and algebra are incorporated throughout this section.

### **EN160A. Applications of Spatial Reasoning in Engineering**

This course consists of a presentation of the uses of fundamental theorems applied to the various drafting disciplines. Emphasis is placed on proper construction methods of all geometric figures used in the field to assist the student in his/her CAD training. This course is essential for the recognition of triangles contained in a complex drawing.

### **EN182. CAD Drafting Models**

The student will learn different methods for creating 3-dimensional design models using the CAD program provided. Emphasis is placed on scales, coordinates, proper projections and referencing multiple design models together.

### **EN177 Mechanical CAD/CAM Drafting**

The student will learn the basics of production drawing by means of the 3-dimensional modeling CAD program provided. The student will create parts, assemblies, and properly annotated production drawing sets in ways that align with industry practices.

### **EN185 Civil CAD Fundamentals**

The student will learn the functions of infrastructure design through the use of the civil CAD program provided. The student will use the template 3-dimensional infrastructure designs to perform the civil drafting techniques and mathematical concepts previously learned during the manual drafting courses.

### **EN190 Basic Surveying with Mathematics**

The manipulations involved in setting up the engineering transit and level are covered in this course. Basics of note-taking and transfer of data to a drawing are stressed. Mathematics includes latitude, departure, azimuth, bearing and length calculations making sure a traversed area will close.

## **Classes Designated for Year Two: Mechanical Engineering Technology**

### **EN200 Advanced Mechanical Drafting**

Application of all basics of drafting is applied in this segment of technical drafting and expands to include complex assembly drawings weldment drawings, flat patterns, and more design techniques related to the mechanical and manufacturing profession. Projects are assigned to include research, use of multiple CAD/CAM software, and solving basic design problems.

### **EN205 Manual Machining Operations**

The student will identify and display the basic use of manual machining equipment to complete the exercises in this course. Emphasis will be placed on correctly following standard operation procedures, lab safety, tool identification, precision and the desired outcomes of a final product.

### **EN210 B. Mechanical Engineering Technology Projects II**

Students will lead and/or work with others in preparing working design models and drawings, all research, design sketches, checking, cost analysis and feasibility of marketing is the student's responsibility. Emphasis is on the leadership role and project management within mechanical design projects.

### **EN215 Additive Manufacturing Design & Operations**

The student will learn and demonstrate the procedures for mechanical designs using modern software and equipment for manufacturing that requires material to be added to create a product. Additive manufacturing equipment is available on site to instruct hands-on applications that utilize various design planes, axis, and material types.

### **EN250. Mechanical Design Capstone**

Application of all material covered through the student's education will be demonstrated through a comprehensive and robust design project. The design/build project will require the student to apply mechanical design practices along with advanced manufacturing technology and techniques in order to create a functional prototype of the design following all regulations of the project scope.

### **EN260 Advanced Manufacturing Processes**

This course covers the modern manufacturing processes and systems, and will emphasize hands on training with industry current machines and technology such as robotics, 3, 4, 5-axis CNC milling, and 4 & 5 axis 3D printing.

### **EN280B. MET Occupational Work Experience and/or Special Projects**

This time is spent on specific job-related activities that may include actual on-the-job training, or special approved projects to accommodate individual interests within the mechanical engineering technology field. This course is designed for the individual student and will supplement his/her regular curriculum.

## **General Education Courses for the AAS**

### **CF101. Computer Fundamentals**

This course is designed to include computer concepts, terminology, hardware structures and software applications for business and professional use. Special emphasis will be on the operating systems, the Internet, word processing, database, presentation, graphics, and spreadsheets.

### **ENGL110 English Composition I**

English Composition provides the students learning and writing experiences allowing them to improve their knowledge, skills and understanding of writing and reading. This course enables the students to communicate effectively through a variety of writing activities. The students will recognize the importance of the grammatical and rhetorical structure of language as applied to greater effectiveness and clarity in writing. Regular writing assignments will enable students to recognize the process of creating clear and accurate documents.

### **MATH110 Intermediate Algebra**

This course reviews standard topics of algebra. Students will study linear and quadratic equations, graphing, functions and functional notation, quadratic, rational, logarithmic and exponential functions, systems of equations, and matrix algebra.

### **BA215. Personal Finance**

This course will provide an overview of personal and family financial planning with an emphasis on recordkeeping, planning your spending, tax planning, consumer credit, making buying decisions, purchasing insurance, selecting investments, and retirement and estate planning.

**HUM105 Ethics**

This course introduces the significance of moral philosophy in a broader context. Students will demonstrate an understanding of major normative ethical theories and recognize key characteristics of philosophical inquiry as well as apply ethical theories to moral problems.

**Pathways**

- The NWKTC Junior/Senior option allows area high schools students the opportunity to take classes on campus during the designated time slot.
- Cert C – Students who complete all EN courses of the program will earn the Cert C.
- AAS – Students who complete all four semesters of the program, including the general education requirements, will earn the Associate of Applied Studies degree.

**Program Guide (program of study)**

Mechanical Engineering Technology			
<b>PROGRAM GUIDE</b>		2022-2023	
		M-F 7:00-2:30	
<b>YEAR I: FIRST SEMESTER F1</b>		<b>22 Fall</b>	<b>22 Fall</b>
Course #	Course Name	Credits	Credits
CF 101	Computer Fundamentals (or Natural & Applied Science)	3	3
EN 105	Applications of Engineering Technology	3	3
EN 105A	Fundamentals of Drafting	2	2
EN 110	Drafting 2D Views and Dimensioning	2	2
EN 115	Engineering Technology Projects I	2	2
EN 120A	Civil Drafting Fundamentals	2	2
EN 130	CAD Fundamentals	2	2
ENGL 110	English Composition I (Required)	3	
or ENGL 112	English Composition I with Review (Requires 2 hours in the Writing Lab per week)		5
<b>TOTAL SEMESTER CREDITS</b>		<b>19</b>	<b>21</b>
<b>YEAR I: SECOND SEMESTER F2</b>		<b>23 Spring</b>	<b>23 Spring</b>
Course #	Course Name	Credits	Credits
EN 101	OSHA 10	1	1
EN 150	Topographic Triangulation	2	2
EN 160A	Applications of Spatial Reasoning in Engineering	2	2

EN 182	CAD Drafting Models					2	2
EN 177	Mechanical CAD/CAM Drafting					2	2
EN 185	Civil CAD Fundamentals					2	2
EN 190	Basic Surveying with Mathematics					3	3
MATH 110	Intermediate Algebra (Required)					3	3
<b>TOTAL SEMESTER CREDITS</b>						<b>17</b>	<b>17</b>
<b>YEAR II: FIRST SEMESTER F3</b>		<b>22 Fall</b>	<b>22 Fall</b>	<b>F5</b>	<b>23 Fall</b>	<b>23 Fall</b>	
<b>(CS) Civil/Surveying Track</b>				<b>(MM) Mechanical/Manufacturing Track</b>			
Course #	Course Name					Credits	Credits
BA 215	Personal Finance (Required)					3	3
EN 200	Advanced Mechanical Drafting					2	2
EN 205	Manual Machining Operations					3	3
EN 210B	Mechanical Engineering Technology Projects II					3	3
EN 215	Additive Manufacturing Design & Operations					3	3
HUM 105	Ethics (Required)					3	3
<b>TOTAL SEMESTER CREDITS</b>						<b>17</b>	<b>17</b>
<b>YEAR II: SECOND SEMESTER F4</b>				<b>F6</b>	<b>24 Spring</b>	<b>24 Spring</b>	
Course #	Course Name					Credits	Semester
EN 250	Mechanical Design Capstone					7	7
EN 260	Advanced Manufacturing Processes					3	3
EN 280B	MET Occupational Work Experience &/or Special Projects					5	5
<b>TOTAL SEMESTER CREDITS</b>						<b>15</b>	<b>15</b>
<b>TOTAL PROGRAM CREDITS</b>						<b>68</b>	<b>70</b>

**Program Accreditations**

NONE

**Faculty**

- Describe faculty qualifications and/or certifications required to teach in the proposed program.

**Faculty Credential Policy** (page 36-37 of Employee Handbook 2021 Revision)

Northwest Tech will employ qualified faculty members who have the formal education or related work experience for the area in which they will be employed. All faculty will be placed on a professional development plan upon employment.

At the time of hiring, all technical faculty members must hold a minimum of a high school diploma or equivalent, and two years of work experience within, or closely related to, the field of study of their instruction. Technical faculty who do not already possess an associate's degree will be required to earn said degree within the first three (3) years of employment. Upon completion of the associate's degree, technical faculty will be required to earn a bachelor's degree within the following four (4) years through a curriculum relevant the work they undertake at the College.

At the time of hiring, all general education faculty members must hold a minimum of a master's degree or higher with a minimum of eighteen (18) hours within the discipline of instruction. Northwest Tech recognizes the difficulty of finding qualified technical and general education faculty. In cases where this exists, the college reserves the right to hire faculty with reduced or alternative qualifications, provided, there is a professional development plan in place. The professional development plan must be developed to raise the qualifications of the faculty member to the standard appropriate by the College and external accrediting bodies.

Specifically, instructors in the program will be expected to bring at least 3-5 years of experience in the mechanical engineering or manufacturing industry.

### **Cost and Funding for Proposed Program**

- Provide a detailed budget narrative that describes all costs associated with the proposed program (physical facilities, equipment, faculty, instructional materials, accreditation, etc.).
- Provide detail on **CA-1a form**.
- Provide Excel in CTE fee details on the **CA-1b form**.
- If the program is requesting Perkins funds, provide details on the **CA-1c form**.
- If the program is requesting KS Promise Act eligibility, provide details on the **CA-1d form**.
- Describe any grants or outside funding sources that will be used for the initial start up of the new program and to sustain the proposed program.

### **Budget Narrative (physical facilities, equipment, faculty, instructional materials, accreditation, etc.)**

#### Facilities, Equipment, Instructional Materials

The classroom building for Engineering Technology includes three classroom spaces all with integrated computer lab space that are currently available for growth with the addition of this program.

The facility for the advanced manufacturing lab includes 1800 sq ft of space and the following equipment/technology;

Haas UMC500 (QTY 1) – 5-axis CNC mill

Tormach 1100MX (QTY 1) – 4-axis CNC mill

Tormach PCNC440 (QTY 1) – 3-axis CNC mill

Tormach 8L (QTY 1) –CNC Lathe

Tormach xsTech Router (QTY 11) – 3-axis CNC mill

ShopFox Combo Lathe/Mill (QTY 2)

Granger Drill Press (QTY 1)

Granger Band saw (QTY 1)

Lincoln Electric Classmate Robotic Welding system

Diabase H5-400 (QTY 5) – 5-axis CNC mill and 3D printer

Crealty CR10-V2 (QTY 12) – 3D printer

Makerbot Replicator (QTY 3) - 3D printer

Makerbot Method X (QTY 1) - 3D printer

Markforged Mark Two (QTY 1) - 3D printer

Markforged Metal X System (QTY 1) - 3D printer

Included in the lab is a large assortment of hand tools and powered tools.

#### Faculty.

Faculty will be paid through the NWKTC general fund.

#### Accreditation Fees/Certification Training.

Expenses associated with applying for accreditation or training instructors will be provided through either Perkins Professional Development funds or the college's general fund.

- CA-1a – see appendices
- CA-1b – see appendices

- CA-1c – see appendices
- CA-1d – see appendices

### **Grants and Outside Funding Sources**

This program will work to acquire additional grants in order to continue to add and improve technology in the lab and maintain industry relevance. Additionally, the program will seek donations from business and industry in the forms of tooling, equipment, training opportunities, and live projects.



### **Program Review and Assessment**

- Describe the institution's program review cycle.

The NWKTC Curriculum & Assessment Committee oversees the Program Review process. Currently, each program completes an annual review and an assessment plan that is reviewed by the C&A committee, the Dean of Academic Advancement, the program Advisory Boards, and the college President. If programs are deficient in any area, they work with the Dean of Academic Advancement to set goals for the upcoming year.

### **Program Approval at the Institution Level**

- Provide copies of the minutes at which the new program was approved from the following groups:
  - Program Advisory Committee  
*(including a list of the business and industry members)*
  - Curriculum Committee
  - Governing Board  
*(including a list of all Board members and indicate those in attendance at the approval meeting)*

Attached in the appendices, please find:

1. Minutes of the Area Board of Control that oversees NWKTC
2. Minutes of the Engineering Program Advisory Board
3. Minutes of the Curriculum & Assessment Committee
4. Letter of support: Will Webb
5. Letter of Support: Sam Nicholson
6. Letter of support: Aaron Wolfe

Submit the completed application and supporting documents to the following:

Director of Workforce Development  
Kansas Board of Regents  
1000 SW Jackson St., Suite 520  
Topeka, Kansas 66612-1368

## KBOR Fiscal Summary for Proposed Academic Programs

CA-1a Form (2020)

Institution: Northwest Kansas Technical College

Proposed Program: 15.0805. Mechanical Engineering Technology

<u>IMPLEMENTATION COSTS</u>				
<b>Part I. Anticipated Enrollment</b>			Implementation Year	
Please state how many students/credit hours are expected during the initial year of the program?				
			Full-Time	Part-Time
A. Headcount:			3	3
<b>Part II. Initial Budget</b>			Implementation Year	
A. Faculty		Existing:	New:	Funding Source:
Full-time	#1	\$61,650	\$	General Fund and/or Perkins allocation if eligible
Part-time/Adjunct	#	\$	\$	
		Amount	Funding Source	
B. Equipment required for program		\$0.00	Already acquired	
C. Tools and/or supplies required for the program		\$0.00	Already acquired	
D. Instructional Supplies and Materials		\$0.00	Already acquired	
E. Facility requirements, including facility modifications and/or classroom renovations		\$0.00	Already completed through Dane G. Hanson Grant	
F. Technology and/or Software		\$6000.00	Perkins V Grant	
G. Other ( <i>Student Laptops</i> )		\$1200.00	Purchased by each student	
<b>Total for Implementation Year</b>		<b>\$68,850.00</b>		

# KBOR Fiscal Summary for Proposed Academic Programs

CA-1a Form (2020)

PROGRAM SUSTAINABILITY COSTS (Second and Third Years)				
Part I. Program Enrollment		Second and Third Years		
Please state how many students/credit hours are expected during the first two years of the program?				
		Full-Time	Part-Time	
A. Headcount:		6	6	
Part II. Ongoing Program Costs		First Two Years		
A. Faculty		Existing:	New:	Funding Source:
Full-time	#1	\$ 61,650	\$	General Fund and/or Perkins allocation if eligible
Part-time	#	\$	\$	
		Amount	Funding Source	
B. Equipment required for program		\$ 0.00	General Fund	
C. Tools and/or supplies required for the program		\$ 1000.00	General Fund	
D. Instructional Supplies and Materials		\$ 500.00	General Fund	
E. Facility requirements, including facility modifications and/or classroom renovations		\$0.00		
F. Technology and/or Software		\$ 10,000	Perkins V Grant	
G. Other <i>(Please identify; add lines as required)</i>				
<b>Total for Program Sustainability</b>		<b>\$ 73,150.00</b>		

Please indicate any additional support and/or funding for the proposed program:

- Perkins V funding (anticipated)
- Capital Outlay
- Maintenance of Effort
- JIIST grants
- Dane G. Hansen Foundation
- Industry donations

Submit the completed application and supporting documents to the following:

Director of Workforce Development  
 Kansas Board of Regents  
 1000 SW Jackson St., Suite 520  
 Topeka, Kansas 66612-1368

KBOR Excel in CTE Fee Summary for Proposed Academic Programs

CA-1b Form (2020)

*Per statute (K.S.A. 72-3810), the Kansas Board of Regents shall establish general guidelines for tuition and fee schedules in career technical education courses and programs. The Excel in CTE tuition and fee schedule of every technical education program shall be subject to annual approval.  
Please include all costs charged to high school students for the proposed new program.*

<b>Institution Name:</b>	Northwest Kansas Technical College
<b>Program Title:</b>	Mechanical Engineering Technology
<b>Program CIP Code:</b>	15.0805

*Please list all fees associated with this **program**:  
Only list costs the institution **is** charging students.*

Fee	Short Description	Amount
Laptop	laptop computer (one-time expense)	\$1,200
Lab fees	Lab Fees (\$200 per semester)	\$400

*Please list all courses within the program and any fees associated to those **courses**:  
Only list costs the institution **is** charging students. Do not duplicate expenses.*

Course ID	Short Description	Amount
	nothing specific to one course (just lab fees above)	

*Please list items the student will need to purchase on their own for this program:  
Institution **is not** charging students these costs, rather students are expected to have these items for the*

Item	Short Description	Estimated Amount

# Carl D. Perkins Funding Eligibility Request Form

Strengthening Career and Technical Education for the 21<sup>st</sup> Century Act

CA-1c Form (2021)

This application should be used for new programs (currently in the program approval process) or existing programs the institution would like reviewed for Carl D. Perkins funding eligibility.

## Program Eligibility

An “eligible recipient” is an eligible institution or consortium of eligible institutions qualified to receive a Perkins allocation.

An “eligible institution” is an institution of higher education that offers CTE programs and will use Perkins funds in support of CTE coursework that leads to technical skill proficiency or a recognized postsecondary credential, including an industry-recognized credential, a certificate, or an associate degree, which does not include a baccalaureate degree.

Any program receiving Perkins funds must be designated as a technical program by KBOR. Definition of a technical program may be found in state statute K.S.A. 72-1802. Criteria adopted by the Board of Regents may be found in their February 20, 2019 meeting packet.

Program Levels:

Educational Award Level	Credit Hours
SAPP	0-15
Certificate A	16-29
Certificate B	30-44
Certificate C	45-59
Associate of Applied Science	60-69

Stand-Alone Parent Programs (SAPPs) must meet the following criteria:

- Minimum of 8 credit hours
- Minimum of 80% tiered credit hours
- Maintain an average of 6 concentrators over the most recent consecutive 2-year period

Certificates and Associate of Applied Science degrees must meet the following criteria:

- Minimum of 51% tiered credit hours
- Maintain an average of 6 concentrators over the most recent consecutive 2-year period
- Comply with Program Alignment – *if applicable*

# Carl D. Perkins Funding Eligibility Request Form

Strengthening Career and Technical Education for the 21<sup>st</sup> Century Act

CA-1c Form (2021)

Name of Institution	Northwest Kansas Technical College
Name, title, phone, and email of person submitting the Perkins Eligibility application <i>(contact person for the approval process)</i>	Ben Schears, President 785-890-1501 Ben.schears@nwktc.edu
Name, title, phone, and email of the Perkins Coordinator	Michael Zimmerman, Instructor 785-890-1578 Michael.zimmerman@nkwtc.edu
Program Name	Mechanical Engineering Technology
Program CIP Code	15.0805
Educational award levels <u>and</u> credit hours for the proposed request	Cert C – 53 credit hours AAS – 68 credit hours
Percentage of tiered credit hours for the educational level of this request	Cert C: 100% AAS: 78%
Number of concentrators for the educational level	Cert C: anticipated 6 each year AAS: anticipated 6 each year
Does the program meet program alignment?	n/a
Justification for conditional approval: <i>(this section must reference information found within the Local Needs Assessment)</i>	<p>Regional occupational data. The KLIC data for SOC code 17-3027 in Northwest Kansas is considered confidential and is not reported. However, data is available for the state of Kansas.</p> <p>Employment trends and projections statewide:</p> <ul style="list-style-type: none"> <li>• <b>Occupational Growth:</b> The job outlook for mechanical engineering technicians is expected to increase 6.5% over the next ten years, with a projected 382 openings over the next ten years</li> <li>• <b>Estimated annual median wages:</b> The average annual wage is \$50,235.</li> <li>• <b>Typical education level needed for entry:</b> The background needed for entry into this occupation is an associate's degree.</li> </ul>

Signature of College Official



Date 3-11-22

# Carl D. Perkins Funding Eligibility Request Form

Strengthening Career and Technical Education for the 21<sup>st</sup> Century Act

CA-1c Form (2021)

Signature of KBOR Official \_\_\_\_\_ Date \_\_\_\_\_

*For KBOR Staff use*

Approval effective for Academic Year:

Approval effective for Perkins fund spending for Fiscal Year:

Perkins Grant reporting required beginning:

# Kansas Promise Eligibility Request Form

CA-1d Form (2021)

This application should be used for new programs (currently in the program approval process) or existing programs the institution would like reviewed for Kansas Promise eligibility.

A complete list of approved Promise Eligible programs may be located at:

[https://www.kansasregents.org/students/student\\_financial\\_aid/promise-act-scholarship](https://www.kansasregents.org/students/student_financial_aid/promise-act-scholarship)

## Program Eligibility

2021 House Bill 2064, section 2, (7) (A) identifies promise eligible programs as (i) Information Technology and Security, (ii) Mental and Physical Healthcare, (iii) Advanced Manufacturing and Building Trades, (iv) Early Childhood Education and Development.

Section 3, (c) allows for the postsecondary educational institution to designate an additional promise eligible program that corresponds to a high wage, high demand, or critical need occupation. The Act further states the postsecondary educational institution shall maintain the promise eligible program for at least three consecutive years.

Name of Institution	Northwest Kansas Technical College
Name, title, and email of person responsible for Academic program	Lisa Blair, Ph.D. Dean of Academic Advancement Lisa.blair@nwtkc.edu
Name, title, and email of Financial Aid contact	Penny Nemechek Financial Aid Specialist Penny.nemechek@nwtkc.edu

Add programs under the appropriate category the institution would like reviewed for Kansas Promise Eligibility. Add additional rows as needed.

Information Technology and Security			
CIP Code	Program Name	Type of Award (AAS, AA, AS, AGS, Certificate)	Scholarship Effective Date (FA21, SP22, SU22)

Mental and Physical Healthcare			
CIP Code	Program Name	Type of Award (AAS, AA, AS, AGS, Certificate)	Scholarship Effective Date (FA21, SP22, SU22)

Advanced Manufacturing and Building Trades			
CIP Code	Program Name	Type of Award (AAS, AA, AS, AGS, Certificate)	Scholarship Effective Date (FA21, SP22, SU22)



# Kansas Promise Eligibility Request Form

CA-1d Form (2021)

15.0805	Mechanical Engineering Technology	AAS	FA22

Early Childhood Education and Development			
CIP Code	Program Name	Type of Award (AAS, AA, AS, AGS, Certificate)	Scholarship Effective Date (FA21, SP22, SU22)

The postsecondary educational institution may designate an additional promise eligible program that corresponds to a high wage, high demand, or critical need\*\* occupation.

College Designated Program				
CIP Code	Program Name	High Wage, High Demand, or Critical Need	Type of Award (AAS, AA, AS, AGS, Certificate)	Scholarship Effective Date (FA21, SP22, SU22)

\*\*If the above program is considered "critical need," please provide supporting documentation:

Signature of College Official  Date 3-11-21

Signature of KBOR Official \_\_\_\_\_ Date \_\_\_\_\_

Special Note to Kansas Independent Colleges:

Please carbon copy the KICA contact below when submitting this application to the Kansas Board of Regent office:

Matt Lindsey, President KICA  
[matt@kscolleges.org](mailto:matt@kscolleges.org)

## MINUTES

The regular monthly meeting of the Area Board of Control, Northwest Kansas Technical College, Goodland, Kansas, was called to order, on Monday, February 28, 2022, at 6:45 pm MT, by Chairman Dan Wasson with the following present:

### Area Board of Control Members

Dan Wasson	Paul Bruggeman
Frank Otter	Dick Short
John Faber	Mark Hanson
Ginger Gibson	Billi Beckman (via Zoom)
Julia Cheney	Shane Mann (via Zoom)
Christine Smith	Brad Schick

### College Administration, Staff & Guests

Ben Schears, President  
Sherri Knitig, VP of Operations  
Lisa Blair, Dean of Academic Advancement  
Rory Kling, Athletic Director  
Mandy Garrett, Director of Admissions  
Mrs. Suzanne Wetzel, Monroe County Community College  
HLC Visiting Team Chair  
Dr. Edward Breitenbach, Muskegon Community College  
HLC Visiting Team Member  
Dr. Travaris Harris, Harper College  
HLC Visiting Team Member  
Ms. Amanda Kathleen Herb, Washington Community College - Ohio  
HLC Visiting Team Member  
Dr. Brian John Dille, Maricopa Community Colleges-Mesa Community College  
HLC Visiting Team Member

As each member had received a copy of the minutes, the minutes were not read. There being no additions, deletions, or corrections to the minutes, Brad Schick moved to approve the regular meeting minutes of January 22, 2022, as written, seconded by Mark Hanson. Motion carried.

Treasurer Frank Otter read the 1/31/2022 reconciled checking, savings, clearing, and ICS account reports. John Faber moved to accept the treasurer's report, seconded by Dick Short. Motion carried.

The Board members reviewed a recap of February invoice payments. A detailed electronic listing of all invoices and journal entries was available to members to review as desired. Ben Schears reviewed the monthly fund balance report and unusual expenditures. Frank Otter moved to approve the expenditures and journal entries for February, Paul Bruggeman seconded the motion. Motion carried.

**Open Discussion w/HLC Visiting Team.** Suzanne Wetzel, HLC Visiting Team Chair, opened up the discussion with introductions and commented that the team did not need to ask the board about their fiscal responsibility as they just witnessed it. As a part of the official accreditation visit, the team openly discussed with the board their role and responsibilities as members and how the board preserves autonomy. The team thanked the members for their time and exited to allow the board time to cover the remaining monthly business items.

## **OLD BUSINESS:**

**Elks Lodge Update.** Ben Schears informed the board that the local vote for sale of the Elks Lodge to the College passed with a 76% majority; however a couple of the local Elks board members killed the vote with the state office indicating the local chapter should have had a committee to process such transactions. The Elks are working on a bylaws change and a new vote. A few members have reached out to the college asking for some additional time as they work through the needed changes. The community as a whole is overwhelmingly supportive. The Dane Hansen Foundation has extended our grant deadline to allow this additional month of negotiations.

Schears reported to the board that he had a group of retired college employees approach him regarding potential naming opportunities to honor a couple individuals that were significant contributors at the college's startup Zona Price and Glenn "Skip" Sharp. Schears commented to the board that he always appreciates these types of feel good initiatives and actually as we have been discussing the Elks had already thought maybe we would name it somehow after Zona Price since she worked for the college for many years and for the Elks for a great number of years as well. The Administration building may be the building that makes the best sense for Sharp. The retirees are gathering bio information on the past individuals and we will proceed after that.

**State Funding Formula Re-centering.** Ben Schears informed the board that re-centering of the two-year funding formula is currently again a hot topic in the legislature. The state currently has some funding available; however, distribution is a concern since the formula has not been funded since its inception. The community colleges and technical colleges are trying to work with their lobbyists and legislators to determine best steps forward to re-centering. As a result of outreach to Senator Billinger (Chair of Ways and Means) and Representative Smith, the college has been able to stay at the forefront of the conversation to support progress. WSU Tech is wanting to recenter in one year, which would be devastating to several colleges. The community colleges want it over 7 years, and technical colleges want it over 3 years, both with a rolling 3-year average of enrollment with perhaps COVID years being excluded. Some community colleges have threatened to attack the technical college residency requirements, which would be significant to us. If this becomes a part of the discussion, we will have to defend and perhaps even push to have the out-of-district funding reevaluated. The best news is that the legislature plans to put some money towards two-year colleges this upcoming year and is proposing a working summer group of colleges and legislators to work out a reasonable re-centering plan.

## **NEW BUSINESS:**

**Endowment Report.** Ben Schears reviewed the Endowment report. Tickets will soon be for sale for the large raffle item, which is a Coleman camper/trailer, and will be \$50 each. The Association will host the event at the Fairgrounds again this year and will be having The Dish Room cater the event scheduled for June 3. The annual graduate follow-up report, which provides employment feedback from last year's graduating students, was provided to the board. The overall placement rate was 84% with an average starting salary of \$44,670. The college makes every effort to get graduates to complete the survey, but every year it is a struggle.

**Grant Report.** The college will be submitting a JIIST proposal this upcoming month to try and secure grant funding to meet the significant increase in costs for the chassis dyno equipment, which is a part of the EDA diesel grant.

**Academic Advancement Report.** Lisa Blair reported that at dinner she learned that one of the HLC team members and she overlapped their education at SIU Carbondale and discovered they even had a common roommate. Blair requested the board consider curriculum changes for the Cloud Computing program to provide some additional coursework and pathways to align with Goodland Tech as they expand employment and internship opportunities in Goodland. Blair thanked Jeremy Skrdlant, instructor, for working with his advisory committee to revise curriculum to maintain program goals and integrity, yet meet the needs of industry.

**Academic Advancement Report (cont.)**. Goodland Tech has hired their own recruiters to recruit students to our Cloud Computing program (will be advertised as Crypto Computing - catchy name for marketing). The Engineering Technology program was revised a year ago with a second year pathway for the advanced manufacturing curriculum; however, we did not add a separate formal associate degree pathway for the mechanical in addition to the civil. Blair asked the board for formal approval of a new degree track which includes a new CIP (Classification of Instructional Programs) code for the mechanical pathway. Paul Bruggman moved to approve the curriculum changes as presented for the Cloud Computing program and new mechanical degree option for the Engineering Technology program. Brad Schick seconded the motion. Motion carried. Blair noted she continues doing classroom observations and will review professional development progress with faculty as observations are finalized.

**Athletic Report**. Rory Kling reported that unfortunately neither the men's or women's basketball team made it to postseason play; however, coaches have nominated some players for conference honors and we are hoping we will get some student athletes recognized there for their efforts in a strong but tough season. The wrestling team had 7 qualify for nationals and track/field had 11 qualify for indoor national competition. Coach Evans Kiptoo received an award recognizing him as the 2021 NJCAA Region VI Men's Coach of the Year for Division I Cross Country. Softball's spring season has been a bit of a struggle to date; however, the team was able to sweep Pratt. Shooting Sports will be competing in the inaugural NJCAA season next fall. The season will consist of a trap curriculum and likely eventually will expand into other events like sporting clays and skeet. The largest hurdle the team is facing is securing ammo and the price of ammo when it is found. The initial launch of the Booster Club has been successful with 22 members and \$6,750 raised to support athletics.

**IT Department Report**. The IT department is working with several testing companies to secure authorization for our new test center so we can conduct program testing for Cosmetology, Electrical, Medical, Carpentry etc. The College has been selected by Apple to resubmit an application for consideration as a continued Distinguished School, so we will be working through that process.

**Admissions & Outreach Report**. Mandy Garrett reported that the admissions department has been busy. FFA Day was held on February 21 where 175 students competed in the hosted competitions. Twenty students requested campus tours during their downtime between competitions. Admissions has met with employees of Goodland Tech to make sure their recruiters understand the admissions process for the college. Garrett commented that college personnel have been involved with several virtual career fairs and we have signed up for a couple virtual fairs that focus on the home school population. Tomorrow, the college will assist with "Adulting Day" at GHS and next week will have a booth at the Better Home and Living show in Colby. A lot of high schools have been bringing over groups of students. Planning is underway for both Junior Day and 6th Grade Day. On Saturday, May 7, several faculty have agreed to facilitate a project day for 4 H students. The college is signed up to attend Husker Harvest Days in Grand Island, NE, which is a new venue for the college. Enrollment applications are way up (423 compared to last year 301, 41% increase) at this time. We will now begin pushing the steps for students to finalize their schedules, financial aid, housing etc.

**Student Advancement Report**. Ben Schears commented that we are starting to get students to come out of their shells since COVID, as they were getting used to isolating. Karaoke was a recent activity where many students engaged and we are looking to host additional evening activities. There have been a few student discipline issues of recent. One is for theft out in the community and there are likely other students caught up in this issue.

**President's Report**. Ben Schears presented a recognition plaque thanking Dick Short for 15 Years of Service to the Area Board of Control. Short couldn't believe it had been 15 years and thanked the board.

**President's Report (cont.)**. The KTEA had postponed consideration/approval of a two-year drone maintenance program for K-State/K-State Polytechnic until the new president took office. The KTEA board had received concerns about a university adding a 2-year degree program, and with the new president change this request was withdrawn.

Ben Schears reported that he spoke with both Scott Smathers and Blake Flanders regarding re-centering. KBOR in general is behind the technical college plan; however Flanders would be more in favor of a one year and done option. Schears gave a shout out to Senator Billinger for proposing to infuse funds this coming academic year into the two-year college Capital Outlay fund which has been stagnant since 1974.

The Spark funding proposal has been submitted for \$1.5 million to renovate 1008 Main. We are hopeful this request will be approved by the legislature as it is part of a packaged grant from the technical colleges.

The College secured a Letter of Commitment today from Sherman County in regards to the old Topside Manor nursing home. The college will be able to take ownership for \$1 at some point this summer once the current residents have been relocated to the newly constructed nursing home. The ultimate goal for the manor is to create a rural allied health training center, move our current healthcare programs over, add a potential Medical Lab Tech (MLT) program, and offer shared training space to first-responders, hospital etc. We plan to pitch this idea to Senator Moran for consideration of a congressionally directed spending request next budget cycle. In the interim to secure funding for the allied health training center, if Goodland Tech is able to recruit 100 students by August for the Cloud Computing program, we could use this space as temporary housing if needed. The \$100,000 for funding for the Plumbing program supported by Senator Jerry Moran has been included in the current budget bill and is expected to pass by the March 11 deadline.

Ben Schears met with folks at the Kansas Department of Commerce in Topeka and Scott Smathers, KBOR. The discussion revolved around the Workforce Aid Apprenticeship Program. This is a potential resource for Goodland Tech and the College to create a successful program. This past Friday Senator Moran was in Goodland to attend and support the announcement of the public private partnership between Goodland Tech and Northwest Tech. This is an exciting venture for Goodland, and it is fun to be a part of growth in the community.

Colby High School contacted the admissions department to book a tour for their faculty as a part of one of their in-service days. Schears was excited to see the district engaging their faculty and they all seemed to enjoy it and learned of the numerous opportunities. As a result of this tour, the principal asked each faculty member to identify a student that would benefit from technical education and he is having one-on-one meetings with those students to talk about potential junior/senior option opportunities. This served as good leverage to encourage Goodland to do the same, and Superintendent Bill Biermann has scheduled a day in April for Goodland district faculty to tour. We will also push an open invitation out to our other participating schools.

**Personnel & Legal**. Resignation(s): None. Appointment(s): None. Other: Ben Schears reported that in addition to faculty for our new Plumbing and Child Care programs, we are looking at adding a faculty position in Welding and one in Electrical based on enrollment projections. Schears commented that he was impressed with faculty and staff today as they honestly and heartfully responded to the myriad of questions from the HLC visiting team. The visit portion will wrap up around Noon tomorrow and a report with comments and recommendations will follow in the coming weeks.

**Board Comments**. Frank Otter commented that his table had a good discussion with one of the HLC team members during dinner. Paul Bruggeman questioned/suggested if we might add an event for students between 6th Grade Day and Junior Day as maybe we lose them and their interest between the gap.

At 8:25 pm MT Chairman Dan Wasson adjourned the meeting.

**Northwest Kansas Technical College  
Engineering & Drafting Technology  
2022 Winter Advisory Meeting Minutes**

February 10, 2022

**I. Call to order & introductions**

Mr. Zimmerman called to order the annual winter advisory meeting of the Engineering & Drafting Technology department at 7:45 a.m. (MST) on February 10, 2022 at the Northwest Kansas Technical College in Goodland, KS. Those present gave introductions and included;

NWKTC Instructors

Michael Zimmerman & Jeff Snyder

NWKTC Administration

Dean of Academic Advancement - Lisa Blair

K-12 Connections

USD 352 - Jim Myers

Industry Advisors

Atkins Global – Dustin Delgado

Aztec Consultants – Tony Peall & Jon Thompson

Driggs Design Group, PA – Aaron Wolfe & Kade Urban

Kiewit – Jason Bowers & Corey Wollen

Martin/Martin, Inc. – Jesus Diaz & Clayton Cramer & David Lovato (online)

Westwood Professional Services – Devon Arnold

Parsons Corporation - Brandon Robbins

Surveying and Mapping - David Adams

HDR - Jesse Jordan &

Burns & McDonnell - Nick Goss

KDOT - Andrew Markley

Fuller Industries Inc. – Will Webb

Peterson Manufacturing - Luke Morrill (virtual)

Miltech Machine Corp. - Sam Nicholson

Peterson Manufacturing - Luke Morill (virtual)

**II. Approval of minutes from last meeting**

- a) Meeting minutes were provided electronically to all participants prior to the meeting to allow time for review. Mr. Snyder expanded on the previous meeting topic of including exposure of BlueBeam Review to the students, and explained that implementation was reviewed but due to the colleges learning management system (LMS) it would slow down the process of providing feedback and grades to students. Faculty are currently using the LMS as a file submission and markup/feedback platform so students understand the process. Mr. Snyder advised that full training

with this software would have to come from the companies during on-boarding of new hires if they use it. Comment from HDR asked to still try and expose students to this software so they at least know what it is (for example, having students research the software and understand how it is being used in the industry). The program will look to add this topic of research in the EN105 course next fall. No other discussion was had in regards to the meeting minutes from November.

Conversation then lended itself to HDR asking about if we train students on Revit. Mr. Zimmerman confirmed that we currently do not but it has been mentioned in the past meetings and is visibly becoming a more utilized software in the field. The instructors noted that in order to add more software training, other curriculum covered would have to be removed in order to allow enough time in the program to cover it. Instructors noted that they will begin looking at how this could be added in the near future and allow students to become exposed to and familiar with Revit.

~ **The Advisors approved the minutes without change.**

### **III. Open issues & New Business**

#### **a) Department Updates:**

##### **i) Instructor changes:**

Mr Snyder advised the committee that at the end of the current semester he would be returning to industry and that the college will be seeking to hire an instructor to fill the opening. Mr. Snyder advised that he will remain very active with the program after his exit and will continue to serve on the advisory committee and help any way he can to provide a smooth transition and onboarding of the new instructor. Mr. Zimmerman then added that advertising for the open position would begin very soon with the goal of solidifying a candidate as soon as possible. The advisors were also asked to help spread the word and recruit from industry

Mr. Zimmerman requested feedback from advisors as far as additional places to advertise and linkIn, Monster, Indeed were mentioned, as well as contacting KSLs and the State Technical Board to see if they could post jobs as well.

##### **ii) Advanced Manufacturing Lab update**

Mr. Zimmerman Advised that all equipment and technology in the lab is operational with the exception of the metal 3D printer, but that would be operational within this semester once the technician is scheduled to come to campus and complete the final install.

##### **iii) ToolingU from SME is now being used to help supplement the curriculum within the mechanical courses. ToolingU is an industry recognized training platform used to help onboard new employees in the manufacturing fields.**

#### **b) New Program Proposal**

Mr. Zimmerman mentioned that since the program now has two pathways within the program of Engineering Technology (Civil/Surveying and Mechanical/Manufacturing) there has been an interest in students wanting to complete both pathways. The way the program currently stands, it makes it hard for students to complete both due to them already having an associate degree and then returning for one year and not having a credential when they complete the extra classes. Mr. Zimmerman then proposed the idea of creating a new program at the college for the students

wanting the mechanical/manufacturing pathway so that they can receive an associates from that program and then if they want to complete the civil/surveying emphasis they can return for another year and earn a second associate's degree. Mr. Zimmerman noted that the addition of a new program (Mechanical Engineering technology) would not change curriculum or outcomes as they currently stand. Mr. Zimmerman advised that letters of support would be needed from mechanical and manufacturing companies to help show support for this new program. General questions followed from the advisors about the process and were answered by the instructors. No additional comments were had and the advisors approved moving forward with sending in the application into the Kansas Board of Regents / Technical Education Authority.

c) Advisory Members - Additions and reaffirmations

- i) Andrew Markley - reaffirmed
- ii) Sam Nicholson - Miltech Machine Corporation (new)
- iii) Will Webb - Fuller Industries (new)
- iv) Brandon Douglas - Parsons Corporation (new)
- v) Toni Pealle - Reaffirmed voted Committee Chair
- vi) Dustin Delgado - Reaffirmed voted Committee Co-Chair

d) Open Discussions:

- i) Luke Morrill with Peterson Manufacturing asked about possibly intruding electrical knowledge within the curriculum as he is seeing an increase in technicians benefiting from having some basic knowledge. Mr. Zimmerman noted that he will be looking to add some PLC logic into some of the programming courses to help with that and will continue to look at this area for future additions.
- ii) Updates on recruiting efforts were given. Mr. Zimmerman is working with Sharon Springs high school to teach some students on a new CNC machine they acquired and will be utilizing this opportunity to help recruit potential students while down there.

**IV. Meeting Adjourned for Round table discussions with students at 10:00 a.m.**



## **C&A Meeting - 4/2/2022**

Committee Members: Kerri Bellamy, Jason Cook, Joseph Dobbs, Michaela Kaus, Dennis Misurell, Jack Polifka, Rachel Schears, Lois Seibert, Jeremy Skrdlant, Shea Vrbka, Michael Zimmerman, Trista Zimmerman, Lisa Blair, Sylvia Shores, Jason Showalter, Rory Kling, Christa Bergsma

**In Attendance:** Jack, Jeremy, Sylvia, Lisa, Michalea, Rachel, Lois, Kerri, Trista, Mike, Christa

**HLC Report:** March 14th - first draft, we can review, final will be in 5 or 6 weeks

**General Education Assessment:** Continue to work on assessment plan

-How can we assess the gen ed courses/learner outcomes as a program?

Program capstones are great for assessing learner outcomes within programs, each instructor is doing assessment within the individual courses, but we need to be assessing learner outcomes within the gen ed program

-Can NT do a capstone project for gen ed classes?

Lisa will meet with Christa and gen ed faculty to get feedback and ideas to move forward

**Engineering Curriculum Changes:** program guides are in Google drive 'files' folder

-2 separate programs: civil and mechanical

1st year all students take the same classes

2nd year classes will change depending on the path students choose

-Students can graduate with an AAS in 2 years, can take a 3rd year and get another AAS degree

-Changes will help grow the current program

-Sylvia and Lisa will work on submitting changes to KBOR

It will be a new program request

Discuss naming of courses

Mike is getting letters of support for the new programs

Vote: Jeremy moved and Lois seconded

Committee voted to approve

Change in Schedule: Division Chair meeting - Monday, March 7th; Faculty meeting - Monday March 21st

Next C&A meeting will be Wednesday, April 6th at 2:30



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**Fuller Industries Inc**

Kansas Board of Regents  
1000 SW Jackson St., Suite 520  
Topeka, KS. 66612-1368

RE: Letter of Support for new Mechanical Engineering Tech Program at NWKTC

Dear Director of Workforce Development:

It is my pleasure to provide this letter of support for the proposed Mechanical Engineering Technology Program at Northwest Kansas Technical College (NWKTC) in Goodland, KS. I represent Fuller Industries Inc. and am currently serving on the Advisory Board.

While there is not currently any labor market data for this occupation for the Northwest Kansas region, it is important to note that jobs are currently opening -and growing – throughout the state of Kansas and across the country. The CAD/CAM and advanced manufacturing technology skills and knowledge students gain through this program will ensure their employability upon graduation. Currently in my companies manufacturing facility we have a growth projection of 5 % from now until 2023. Our 5 year plan is going to require positions like Mechanical Engineering Tech to be meet this growing demand. The skills that this program offers is essential to the growth of manufacturing in Kansas.

In order to fulfill this need, I am willing to contribute in the following ways:

- ◇ Continue to serve on the Advisory Board, meeting once per semester
- ◇ Offer expertise and feedback regarding the curriculum, facilities, training and equipment
- ◇ Offer internships or apprenticeships to students and/or recent graduates
- ◇ Offer donations of equipment or materials to support in-class instruction
- ◇ Give highest consideration for employment to NWKTC graduates

In summary, it is my professional opinion that this new program will provide the training and opportunities for employment that will enhance our local community. We are seeing a decline in local talent on the technology front at the manufacturing level. After interviewing many of these students they are going to be prepared to hit the ground running with the skills that have learned throughout this program.

Thank you for your consideration of the NWKTC proposal for the Mechanical Engineering Technology Program. Director of Workforce Development

Sincerely,

A handwritten signature in blue ink, appearing to read "Mike", followed by a second, less legible signature.



One Fuller Way  
Great Bend, Kansas 67530

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**Fuller Industries Inc**

Will Webb  
One Fuller Way, Great Bend, KS 67530  
[wwebb@fullerind.com](mailto:wwebb@fullerind.com)  
(620)793-4505

620.792.1711  
FullerIndustriesLLC.com

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Director of Workforce Development  
Kansas Board of Regents  
1000 SW Jackson St., Suite 520  
Topeka, KS. 66612-1368

RE: Letter of Support for new Mechanical Engineering Tech Program at NWKTC

Dear Director of Workforce Development:

It is my pleasure to provide this letter of support for the proposed Mechanical Engineering Technology Program at Northwest Kansas Technical College (NWKTC) in Goodland, KS. I represent Miltech Machine Corporation and am currently serving on the Advisory Board.

While there is not currently any labor market data for this occupation for the Northwest Kansas region, it is important to note that jobs are currently opening -and growing – throughout the state of Kansas and across the country. The CAD/CAM and advanced manufacturing technology skills and knowledge students gain through this program will ensure their employability upon graduation. We need people with manufacturing knowledge in this country. I have been working in manufacturing since 1978 and have been in a lot of facilities and seen the need for skilled help. I have needs in my company now and have visited with several students about employment.

In order to fulfill this need, I am willing to contribute in the following ways

- Continue to serve on the Advisory Board, meeting once per semester
- Offer expertise and feedback regarding the curriculum, facilities, training and equipment
- Offer scholarships to prospective and/or continuing students
- Offer internships or apprenticeships to students and/or recent graduates
- Offer donations of equipment or materials to support in-class instruction
- Serve as a guest speaker in class to discuss current issues or professional development with the students
- Give highest consideration for employment to NWKTC graduates

In summary, it is my professional opinion that this new program will provide the training and opportunities for employment that will enhance our local community. I personally went through a VO-Tech program from 1976 through 1978 in Tulsa Oklahoma and have been in the industry ever since. I feel very strong that this is needed in our area. I know we have a lack of skilled workers in the manufacturing industry and these graduates are very employable.

Thank you for your consideration of the NWKTC proposal for the Mechanical Engineering Technology Program.

Sincerely,

Sam Nicholson CEO  
785-877-5381  
15277 W Washington Rd.  
Norton KS 67654  
sam@miltechmachine.net



**Goodland Office**  
111 W. 12<sup>th</sup> Street  
Goodland, KS 67735  
P: (785) 259-3372  
E: awolfe@driggsdesign.com

04/07/2022

Director of Workforce Development

Kansas Board of Regents

1000 SW Jackson St., Suite 520

Topeka, KS. 66612-1368

RE: Letter of Support for new Mechanical Engineering Tech Program at NWKTC

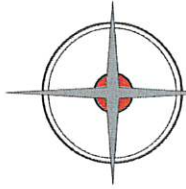
Dear Director of Workforce Development:

It is my pleasure to provide this letter of support for the proposed Mechanical Engineering Technology Program at Northwest Kansas Technical College (NWKTC) in Goodland, KS. I represent Driggs Design Group, PA and am currently serving on the Advisory Board.

While there is not currently any labor market data for this occupation for the Northwest Kansas region, it is important to note that jobs are currently opening -and growing – throughout the state of Kansas and across the country. The CAD/CAM and advanced manufacturing technology skills and knowledge students gain through this program will ensure their employability upon graduation.

In order to fulfill this need, I am willing to contribute in the following ways:

- ◇ Continue to serve on the Advisory Board, meeting once per semester
- ◇ Offer expertise and feedback regarding the curriculum, facilities, training and equipment
- ◇ Serve as a guest speaker in class to discuss current issues or professional development with the students
- ◇ Give highest consideration for employment to NWKTC graduates



**DRIGGS DESIGN GROUP, PA**

**Surveying Engineering Planning**

**Goodland Office**

111 W. 12<sup>th</sup> Street

Goodland, KS 67735

P: (785) 259-3372

E: [awolfe@driggsdesign.com](mailto:awolfe@driggsdesign.com)

In summary, it is my professional opinion that this new program will provide the training and opportunities for employment that will enhance our local community.

Thank you for your consideration of the NWKTC proposal for the Mechanical Engineering Technology Program.

Sincerely,

Aaron Wolfe

111 W. 12<sup>th</sup> Street, Goodland, KS 67735

[awolfe@driggsdesign.com](mailto:awolfe@driggsdesign.com)

(785) 259-3372