New Program Request Form

CA1

General Information

Institution submitting proposal	Manhattan Area Technical College
Name, title, phone, and email of person submitting the application (*contact person for the approval process)*	Morgen Stoecklein, Registrar 785-320-4544 registrar@mahattantech.edu
Identify the person responsible for oversight of the proposed program	Nathan Roberts – Dean of Academic Affairs
Title of proposed program	Industrial Engineering Technology
Proposed suggested Classification of Instructional Program (CIP) Code	15.0613
CIP code description	Manufacturing Engineering Technology/Technician.
Standard Occupation Code (SOC) associated to the proposed program	17-3026
SOC description	Industrial Engineering Technicians
Number of credits for the degree and all certificates requested	Associates of Applied Science – 61 credit hours Certificate B – 37 credit hours
Proposed Date of Initiation	Fall 2022
Specialty program accrediting agency	n/a
Industry certification	· Fundamentals of Industry 4.0 (NC3) · Fundamentals of Electricity AC & DC (NC3) · Fundamentals Fluid Power- Pneumatics and Hydraulics and Sensors Technology (NC3) · Introduction to Mechatronics Systems (NC3) · Applied Fluid Power - Maintenance & Troubleshooting (NC3) · PLC Fundamentals & Applied, Smart Sensors (NC3) · Fundamentals of Mechanical Systems (NC3) · Applied Mechanical Systems (NC3) · Industrial motor controls (lvl2) (NC3) · Data Analytics (Trane), Blue print reading. · Applied Industry 4.0 Requires MPS 403 And Applied Product ID Fundamentals (NC3) · OSHA 30 *More information on credentials are located on page 10

Signature of College Official_____ Date 4.20.2022

Signature of KBOR Official_____ Date_____

Narrative

Program Rationale

We are creating education and training opportunities that apply to multiple technical education programs with skills targeting industrial engineering technology—the technician who helps companies bridge the gap with IT integration for Industry 4.0.

Manhattan Area Technical College is a signed partner with Kansas Local Area II and the Workforce Innovation and Opportunity Act (WIOA). With that agreement, MATC collaborates with the WIOA partners, especially the regional KansasWorks agency on job fairs (co-host in recent years), financial support from WIOA to assist students, promotion of testing and credential/licensure verification through the MATC Testing Center including WorkKeys for Career Readiness Certification and connecting persons to the Adult Learning Center (GED and ESL services).

MATC is an active partner in regional economic development in its service area. The President is an ex officio member of the Manhattan Chamber of Commerce, the Greater Manhattan Economic Partnership, and participates in meetings of the Junction City and Wamego Chambers of Commerce as well as the Dean of Academic Affairs being Vice Chair of the Manhattan Workforce Development Committee. The addition of this project and its capacity to strengthen MATC's education of mechatronics for advanced manufacturing, particularly in the program areas previously mentioned, will be shared with members of these groups.

With this project, MATC has acquired mobile video/audio equipment so that skills lab demonstrations of the mechatronics applications and with additional video/audio connectivity access in our targeted programs, could be provided to any other technical college or other requesting organization (other educational institutions, business and industry, etc.) via Zoom (or a similar method). Six mechatronics lab devices were purchased with project resources designed for demonstrating and teaching basic mechatronic applications at secondary schools, along with the video/audio capability.

Emphasis initially will be with agencies such as KansasWorks to ensure that persons in the region who have been affected by the pandemic are made aware of the re-skilling/up-skilling opportunity through this project. The added benefit of the project and immediate impact will be the short-course and course presentation components offered to current students in existing related programs, reinforcing strength of their knowledge, skills, and ability to share that with employers via resumes, interviews, and related presentations and interactions. The immediate third impact component will be sharing the project with the program advisory members (largely employers) of our technical programs.

Program Description

<u>Catalog Description</u>

Industrial Engineering Technology provides instruction of theory as well as hands-on application of skills required for advanced manufacturing, industrial automation, and mechanical troubleshooting. Some areas include safety, electrical, mechanical, hydraulics, pneumatics, robotics, PLC (programmable logic controller) programming, and industrial controls. These skills prepare students to be competitive in the modern industrial and maintenance fields.

<u>Program Objectives</u>

- Provide students with industry recognized certifications in the field of industrial engineering.
- Educate students in fundamental concepts of electrical, hydraulic, and pneumatic operation and control.
- Enhance student understanding of unit operation to include logic and automation control.
- Prepare students for advanced manufacturing process control, automation, logistics and data analytics.

Admission Requirements

Program Seeking Students

Students who wish to attend a Manhattan Tech academic program must submit the materials below to beconsidered for admission:

1. Complete college application and application fee (found online at manhattantech.edu)
2. Official transcript verifying graduation and final grades from an accredited high school, registeredhome school, or a General Education Development (GED®) diploma.
3. ACT scores within the last three years, if available.
4. Meet college placement assessment criteria, unless exempt from assessment based on ACT scores (Refer to Entrance Assessment section for additional details).

High School/Concurrent Enrollment/Dual Credit Students

Students may receive concurrent high school/college credit, which can be applied toward a Manhattan Tech technical certificate/degree following the student's high school graduation. (Part-time enrollmentswill be considered if program space is available.)

Students interested in enrolling should refer to www.manhattantech.edu/concurrent for more informationand consult with their guidance counselor to determine course interest and eligibility.

Admission/Enrollment Guidelines for Concurrent Credit/Dual Credit for High School Students:

- Students must be classified as a sophomore, junior, or senior in high school.
- Students must have a cumulative GPA of 2.5 or higher.
- Students must take the ACCUPLACER or show qualifying ACT scores to enroll in English CompositionI and/or College Algebra. To schedule a placement test, visit www.manhattantech.edu/proctor
    - Students are required to attend an enrollment session at their respective high school and submit their completed Concurrent Enrollment Form/Parent Financial Agreement. Students should checkwith their guidance counselor or the Manhattan Tech website for specific dates/deadlines, enrollment forms, and payment information.

Please note: these guidelines also apply to homeschooled students receiving dual credit.

High school students wishing to enroll in courses held on campus at Manhattan Tech or online who are notobtaining Dual Credit will follow standard entrance specifications. Refer to General Admission Requirements for those provisions.

Graduation Requirements

Students who intend to graduate with a technical Certificate and/or Associate Applied Science

degree must complete the following requirements to graduate and/or participate in commencement exercises:

- Submit the Intent to Graduate form (available on MATC Online) and $25 fee.
- Satisfactorily complete all course work for technical certificate/degree.
- Achieve a cumulative GPA of 2.0 or higher.
- Have no more than 6 credit hours of course requirements remaining to complete theCertificate/Degree.
- Fulfill all financial obligations to Manhattan Tech as well as Financial Counseling, if applicable.

Demand for the Program

The service area of Manhattan Area Technical College (MATC) has significant needs addressing and related to Advanced Manufacturing/Industry 4.0 and Information Technologies.

Regional employers need more persons trained for essential jobs in construction trades, climate and environmental control (HVAC), welding, and electric power and distribution (EPD), and related Industry 4.0 applications of these trade skills with information technology (IT) and critical environments technology (CET). The focused need to help persons acquire skills in mechatronic-related applications (IT integration skills) as applied to a variety of programs and multiple high-demand occupational areas enables this program to provide a value-added employee into the workforce.

This goal is reinforced by the Kansas Department of Labor occupational data, shown below.

- Occupational growth: +3.4% over ten years
- Estimated annual median wages: 50,670
- Typical education level needed for entry: Associates Degree

When MATC participated in the local comprehensive needs assessment required under the Strengthening Career Technical Education for the 21st Century Act (Perkins V) project through the Kansas Board of Regents, KansasWorks/WIOA, and the Kansas State Department of Education for our area, several related occupational areas met the high demand condition (per data from the Kansas Department of Labor):

a) Maintenance/Repair Workers and Supervisors
b) Carpenters and Construction Laborers
c) Welders
d) Supervisors of Mechanics, Installers, and Repairs
e) HVAC
f) Industrial Maintenance Mechanics
g) Electricians
h) Electronic Technology
i) Building Technology
j) Precision Production, including Manufacturing and Machine Technology

The last three areas alone have had only 2 concentrators (students enrolled in related majors) while there is a total of more than 3,000 annual openings in these combined occupational areas. The shortage of workers with skills in these areas holds back economic activity for the region. The FY23-34

Manhattan Area Needs Assessment also identified Advanced Manufacturing as a pathway needed in the region. MATC's job placement rate for graduates is over 90% annually.

MATC has a robust presence with Excel in CTE, particularly with the high schools of Manhattan, Rock Creek, and Wamego. In a non-COVID year of interrupted secondary school, MATC enrolls more than 400 students in early college courses, and in Excel in CTE the course pass rate is over 90%.

With the addition of the mechatronics lab, courses, and applications of several of those courses to existing programs, we anticipate seeing an increase of secondary students taking one or more of the mechatronics-related courses by 40%, with an estimated 100 secondary students participating in a course presentation or complete course due to this project. We believe there will be an increase of 5-10% per academic year in secondary student participation through the 3 academic years after 2021-2022.

MATC and Manhattan-Ogden USD 383 are developing a college and career center project that should be implemented by the 2023-2024 school year, and MATC has opened an off-campus center in Wamego during the 2020-2021 academic year to enhance access for early college for the school districts of Wamego, Rock Creek, Waubonsee, and St. Mary's, in addition to the adult population of that area.

There are currently no business/industry partnerships specific to the Industrial Engineering Technology program. With the recent announcement of Scorpion Biological Services building a facility and employing 500 in the Manhattan area, the need for skilled labor over the next 5-7 years will increase significantly in this field.

Letters of Support

Letters of support from local industry are provided in Appendix A from the following industry contacts. The following individuals also sit on the BILT team for Industrial Engineering Technology. The BILT model focuses on getting business and industry to co-lead the team, not just advise. These teams meet regularly and feel ownership of the program.

- Todd Helmut, Building Controls Supervisor – Five Star Mechanical
- Steve Spade, Business Development – KBS Constructors
- Keven Ward, Strategic Programs Consultant – Trane Technologies
- Cade Dover, Senior Manager, Operations - Evergy

Duplication of Existing Programs

Name of Institution	Program Title	CIP Code	Award	Total # Declared Majors	Total # Grads	Total #Grads Exited& Employed	Med Wage of Grads Employed
Butler Community College	Industrial Technology/Technician	15.0612	Assoc/Cert	24	0	0	0
Flint Hills Technical College	Manufacturing Engineering Technology/Technician	15.0613	Assoc/Cert	18	5	5	$46,733
Hutchinson Community College	Manufacturing Engineering Technology/Technician	15.0613	Assoc/Cert	41	5	0	0
Neosho County Community College	Industrial Technology/Technician	15.0612	Assoc/Cert	21	0	0	0

Wichita State University Technical College has also implemented a new program under the same CIP code, but no K-TIP data is currently available.

Utilizing the Higher Education Advanced Manufacturing & Information Technology Equipment grant (Appendix B), Manhattan Tech will be the first institution in Kansas to provide full FESTO based instruction all the way through their Industry 4.0 certification.

FESTO is a manufacturer of factory automation equipment and software, with a Didactic branch. Through FESTO Didactic, Manhattan Tech was supplied with the curriculum and learning environment needed to provide training all the way through the Industry 4.0 Certification. Partnering with NC3 to offer the certifications, FESTO has designed a rigorous curriculum of which Manhattan Tech is the first full adapter in the state of Kansas. While other institutions may utilize FESTO as *supplemental* curriculum, Manhattan Tech will be utilizing the *full* curriculum for IET, rendering collaboration unviable.

Program Information

Course Prefix/ #	Course Title	SCH	Prereq.
IET 100	**OSHA 30 General Industry**	2	None
	The OSHA 30 training program is intended training for supervisors and employees alike. The program increases trainee knowledge about workplace hazards, their rights as employees and their contribution to the workforce.		
IET 101	**Fundamentals of Electricity AC/DC**	3	None
	Decrease production downtime, improve efficiency and increase output – All hinges on understand electricity and how to work with it safely. These courses have been specifically developed to give students the knowledge and skills required to enable them to work safely and effectively with electricity. The lab components of the training offer the student the opportunity to build, test and troubleshoot AC/DC circuits and examine the operating voltages and currents related to proper circuit operation. Technicians will use various instruments to make circuit measurements and calculations.		
IET 102	**Fundamentals of Fluid Power I**	3	None
	This pneumatic training course covers the use of compressed air for pneumatic control and as a signaling medium. A complete overview is given, covering compressors, storage, dryers and distribution as well as the design, construction and operation of a range of actuators, valves and ancillary equipment. The relevant ISO symbols are introduced and included in the circuit diagrams. This course ensures a sound competence the safe operation and maintenance of one of the most common automation elements in industry.		
IET 103	**Applied Fluid Power**	3	IET 100 or OSHA 30 and IET 102 with a grade of "C" or higher.
	This course adds on to the Fundamentals of Fluid Power course in Level I. Students will learn how to read and interpret electro-pneumatics circuits and dive deeper into how to maintain, troubleshoot, and repair pneumatic systems. This extends your knowledge of complex pneumatic systems and improves your troubleshooting skills. Practical exercises on training equipment for setup, commissioning, troubleshooting, and fault elimination facilitate the transfer of knowledge to real world industrial applications.		
IET 104	**Mechatronics**	3	None
	As an Introduction to Mechatronics, this course aims to relay foundational information and develop hands-on skills in the areas of Mechanical, Electrical, and Control Technology. Students will develop competencies to operate and maintain pneumatics, electricity, sensors, actuators, and controls. Utilizing real-world automation devices students will also gain additional skills in STEM (Science, Technology, Engineering, and Math). These skills that are at the core of automation, production, and manufacturing are in high demand. At the conclusion of the course, students will be prepared to enter into high levels of Mechatronics and Industry 4.0 training, as well as filling much needed career positions such as certified production technicians and/or operators.		
IET 105	**Mechanical Drive I**	3	IET 100 or OHSA 30.
	The driving force behind most industrial applications is Mechanical Systems. Gears, drives, bearings, pulleys, and more are found in nearly everything that moves. The Mechanical Systems course covers the installation, use, maintenance, and troubleshooting of mechanical drive components and systems. The curriculum is divided into various topics which deal with the components encountered in industry. The learning is based on practical,		

	hands-on tasks to build knowledge in operating and maintaining these vital systems.		
IET 121	**Basic Controls**	5	IET 101 with a grade of "C" or higher.
	Working with a Programmable Logic Controller (PLC) efficiently requires a strong familiarity with the specifics of the programming environment and languages. Students will work with high-end products from Rockwell Automation/Allen Bradley. This training program allows students to acquire hands-on experience with industrial control equipment. Realistic examples are used to motivate students to gain the skills needed to work with PLC controlled systems. This course will introduce the participant to various sensors common in the industrial automation field. Hands-on experience plays a central role in teaching the fundamentals of sensors. Examples are used to demonstrate the general operational principles of different sensors. Special attention is paid to the selection of the right sensor, its connection, correct settings, and functional checking. Students will expand their knowledge into programming PLCs, incorporate Human Machine Interface (HMI) programming and modifying programs to include changes in the applications.		
IET 210	**Mechanical Drive 2**	3	IET 105 Mechanical Drive 1 with a grade of "C" or higher.
	The driving force behind most industrial applications is Mechanical Systems. Gears, drives, bearings, pulleys, and more are found in nearly everything that moves. The Mechanical Systems course covers the installation, use, maintenance, and troubleshooting of mechanical drive components and systems. The curriculum is divided into various topics which deal with the components encountered in industry. The learning is based on practical, hands-on tasks to build knowledge in operating and maintaining these vital systems.		
IET 220	**Industrial Motor Controls**	4	IET 100 or OSHA 30 and IET 121 Basic Controls with a grade of "C" or higher
	Participants in motor controls will understand the application, operational characteristics and advantages of variable speed motors. They will understand air flow performance between PSC, Constant Torque, and Variable Speed motors. Students will troubleshoot procedures for each type of motor and configure each motor type within a series of different indoor units to deliver proper air flow and obtain system performance.		
IET 230	**Process Logistics and Advanced Manufacturing**	3	None.
	As an introduction to Industry 4.0, this course aims to relay foundational information utilizing data analytics. The course will introduce the various industrial revolutions and how Industry 4.0, the internet of things, smart factories, and cyber-physical systems are a disruption to the manufacturing industry and discusses the impact and implications that these advancements introduce.		
IET 240	**Applied Industry 4.0**	5	IET 100 or OSHA 30, IET 102, 103, 104, 210, and 220 with a grade of "C" or higher.
	This course will give participants the ability to explore and understand Radio Frequency Identification (RFID) utilizing Tags, Readers, and Writers as well as Vision Systems that utilize QR Coders/Barcodes. All of these elements provide critical data that modern industry relies on. Building upon the base knowledge gained in the Level I Industry 4.0 Course, students will delve deeper into the Industrial Internet of Things (IIOT) as it applies to modern production systems. Much of the focus will be on how Manufacturing Execution Systems (MES) sends and receives data from the production process. Participants will work with the MES and learn how to		

	process, utilize, and protect critical data. The students will work with real production scenarios and real-world industrial equipment to incorporate Human Machine Interface (HMI) with the MES and equipment.		
BUS 185	**Business Ethics & Human Relations**	3	None
	This course introduces contemporary and controversial ethical issues facing the business community. Topics include moral reasoning, moral dilemmas, law and morality, equity, justice and fairness, ethical standards, and moral development. The course emphasizes employability skills such as communication, work habits and attitudes, ethics, conflict management, motivation and problem solving, self-concept, perception, self-awareness, personality, values and communications.		
BUS 255	**Principles of Management**	3	None
	The course teaches the basic components of management: planning, organizing, leading, and controlling. This course will focus on the fundamentals of management as they are practiced today.		
CIS 116	**Spreadsheet Management**	2	CIS100 Software Applications with a grade of C or higher
	This course covers intermediate-level concepts of spreadsheet software. Using typical business scenarios, the student will perform "what-if" analyses, manage data in worksheets with tables and database functions, and use multiple worksheets to build consolidated statements. The applications and principles learned in this course are relevant to any career field.		
CIS 126	**Database Management**	2	CIS100 Software Applications with a grade of C or higher
	Database management includes designing and creating a database; adding, changing and deleting records; creating forms and reports, including custom forms and reports; changing structures; building relationships and lookup fields; using query wizards and advanced query techniques; macros.		
CRT 100	**Principles of Information Assurance**	1	None
	Principles of Information Assurance is designed to teach the principles and practices that all computer users need to keep themselves safe, both at work and at home. By presenting best practices along with a small amount of theory, students are taught both what to do and why to do it. Topics covered include how to secure both clean and corrupted systems, protecting your personal data, securing simple computer networks, and safe Internet usage.		
CRT 126	**Advanced Operating Systems and PC Hardware**	5	None
	This course covers personal computer operating systems and hardware to enforce skills related to the CompTIA A+ certification exam. Operating system topics include installation, management, functionality, security, configuration, and virtualization, which are covered primarily within Microsoft Windows. Hardware topics cover CPUs, memory, motherboards, storage and I/O devices, power supplies, home networking, and computer safety.		
COM 105	**English Composition I – KRSN ENG1010**	3	Meet placement guidelines
	English Composition I is an introduction to expository writing emphasizing expression of ideas, structure, organization, development, and grammatical correctness. The course offers practice in researching, revising, and editing.		
COM 110	**Technical Writing**	3	Meet placement guidelines
	This course is an introduction to professional and technical writing used in the workplace. The class offers practice in document design and editing. The types of correspondence include memos, letters, e-mail, reports, and instructional manuals. The course will focus on clarity, conciseness, document design, organization, audience recognition, audience involvement, and accuracy. Collaboration and teamwork is stressed. Presentations will be practiced during class.		
MAT 109	**Technical Mathematics II**	3	Meet placement guidelines
	This is an algebra-based mathematics course that focuses on technical applications. Topics include graphing linear equations, systems of linear		

	equations, polynomials, factoring polynomials, quadratic equations, right triangle trigonometry and trigonometry with any angle. This course is designed to provide students with the critical thinking needed for solving complex technical problems.		
MAT 110	**Intermediate Algebra**	3	Meet placement guidelines
	This course is designed for students who have only one year of high school algebra, are inadequately prepared for College Algebra, or score in the prescribed range on the ASSET/COMPASS exams. Topics covered will include Number Systems, Linear Equations and Inequalities, Lines, Systems of Linear Equations and Inequalities, Polynomials, Exponents, Rational Expressions and Quadratic Equations.		

Accreditation

No accreditation is available at this time for the Industrial Engineering Technologies program. Certifications are provided through the National Coalition of Certification Centers (NC3).

The table below is a map from the courses in the IET program to each of the 16 certifications offered. Students in both the AAS and Certificate program will earn all 16 certifications, as all of the technical courses listed are required for both pathways.

Course	Course Title	SCH	NC3 Certifications (16)
IET 100	OSHA 30 General Industry	2	OSHA 30
IET 101	Fundamentals of Electricity AC/DC	3	Fundamentals of electricity AC & DC
IET 102	Fundamentals of Fluid Power I	3	Fundamentals Fluid Power- Pneumatics and Hydraulics and Sensors Technology
IET 103	Applied Fluid Power	3	Applied Fluid Power - Maintenance & Troubleshooting
IET 104	Mechatronics	3	Introduction to Mechatronics Systems
IET 105	Mechanical Drive 1	3	Fundamentals of Mechanical Systems
IET 121	Basic Controls	5	PLC Fundamentals & Applied, Smart Sensors
IET 210	Mechanical Drive 2	3	Applied Mechanical Systems
IET 220	Industrial Motor Controls	4	Industrial motor controls (lvl2)
IET 230	Process Logistics and Advanced Manufacturing	3	Data Analytics (Trane), Blue print reading, Fundamentals of Industry 4.0
IET 240	Applied Industry 4.0	5	Applied Industry 4.0 Requires MPS 403 And Applied Product ID Fundamentals

Multiple Options

Students entering the IET Program will have two option, either an A.A.S. degree in Industrial Engineering Technologies or a Certificate B in Industrial Engineering Technologies. Semester-by-semester detail is provided below. The following points regard uniqueness of each alternative:

- Courses required by the A.A.S. degree but not required for the Certificate B are as follows:
  - General Education (an additional 15 SCH)
  - Technical Electives (9 SCH)
- All courses required for the Certificate B are also required for the A.A.S. degree.

A.A.S Degree in Industrial Engineering Technologies

61 Credit Hours

37 Technical Specialty Credits
15 General Education Credits
9 Technical Elective Credits

Fall Semester – Year 1		
IET 100	OSHA 30 General Industry (CET)	2 SCH
IET 101	Fundamentals of Electricity AC/DC	3 SCH
IET 102	Fundamentals of Fluid Power I	3 SCH
IET 104	Mechatronics I	3 SCH
COM 105 or 110	English Composition I or Technical Writing	3 SCH
	Total:	**14 SCH**
Spring Semester – Year 1		
IET 103	Fluid Power II	3 SCH
IET 121	Basic Control	5 SCH
IET 105	Mechanical Drive I	3 SCH
MAT 110 or 109	Intermediate Algebra or Technical Mathematics II	3 SCH
TECH	Technical Elective	3 SCH
	Total:	**14 SCH**
Fall Semester – Year 2		
IET 210	Mechanical Drive II	3 SCH
IET 220	Industrial Motor Controls	4 SCH
GEN	General Education Elective	3 SCH
TECH	Technical Elective	5 SCH
	Total:	**15 SCH**
Spring Semester – Year 2		
IET 230	Advanced Manufacturing and Process Logistics	3 SCH
IET240	Applied Industry 4.0	5 SCH
GEN	General Education Elective	6 SCH
TECH	Technical Elective	1 SCH
	Total:	**15 SCH**

Certificate B in Industrial Engineering Technologies

37 Technical Specialty Credits

Fall Semester – Year 1		
IET 100	OSHA 30 General Industry (CET)	2 SCH
IET 101	Fundamentals of Electricity AC/DC	3 SCH
IET 102	Fundamentals of Fluid Power I	3 SCH
IET 104	Mechatronics I	3 SCH
	Total:	**11 SCH**
Spring Semester – Year 1		
IET 103	Fluid Power II	3 SCH
IET 121	Basic Control	5 SCH
IET 105	Mechanical Drive I	3 SCH
	Total:	**11 SCH**
Fall Semester – Year 2		
IET 210	Mechanical Drive II	3 SCH
IET 220	Industrial Motor Controls	4 SCH
	Total:	**7 SCH**
Spring Semester – Year 2		
IET 230	Advanced Manufacturing and Process Logistics	3 SCH
IET240	Applied Industry 4.0	5 SCH
	Total:	**8 SCH**

Faculty

Credentials for teaching in the IET Program are the same as for those who are employed for any position as a faculty member, including education, training, and/or industry experience in the topic areas taught. The instructor will hold a degree one level higher than the program degree when possible, or be willing to obtain said degree within a prescribed time period. They must also be NC3 FESTO Industry 4.0 certified. The instructor must possess or be eligible to obtain certification commensurate with those required by the industry to perform duties at or above the level taught within the program.

Cost and Funding for Proposed Program

- Provide detail on **CA-1a form** (Appendix C)
- Excel in CTE fee details on the **CA-1b form** (Appendix D)
- If the program is requesting Perkins funds, provide details on the **CA-1c form** (Appendix E)
- If the program is requesting KS Promise Act eligibility, provide details on the **CA-1d form** (Appendix F)

Budget Narrative

In October of 2020, Manhattan Tech was awarded the Higher Education Advanced Manufacturing & Information Technology Equipment Grant, totaling $366,200. The purpose of the grant was to outfit the Industrial Engineering Technology Lab with Industry 4.0 level FESTO equipment. The equipment requested included a compact Industry 4.0 learning system from FESTO Didactic, software for PLC programs for 6 users, as well as laptops for the lab. After the Higher Education Advanced Manufacturing & Information Technology Equipment Grant have been used, the program will rely on student tuition and fees, Perkins funds (if approved), and donations from the BILT.

MATC is prepared to support the new CET Program in the following areas:

- Advising services. 1 admissions director, 1 vice president of student services, 1 counselor, 2 student services assistants will be available for IET Program advising.
- Laboratory and Instructional Space. MATC was awarded the Higher Education Advanced Manufacturing & Information Technology Equipment Grant ($366,200) that purchased all of the FESTO equipment for the lab.
- Instructional Equipment and Supplies. MATC was awarded the Higher Education Advanced Manufacturing & Information Technology Equipment Grant ($366,200) allowing the college to purchase of equipment to build a new Building Automation Systems laboratory.
- Library. Students have access to MATC's library that has access to several resource databases as well as Kansas State University's library. Through a data management system at MATC, students are able to access library resources via the Internet from wherever they are located**.**

Program Review and Assessment

Faculty and administration review the effectiveness of individual instructional programs on a three-year rotational basis. Such review may lead to recommendations for modifications of practice, changes in contentand courses, and expansion or discontinuance of the program of instruction. Areas of the program that are reviewed specifically include mission, objectives of the program, and learning outcomes; relevance of curriculum; budgetary requirements of the

program; enrollment, graduation, and placement data, including wages; and any other items that are unique to the program being reviewed. New programs are reviewed annually in a modified form and three years after the initial introduction of the program.

See Appendix G for the Program Review document. The program faculty will complete the program review, review findings with their direct supervisor, and present finalized review to the Board of Directors

Program Approval at the Institution Level

Program Advisory Committee. The IET Program at MATC adopted the term Business and Industry Leadership Team (BILT) to describe its PAC, based on NSF suggestions for emphasizing a leadership role versus simply advisory. A list of BILT members who have participated in update and planning meetings and/or other supportis attached in the Appendix. The minutes of the meeting at the full curriculum was approved by the BILT on December 1, 2021 and March 9, 2022 are in Appendix H.

MATC Curriculum Committee. The MATC Curriculum Committee approved the course outlines for all new IET Courses at two meetings: May 13, 2022 & January 14, 2022. The program was approved at the meeting on March 25, 2022. Minutes provided in Appendix I.

MATC Board Members. The MATC governing board approved the curriculum and new program at the meeting on March 29, 2022. Minutes provided in Appendix J.

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

Dear Dr. Genandt,

We are pleased to provide this letter of support for the Manhattan Area Technical College in your pursuit to build an important and much needed education curriculum focused on Industrial Engineering Technologies. The curriculum outline, course descriptions, and strategic vision for growth that you present are aligned with many of our workforce needs at Five Star Mechanical.

As a growing building controls and automation company, we feel this course of study combined with the CET program that MATC provides fills a large education gap in the automation technologies field.

In our industry of HVAC controls, starting salaries for graduates with these credentials can range between $45,000 and $52,000. We anticipate hiring around four employees for our company with such skills over the next three years, and we envision needing ongoing training on IET topics for one to two employees each year.

Let us know how else we might help.

Best regards,

Todd Helmut

Five Star Mechanical

RE: MATC Letter of Industrial Engineering Technologies

Todd Helmut <thelmut@FiveStarKS.com>

Mon 4/25/2022 9:18 AM

To: Mark Miller <markmiller@manhattantech.edu>;Kevin Ward (Keven.Ward@Trane.com) <Keven.Ward@Trane.com>;SteveSpade@kbsci.com <SteveSpade@kbsci.com>

Cc: Casey Field <CaseyField@manhattantech.edu>

Thanks for the Email Mark.

Yes, I support the IET program and am a vo If you need anything else, please don't hesitate to reach out.

Thanks,

Todd Helmut
Controls Dept. Manager
Five Star Mechanical
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thelmut@fivestarmechanicalinc.com
www.fivestarmechanicalinc.com
www.reliablecontrols.com
Reliable Controls Authorized Dealer

From: Mark Miller <markmiller@manhattantech.edu>
Sent: Monday, April 25, 2022 9:05 AM
To: Kevin Ward (Keven.Ward@Trane.com) <Keven.Ward@Trane.com>; Todd Helmut <thelmut@FiveStarKS.com>; SteveSpade@kbsci.com
Cc: Casey Field <CaseyField@manhattantech.edu>
Subject: MATC Letter of Industrial Engineering Technologies
Importance: High

Good morning Gentlemen, I need a favor in regards to your commitment for the IET program we requested a few months back. If you could acknowledge your commitment wit this generic letter or a quick email to me or Casey that you support the IET program we will to able to present evidence of your support to the Kansas Board of Regents for their approval. I understand if this maybe an inconvenience but I need a reply ASAP. Thank you, Mark NOTICE TO RECIPIENT: The information contained in this electronic mail message and in all attachments hereto are confidential, privileged and/or proprietary and are intended for the exclusive use of the addressee(s). If you are not an intended addressee of this message, your interception, copying, distribution, disclosure or other use of this message, any attachment or the information contained therein is strictly prohibited. If you received this message and are not an addressee hereof, immediately notify the sender by e-mail and destroy every electronic, paper and other copy of this message and all attachments hereto and every digest or other summary of the information contained herein or in any attachment. All e-mail sent to this address will be received through the Manhattan Area Technical College e-mail system and is subject to archiving and review by someone other than the recipient.

KBS CONSTRUCTORS

December 17, 2021

Dr. James Genandt
President / CEO Manhattan Area Technical College
3136 Dickens Ave.
Manhattan, KS 66503

Dr. Genandt,
KBS Constructors is pleased to provide this letter of support for the Manhattan Area Technical College (MATC) in your pursuit to provide an important and much needed education curriculum focused on Industrial Engineering Technologies. With offices in Manhattan and Topeka, KBS Constructors has served clients since 1989 as a commercial general contractor . During that time we have worked with many clients in industry and manufacturing..

Though our company does not specifically employ staff with this educational background, this program will definitely benefit many of our clients such as Hill's Pet Nutrition, Michelin, CenturyLink, and Burlington Northern Santa Fe. To remain competitive and profitable, these companies are required to incorporate and maintain new technology related platforms. Their needs for trained and credentialed support staff are increasingly important to their operations and success.

Additionally, we support development of this new program because the comprehensive curriculum, course descriptions, and strategic vision for growth that you present are aligned with the workforce needs in various types of industries. The reputation of MATC, providing programs that support current and future work force needs for our region, will ensure that these graduates will be productive from the very beginning of their employment.

Please let us know how else we might help.

Best regards,

Steve Spade
Business Development

KNOWLEDGE BEYOND STRUCTURES

Re: MATC Letter of Industrial Engineering Technologies

Steve Spade <SteveSpade@kbsci.com>
Mon 4/25/2022 9:24 AM

To: Mark Miller <markmiller@manhattantech.edu>

Cc: Casey Field <CaseyField@manhattantech.edu>

Mark,
KBS Constructors, as a voting Board member of the BILT Team oversight committee, fully supports Manhattan Area Technical College's IET program and mission.

Please let me know if any additional information is needed.

Sincerely,
Steve Spade

KBS CONSTRUCTORS

STEVE SPADE
Business Development

SteveSpade@kbsci.com
O: 785-266-4222 | C: 785-249-6408
kbsci.com

From: Mark Miller <markmiller@manhattantech.edu>
Date: Monday, April 25, 2022 at 9:05 AM
To: "Kevin Ward (Keven.Ward@Trane.com)" <Keven.Ward@Trane.com>, Todd Helmut <thelmut@FiveStarKS.com>, Steve Spade <SteveSpade@kbsci.com>
Cc: Casey Field <CaseyField@manhattantech.edu>
Subject: MATC Letter of Industrial Engineering Technologies

Good morning Gentlemen, I need a favor in regards to your commitment for the IET program we requested a few months back. If you could acknowledge your commitment wit this generic letter or a quick email to me or Casey that you support the IET program we will to able to present evidence of your support to the Kansas Board of Regents for their approval. I understand if this maybe an inconvenience but I need a reply ASAP. Thank you, Mark
NOTICE TO RECIPIENT: The information contained in this electronic mail message and in all attachments hereto are confidential, privileged and/or proprietary and are intended for the exclusive use of the addressee(s). If you are not an intended addressee of this message, your interception, copying, distribution, disclosure or other use of this message, any attachment or the information contained therein is strictly prohibited. If you received this message and are not an addressee hereof, immediately notify the sender by e-mail and destroy every electronic, paper and other copy of this message and all attachments hereto and every digest or other summary of the information contained herein or in any attachment. All e-mail sent to this address will be received through the Manhattan Area Technical College e-mail system and is subject to archiving and review by someone other than the recipient.

March 30, 2021

Dr. James Genandt
President/CEO
Manhattan Area Technical College

On behalf of Evergy, we want to lend our support to your effort for the Industrial Engineering Technologies program for Manhattan Area Technical College. Our customers in eastern Kansas and western Missouri will benefit from this future workforce and we plan to support this program by providing input and opportunities for MATC to present information about the program to our employees to help us all succeed.

We appreciate the efforts of MATC to help the region educate a skilled technical workforce.

Sincerely,

Cade Dover
Senior Manager, Operations
Evergy
Cade.Dover@evergy.com

Internal Use Only

March 10, 2022

Dear Dr. Genandt,

On behalf of Trane U.S. Inc., I am pleased to provide this letter of support for Manhattan Area Technical College in your pursuit to build an important and much needed education curriculum focused on Industrial Engineering Technologies. The curriculum outline, course descriptions, and strategic vision for growth that you present are aligned with many of our workforce needs at Trane and others in our industry.

We are particularly enthusiastic about the program's emphasis on the mechanical features of a critical environment, automation, industrial controls, data analytics, and Industry Recognized Certifications.

In our industry of HVAC and Energy Management, starting salaries for graduates with these credentials can range between $24.00 per hour and $33.00 per hour, plus benefits, with about 678 current HVAC job openings across Kansas[1]. We anticipate hiring around eight employees in Kansas for our company with such skills over the next three years, and we envision needing ongoing training on IET topics for about three employees each year.

- US Department of Labor identified the 2020 Median pay for HVAC professionals at $50,590 year or $24.32 per hour.[2]
- US Department of Labor identifies a projected 5% of annual growth in job opportunities; 38,500 job openings are projected each year over the decade as a result of the need to replace workers who transfer to different occupations or exit the workforce
- The US Manufacturing industry employs 13 million people; today the industry still has nearly 500,000 jobs open (Manufacturing Institute)
- If the current conditions continue, by 2030 there could be as many as 2.1 million jobs that go unfilled in manufacturing (Manufacturing Institute)

Additionally, we support development of this new program because it elevates the public perception of CTE and draws more students into the field.

Trane, a business of Trane Technologies, is a $14 billion world leader in creating and sustaining safe, comfortable and energy efficient environments that improve the performance of buildings and homes around the world. At Trane, we recognize a significant need to advance high-demand, high-tech, high-wage workforce training in HVAC, Building Automation Systems (BAS), Data Analytics and energy-related careers.

In our industry the workforce shortage has already reached the crisis stage in Kansas and nationally as well. We share the aging/retiring workforce challenge that is common with all industries; but in our industry there are compounding factors that magnify the ever-increasing need for a skilled workforce. These compounding factors include an aging building stock in need of renewal, aging energy grid, strategic focus on energy and energy efficiency, Industry 4.0 driven cyber-physical systems, the Internet of Things (IoT), cloud-based computing, data analytics and cognitive computing, and Indoor Air Quality resulting in an ever-increasing skills gap and workforce shortage.

Trane continues to make significant investments in STEM and Career and Technical Education in Kansas and nationally, as we share mutual priorities for the development of a highly skilled 21st century workforce with other key stakeholders throughout the country. Our Trane team has demonstrated much of this through our support for KSDE's Kansans CAN School Redesign Project with Trane's *BTU Crew*™ PBL/WBL Energy and Data Analytics programming for middle school and secondary students and our strategic partnership with NC3-National Coalition of Certification Centers for secondary/post-secondary

[1] Job Finder | Careers | CareerOneStop
[2] Occupation Profile for for Heating, Air Conditioning, and Refrigeration Mechanics and Installers | CareerOneStop

students. The Trane/NC3 Climate and Energy Control Technologies labs at Washburn Tech, WSU Tech, and Dodge City Community College are nationally recognized, state-of-the-art training centers providing students with Industry Recognized Certificates (IRCs) in high-demand, high-tech, and high-wage Climate and Energy Control Technologies (HVAC) and other energy-efficiency related career fields.

Trane relies upon and partners with school districts, technical and community colleges and universities to develop and sustain a workforce that can help our business, industry, supply-chain companies, and contractors compete and grow regionally, nationally, and globally.

Kansas citizens and businesses have a well-established track record of innovation, entrepreneurship and success undergirded by hard work. Trane is proud to be a part of that legacy as we want the Kansas economy to flourish for many more generations to come.

Respectfully,

Keven Ward
Strategic Programs Consultant
Keven.Ward@trane.com

Industrial Engineering Technology Program

Ward, Keven <Keven.Ward@trane.com>

Mon 4/25/2022 9:21 AM

To: Mark Miller <markmiller@manhattantech.edu>;Casey Field <CaseyField@manhattantech.edu>;James Genandt <JamesGenandt@manhattantech.edu>

President Genandt,

Good morning.

Please accept this to clarify and reinforce Trane's support for MATC's Industrial Engineering Technology program.

- I will continue to serve on the BILT team to provide input to students, faculty, and the program.
- Trane will continue to provide professional development and industry certifications for instructors
- Trane will continue to advocate for education and workforce systems at the state and national level
- My colleagues and I will serve on advisory committees
- Trane will provide expertise in design of facilities, labs, and equipment needs
- Trane will provide feedback to students through mock interviews
- Trane will assist with program design
- Trane will continue to participate in career fairs for MATC
- Trane will continue to provide guest speakers at MATC programs
- Trane will host facility benchmarking tours for instructors and students

Thank you again for developing the Industrial Engineering Technology program.

Best regards,

Keven Ward
Strategic Programs Consultant
Trane
11211 Lakeview Avenue
Lenexa, KS 66219

913-633-8925 Mobile

Trane Technologies
Keven.Ward@Trane.com

FORTUNE WORLD'S MOST ADMIRED COMPANIES 2021

Higher Education Advanced Manufacturing & Information Technology

Equipment Grants Proposal submitted by Manhattan Area Technical College—Manhattan, KS

1. Name and Location of Applicant: Manhattan Area Technical College, 3136 Dickens Avenue, Manhattan, KS 66503

2. Primary POC: Dr. James Genandt, President/CEO, jamesgenandt@manhattantech.edu, Office Phone: 785-320-4500

3. Primary Service Area: Counties of Riley, Geary, Pottawatomie, Dickinson, Clay, and Marshall

4. MTC's regional and niche industries' economic needs related to Advanced Manufacturing/Industry 4.0 and/or Information Technologies: The service area of Manhattan Area Technical College (MATC) has significant needs addressing and related to Advanced Manufacturing/Industry 4.0 and Information Technologies.

   Regional employers need more persons trained for essential jobs in construction trades, climate and environmental control (HVAC), welding, and Electric Power and Distribution (EPD), and related Industry 4.0 applications of these trade skills with information technology (IT) and critical environments technology (CET). The focused need to help persons acquire skills in mechatronic-related applications (IT integration skills) as applied to a variety of programs and multiple high-demand occupational areas enables this project to provide a value-added employee into the workforce. In essence, we are creating education and training opportunities that apply to multiple technical education programs will skills targeting industrial engineering technology—the technical technician who helps companies bridge the close the gap with IT integration for Industry 4.0. This goal is reinforced by the Kansas Department of Labor occupational data.

   When MATC participated in the local comprehensive needs assessment required under the Strengthening Career Technical Education for the 21st Century Act (Perkins V) project through the Kansas Board of Regents, KansasWorks/WIOA, and the Kansas State Department of Education for our area, several related occupational areas met the high demand condition (per data from the Kansas Department of Labor):

   a. Maintenance/Repair Workers and Supervisors
   b. Carpenters and Construction Laborers
   c. Welders
   d. Supervisors of Mechanics, Installers, and Repairs
   e. HVAC
   f. Industrial Maintenance Mechanics
   g. Electricians

h. Electronic Technology
i. Building Technology
j. Precision Production, including Manufacturing and Machine Technology

The last three areas alone have had only 2 concentrators (students enrolled in related majors) while there is a total of more than 3,000 annual openings in these combined occupational areas. The shortage of workers with skills in these areas holds back economic activity for the region.

We are confident of making a positive impact with this project. MATC's job placement rate for graduates is over 90% annually.

5. How MATC will target key components to reinforce advanced manufacturing skills and credentials, and information technologies to reinforce integration with advanced manufacturing as well as cybersecurity and networking: The technical education programs at MATC that will be used to address these needs include but are not limited to:
    - Air Conditioning & Refrigeration (HVAC), with industry credentials in EPA 608 (refrigerants) and OSHA 10, and aligned with KBOR standards, targeting courses such as Safety, HVAC Fundamentals, Electrical Fundamentals, Controls and Motors, and Design and Blueprint Reading;
    - Construction Technology (CTR), with industry credentials from the National Center for Construction Education and Research (NCCER) in Carpentry I/II and OSHA 30, and aligned with KBOR standards, targeting courses such as Introductory Craft Skills, Carpentry Basics, and Agricultural Structures;
    - Welding, with AWS qualifications testing and OSHA 10, and is aligned with KBOR standards, and targeting courses such as Welding Metallurgy, Blueprint Reading, Cutting Processes, and Fabrication;
    - Electric Power and Distribution (EPD) (one of only two such programs in Kansas), with NOCTI industry assessment and OSHA 10, targeting courses such as Equipment Operation, Transformer Theory and Operation, Underground Distribution, and Fusing and System Controls;
    - Information Network Technology (INT), with multiple industry certifications through the CCNA curriculum, and is aligned with KBOR standards, targeting courses such as Principles of Information Assurance, Advanced Operating Systems and Hardware, UNIX Fundamentals, Operating Systems, Infrastructure Virtualization, Networks and Network Management, Network Security, and Fundamentals of Information Systems Security;
    - Critical Environment Technology (CET), the first program of its kind in the nation designed specifically to train support personnel along the KC Animal Health Corridor, especially in the Manhattan region along with NBAF. The program includes training in biohazard risk reduction, building controls, plumbing and waste neutralization, building automation systems, and more. The development of this program was supported by a grant from the National Science

Foundation. Credentials in this program include OSHA 30, NCCER Industrial Maintenance Electrical and Instrumentation, and NCCET Industrial Maintenance Mechanic. Students/participants completing the biohazard risk reduction course may also be eligible to apply for PPE certification from 3M, another partner with NC3.

- In addition, MATC would incorporate the FESTO Didactic Training Curriculum for Mechatronics Level I, expanding the MATC capacity to target training for Electromechanical Technician, Production Technician, and Industrial Maintenance Technician occupational training and credentialing.
- Each of these programs has options to use courses from the other programs as technical electives to target specific skill development. The addition of the mechatronics component also enhances options for both secondary and college students who may participate and compete in SkillsUSA events at state, regional, and national levels.

6. <u>MATC plan for working with regional workforce organizations and related agencies to target persons who could benefit from this project:</u> Manhattan Area Technical College is a signed partner with Kansas Local Area II and the Workforce Innovation and Opportunity Act (WIOA). With that agreement, MATC collaborates with the WIOA partners, especially the regional KansasWorks agency on job fairs (co-host in recent years), financial support from WIOA to assist students, promotion of testing and credential/licensure verification through the MATC Testing Center including WorkKeys for Career Readiness Certification, connecting persons to the Adult Learning Center (GED and ESL services), as well as providing space for agency personnel to be on campus with IT access for student interaction (when COVID-19 is not an issue) or access via Zoom to work with students, instructors, and staff.

   In addition, MATC is a military-friendly institution with effective interaction with Fort Riley personnel for soldiers and families residing in the area, for soldiers and family transitioning away from military service, and applying military training for academic credit per established agreements with the Kansas Board of Regents. Military persons comprise 10-15% of MATC's annual enrollment on a consistent basis. MATC also works in collaboration with Flint Hills Job Corp for training and education of participants in that program, and with the SAVE Project working with former military personnel transitioning to agriculture-related occupations and enterprises. A copy of agreements with these entities is available upon request.

7. <u>Number of students expected to benefit from the upgraded or expanded program:</u> MATC projects the following student impact from this project:
   a. Spring 2021: A minimum of 50 students will participate in course presentations on mechatronics applications from current program areas of HVAC, Information Networking, Construction Trades, Electric Power and Distribution, Welding, and

Critical Environment Technology. In addition, presentations of the mechatronics applications will be made to program advisory groups of these same programs, and information about the training and education opportunities to agencies such as KansasWorks, Fort Riley, Flint Hills Job Corps, the Greater Manhattan Economic Partnership, and at least four regional school districts.

b. 2021-2022 Academic Year: A minimum of 150 students/presentation participants would participate in course presentations and/or coursework of mechatronics skills in the targeted program areas, and including participants in the MATC Adult Education Program, and the agencies listed in a above. MATC would also be developing an industrial engineering technician certificate due to the addition of the requested equipment and additional curriculum combined with existing courses. We project a minimum of 12 students earning that certificate by July30, 2022. We anticipate growth of at least 10% per academic year in students earning the certificate through 2025-2026.

8. The institution's plan to extend the same program skills into respective secondary schools as related to Excel in CTE (and in our case, ALC): MATC has a robust presence with Excel in CTE, particularly with the high schools of Manhattan, Rock Creek, and Wamego. In a non-COVID year of interrupted secondary school, MATC enrolls more than 400 students in early college courses, and in Excel in CTE the course pass rate is over 90%. Instructors for the MATC college-level courses with the high schools meet the MATC qualifications. With the addition of the mechatronics lab, courses, and applications of several of those courses to existing programs, we anticipate seeing an increase of secondary students taking one or more of the mechatronics-related courses by 40% by the end of the 2021-2022 academic year, with an estimated 100 secondary students participating in a course presentation or complete course due to this project. We believe there will be an increase of 5-10% per academic year in secondary student participation through the 3 academic years after 2021-2022. MATC and Manhattan-Ogden USD 383 are developing a career academy project that should be implemented by the 2023-2024 school year, and MATC is opening an off-campus center in Wamego during the 2020-2021 academic year to enhance access for early college for the school districts of Wamego, Rock Creek, Waubonsee, and St. Mary's, in addition to the adult population of that area.

9. The plan for the college to coordinate efforts to strengthen state capacity for economic development/Industry 4.0: MATC is an active partner in regional economic development in its service area. The President is an ex officio member of the Manhattan Chamber of Commerce, the Greater Manhattan Economic Partnership, and participates in meetings of the Junction City and Wamego Chambers of Commerce. The addition of this project and its capacity to strengthen MATC's education of mechatronics for advanced manufacturing, particularly in the program areas previously mentioned, will be shared with members of these groups. The seven technical colleges, which form the Kansas Association of Technical Colleges, connect monthly (or more often as happened during

the COVID situation from April-August). Due to the COVID situation, and the resources from the CARES Act and SPARK funds, all of the technical colleges have increased their capacity to provide distance learning access. With this project, MATC would acquire mobile video/audio equipment so that skills lab demonstrations of the mechatronics applications and with additional video/audio connectivity access in our targeted programs, could be provided to any other technical college or other requesting organization (other educational institutions, business and industry, etc.) via Zoom (or a similar method). There will also be six mechatronics lab devices purchased with project resources designed for demonstrating and teaching basic mechatronic applications at secondary schools, along with the video/audio capability. The video component would be in high definition including a tracking capability to follow movement of lab demonstrations. Specific equipment information is in the proposed budget section of this proposal. We would actively encourage dissemination information of this project through local, regional, and state economic development agencies and venues to enhance the access to the skills demonstrations.

Emphasis initially will be with agencies such as KansasWorks to ensure that persons in the region who have been affected by the pandemic are made aware of the re-skilling/up-skilling opportunity through this project. The added benefit of the project and immediate impact will be the short-course and course presentation components offered to current students in existing related programs, reinforcing strength of their knowledge, skills, and ability to share that with employers via resumes, interviews, and related presentations and interactions. The immediate third impact component will be sharing the project with the program advisory members (largely employers) of our technical programs during the last quarter of 2020.

10. Project Budget:

Equipment/Related Supplies

Vendor: Innovative Education Systems

Item	Description	Qty	Cost	Total
8092834	D: SC CPLAB STD CFG 6 Stations Industry 4.0 learning system with 4 Application modules. The Cyber-Physical Lab is a professional, compact Industry 4.0 learning system from FESTO Didactic.	1	$353,883.94	$353,883.94
8066478	STEP 7 Trainer Package for 6 users. Interchangeable usage of STEP 7 Professional 2017 (Classic) and STEP 7 Professional TIA-Portal V15, with software for programming/simulating PLC programs for Siemens S7-1500/	2	2,426.13	4,852.26

	1200/300/400 controllers			
556276	Complete MecLab System for Secondary School course/demos. Each system set includes: 1 stacking magazine station, 1 conveyor station, 1 handling station, 1 compressor, USD cables, power supply fluids, CD ROM with documentation, tools, reset & sustainers	5	8,828.64	44,142.20
5526245	MecLab Expansion Set (D:ML-HW-ERW.-SET) Used for additional projects and integration of stations	5	2,005.92	10,029.60
549790	Cable (D:ML-BG-KA-0, 5M-M8-M8-3)	10	45.20	452.00
167122	Connector Cable (D:MP-AN-OFFEN)	15	110.63	1,659.45
	Shipping/handling			527.00
Vendor: CDW-G				
5611249	Lenovo ThinkPad P53s, 15.6", Core i7 8665U, 16 GB RAM, 256 GB-SSD-US	3	1,684.80	5,054.40
4473675	Logitech BRIO 4K Ultra HD Webcam	3	193.99	581.97
5498722	Lenovo ThinkPad T490s-14", Core i& 8565U, 8GB RAM, 256 GB SSD-US	3	1,174.78	3,524.34
2225027	Ergotron Neo-Flex Laptop Cart	3	753.26	2,259.78
5257550	Kramer C-USB3/AAE Series C-USB3/ AAE-10, extension cable, 10ft	3	14.75	44.25
5569114	Hamilton Buhl Octopus tripod	3	16.69	50.07
3661069	Manfrotto Compact Action tripod	3	96.47	289.41
	Electrical Expansion in Lab			5,000.00
	Total Equipment			***$432,350.15***

Professional Development/Training

Vendor: Innovative Education Systems

	Training and set-up Mechatronics Lab			6,850.00

Vendor: NC3	Train the Trainer/FESTO Certifications	2,000.00
	Total Professional Development	***$ 8,850.00***

Marketing

Vendor: Various	Media advertising commercials	10,000.00
	Print materials (posters, mailings, etc.)	10,000.00
	Total Marketing	***$ 20,000.00***
Project Administration by MATC		5,000.00
	Total Proposed Budget	***$466,200.15***

MATC In-Kind Support: Manhattan Area Technical College will provide facility space, classroom furniture, and utilities for the project. Approximate value at local commercial square foot rental rate (2,000 square feet @ $20/square foot) = $40,000. Contribution of instructor/trainer cost = $10,000.

11. Project schedule:

    September-October 2020—The vendors listed for the equipment items have made it clear to MATC that the items will be delivered within 60 days of the orders being placed. Upon the completed contract for the project with the Kansas Department of Commerce, MATC will order the equipment no later than September 28, 2020.

    October-November 2020—Classroom and Lab space has already been identified and is ready to accept the installation of equipment.

    October-December 2020—Persons providing the education and training would receive their professional develop during the last quarter of 2020. Again, this proposal allows MATC to offer FESTO-level Industry 4.0 education emphasizing mechatronics and the accompanying certification (https://www.nc3.net/partner-festo/) through the National Coalition of Certification Centers (NC3), and MATC is a member of NC3 (membership is supported by the Kansas Board of Regents).

    October-December 2020—Marketing and media releases and materials will be developed, purchased and distributed. MATC operates the adult learning center for a 14-county area, so that unit of the College will be distributing information as part of their client process as well as with regional supporting agencies.

Project Update Reports:

- Acquisition of equipment/supplies, targeted programs, contact with agencies, enrollment schedules: October 15, 2020; November 15, 2020; January 5, 2021.
- Enrollment data/student updates within 60 days of the end of each academic term.
- Updates/reports on engagement with advisory groups, presentations, internships, job placements as required.

Instructional Implementation Plan

January-May 2021—Mechatronics concepts and demonstration of applications will be provided to current technical education programs including but not limited to: Welding, HVAC, Construction Trades, Information Networking Technology, Electric Power & Distribution, and Critical Environment Technology. Academic administrators, working with faculty, will develop a Mechatronics certificate options for credit, designed to meet the FESTO/NC3 conditions. Secondary school demonstrations of the MecLab components will be performed to at least two school districts in the MATC service area.

Summer 2021—MATC will invite area secondary instructors from sciences, math, and technical education disciplines for a webinar and/or workshop (depending on COVID) to demonstrate the new technology and applications targeting Excel in CTE enrollment.

Fall 2021—MATC offers courses as technical electives in mechatronics, and at least one secondary school engagement enabling students to begin earning college credit toward the FESTO certification.

MATC sees stable sustainability of the project due to the project design touching several technical education programs that meet regional high demand occupational needs in addition to increased industry-recognized certification.

12. Revenue streams: (KBOR 2020 Technical College Data Book)

Tuition and Fees	$3,009,109
Federal Grants/Contracts	753,453
State/Local Grants/Contracts	636,268
State Appropriations	2,244,129
Other Revenues	268,000

We anticipate additional revenue from offering courses and training with the Industry 4.0 mechatronics skills. Those revenues will help us with maintenance of the equipment and upgrades. We believe there is significant potential to employ a full-time coordinator for an industrial engineering technology program emphasizing the mechatronics applications within three academic years due to enrollment and funding.

13. CARES Act, other funds targeting the program:

MATC has received institutional funding due to the COVID-19 situation:

Riley County CARES Act funding	$ 61,750
KBOR CARES Act/SPARK funding	208,419
Federal CARES Act for Title III Grant	18,476
Federal CARES Act for MATC	369,840

Funds from these sources will help provide cleaning, and related PPE gear and protocols for the mechatronics lab and equipment.

KBOR Fiscal Summary for Proposed Academic Programs

CA-1a Form (2020)

Institution: Manhattan Area Technical College
Proposed Program: Industrial Engineering Technology

IMPLEMENTATION COSTS				
Part I. Anticipated Enrollment		Implementation Year		
Please state how many students/credit hours are expected during the initial year of the program?				
		Full-Time	Part-Time	
A. Headcount:		12	6	
Part II. Initial Budget		Implementation Year		
A. Faculty		Existing:	New:	Funding Source:
Full-time	1	$0	$ 54,600	General Operating Funds
Part-time/Adjunct	0	$0	$0	
		Amount	Funding Source	
B. Equipment required for program		$0	Already purchased with grant	
C. Tools and/or supplies required for the program		$0	Already purchased with grant	
D. Instructional Supplies and Materials		$0	Already purchased with grant	
E. Facility requirements, including facility modifications and/or classroom renovations		$0	Already purchased with grant	
F. Technology and/or Software		$0	Already purchased with grant	
G. Other *(Please identify; add lines as required)*				
Total for Implementation Year		$54,600		

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:		24	12	
Part II. Ongoing Program Costs		First Two Years		
A. Faculty		Existing:	New:	Funding Source:
Full-time	1	$54,600	$0	General Operating Funds
Part-time	0	$0	$0	
		Amount	Funding Source	
B. Equipment required for program		$ 10,000	MATC General/ Donations/ Grant	
C. Tools and/or supplies required for the program		$ 1,000	Student Fees/ Donations	
D. Instructional Supplies and Materials		$ 6,000	Student Fees/ Donations	
E. Facility requirements, including facility modifications and/or classroom renovations		$ 0		
F. Technology and/or Software		$ 2,000	MATC General/ Donations	
G. Other *(Please identify; add lines as required)*		$ 12,000	NC3 Train the Trainer – MATC General/ Grant	
Total for Program Sustainability		$ 85,600		

KBOR Fiscal Summary for Proposed Academic Programs

CA-1a Form (2020)

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

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.*

Institution Name:	
Program Title:	
Program CIP Code:	

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

Fee	***Short Description***	***Amount***
	Excel in CTE Students are not charged fees	

*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***
IET 100	OSHA 30 General Industry	$0.00
IET 101	Fundamentals of Electricity AC/DC	$0.00
IET 102	Fundamentals of Fluid Power I	$0.00
IET 104	Mechatronics I	$0.00

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 program.*

Item	***Short Description***	***Estimated Amount***

Carl D. Perkins Funding Eligibility Request Form

Strengthening Career and Technical Education for the 21st Century Act

CA-1c Form (2022)

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 21st Century Act

CA-1c Form (2022)

Name of Institution	Manhattan Area Technical College
Name, title, phone, and email of person submitting the Perkins Eligibility application *(contact person for the approval process)*	Nathan Roberts, Dean of Academic Affairs 785-320-4589 nathanroberts@manhattantech.edu
Name, title, phone, and email of the Perkins Coordinator	Nathan Roberts, Dean of Academic Affairs 785-320-4589 nathanroberts@manhattantech.edu
Program Name	Industrial Engineering Technology
Program CIP Code	15.0613
Educational award levels and credit hours for the proposed request	Associates of Applied Science – 61 credit hours Certificate C – 46 credit hours
Percentage of tiered credit hours for the educational level of this request	60.7%
Number of concentrators for the educational level	12
Does the program meet program alignment?	No.
Justification for conditional approval: *(this section must reference information found within the Local Needs Assessment)*	Based on findings in the FY23-24 Manhattan Area Needs Assessment, there are 6 openings with a median wage of almost $50,000 for employees. This program offers both the AAS and Certificate to provide training for these job opportunities.
Pursuant to Americans with Disabilities Act, will the proposed program be offered in a location and format which is fully accessible, according to applicable ADA laws? *(Contact Board staff for technical assistance if there are questions regarding accessibility)*	Yes.

Signature of College Official _____ Date 4.20.2022

Signature of KBOR Official _____ Date _____

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

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	Manhattan Area Technical College
Name, title, and email of person responsible for Academic program	Nathan Roberts, Dean of Academic Affairs nathanroberts@manhattantech.edu
Name, title, and email of Financial Aid contact	Laura Weiss-Cook, Director of Financial Aid lauraweisscook@manhattantech.edu

Advanced Manufacturing and Building Trades			
CIP Code	Program Name	Type of Award (AAS, AA, AS, AGS, Certificate)	Scholarship Effective Date (FA21, SP22, SU22)
15.0613	Industrial Engineering Technology	AAS, Cert B	FA22

Signature of College Official_____ Date 4.20.2022

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

MANHATTAN TECH
MANHATTAN AREA TECHNICAL COLLEGE

Program Review Report for AY 21-22

2020-2021 Financials Revenue	
Tuition (credit hours)	
Program/Course Fees	
Institutional Fees	
State Aid	
Total Revenue	
Grant/External Funding	
Perkins Capital Outlay **Total External Funding**	
Expenses	
Teaching Salary & Benefits	
Program/Course Supplies	
Professional Development	
Equipment Purchased	
Other Expenses	
Total Expenses	
Program Contribution to Indirect Costs	
Supplemental Program Information	
MATC Per Credit Hour of Instruction (direct costs only)	
Cost Model Composite Rate (average)	
Total Annual Cost to Students – tuition, lab fees, textbooks, tools, equipment	

Program Data	AY 20-21	AY 19-20	AY 18-19
Student Information			
Number Admitted (met program requirements)			
Male/Female Mix			
Retention/Graduation			
1st to 2nd Semester Retention			
Number of Graduates			
A.A.S.			
Certificate			
Semester Credit Hours Generated			
Total Completed Students			
Total SCH (Omit Gen Ed SCH)			
Follow-Up Information			
No. of Students Available			
No. of Students Placed [1]			
No. Placed in Field			
Average Wage			
Industry Credentials			
Number Attempted			
Number Earned			
Assessments of MATC Core Abilities			
Oral Communication			
Written Communication			
Problem Solving/Critical Thinking			
Quantitative Literacy			

[1] Placed means employed, continuing education, or serving in the military.

Program Review Report for AY 21-22

Program Name	
Does the catalog program description still accurately represent your program to external constituents?	
How does your program meet the mission and vision of MATC?	
Program Accreditation or Certifications	***Discuss the results of the most recent accreditation and plans for addressing any deficiencies or recommendations. Please identify the next accreditation visit.*** ***If program is not accredited, please identify any certification and certification alignments that exist. (i.e. NCCER, AWS, Military alignment, MOS, CCNA, RedHat)***
Full-Time Faculty	List full-time instructors and classes taught
Adjunct Faculty	List adjunct instructors and classes taught
Co-curricular Activities	***Co-curricular refers to activities, programs, and learning experiences that reinforce MATC's mission, values, and complements the formal curriculum. Co-curricular activities support student development outside of the classroom. (i.e. student organizations, internships, attending PAC meetings, and service projects)***
Advisory Committee Involvement	Current members including their title, organization, phone number, email, number of years on committee, contributions to the program (guest speaker, donations, internships, etc.) ***Provide documented evidence of PAC validating program outcomes and recommendations from the PAC related to program needs. (i.e. PAC meeting minutes)***
Gifts in Kind or Donations And new equipment purchases	Name of donor/company Specifically what was donated Value of donation - estimate the value and identify what the college did not have to spend for an equivalent purchase.

Program Review Report for AY 21-22

Certificates and Degrees Awarded	Certificate(s) – name of certificate and number of credit hours A.A.S. degree requirements ***Discuss the data provided related to number of students in program and retention/completion. Provided an analysis regarding the number of students completing the program within 150% of normal time (A.A.S. degree – 3 years; Certificate – 1.5 years).*** ***Discuss employment placement evidence: number of students placed into jobs related to the program of study, student/employer feedback on satisfaction of their preparation from MATC, longevity/advancement of graduates within their program of study and job placement, number of students who were successful with gaining related employment who did not complete their program of study.***
Curriculum Review	***Provide a narrative identifying the significant program changes since last program review***
Program Learning Outcomes	Map course outcomes to program outcomes – provide matrix as an attachment Map KBOR Core Abilities to program/course outcomes
Grade Distribution	Registrar/IR will provide this data; ***provide an analysis of the grade distribution***
Assessment Results	Program and Course MATC Core Abilities assessment results – IR will provide MATC Core Abilities results (Oral Communication, Written Communication, Problem Solving/Critical Thinking, Quantitative Literacy) for the most recent years. End-of-program assessment results Other external assessment results ***Provide narrative discussing what you learned from the assessment data and how you will use the data to make improvements/changes***
Delivery Methods	Describe how you use delivery method to deliver the classes. (LMS, Canvas, Online lectures, lab, face to face, etc.)
Recruiting, Retention, Persistence, and Completion	***Describe the recruiting efforts that you have utilized as well as the efforts that you have implemented to affect retention, persistence, and completion of your students. Why should students pick MATC over other programs?***
Job Outlook – Demand for Program	
Resources Needed	1. To maintain program quality

	2. To advance program quality and value to regional employers

Program Review Report for AY 21-22

S.W.O.T. Analysis – Completed with PAC/BILT and any appropriate external group.

*Internal vs External treats/opportunities, new programs in the area, what makes you different from other programs nearby, etc.

Strengths
Weaknesses
Opportunities
Threats

Analysis of S.W.O.T.
(please provide a short narrative about the SWOT)

Program Review Report for AY 21-22

MANHATTAN TECH
MANHATTAN AREA TECHNICAL COLLEGE

Faculty Credentials & Professional Development

Faculty Name	
Credentials	
Professional Development Activity	
Professional Development Reflection	

CET/IET BILT Meeting

Date: 12/1/2021
Time: 6:05 pm
Location: 307 A

Members Present:

Margaret Juergensmeyer, Kevin Ward, Jim Genandt, Gary Maple, Chelsea Weese, Nathan Roberts, Mark Miller

Members Absent: Steve Spade, Cade Dover, Todd Helmut, Sarah Phillips

Recorder: Chelsea Weese

Agenda Item	*Discussion*	*Action Taken*
Welcome	Dr. Genandt gave updates. • Letters of support are needed for IET. • There is a critical shortage of IT professionals and MATC is currently working with other tech colleges about grants and collaborations. • MATC enrollment is up 10%!	
CET Updates- Introducing Mark Miller	Gary Maple introduced Mark Miller as a new faculty member in CET/IET. Mark is a retiree from Evergy and brings invaluable industry knowledge and experience. He is currently developing content for CET and is very excited to be part of the CET/IET team at MATC.	

ATE Conference Updates

The grant ends July 2022—including the no-cost extension. Sufficient funds are available until the deadline.

The annual ATE Conference was attended virtually. Several documentation pieces were prepared to share with the ATE Connects session—a pdf of highlights of what has been accomplished so far, and a short video about the purpose of CET. Outside contacts were not made during the conference, but the resources are now available to attendees.

BIO 230- Risk Reduction

This course is currently scheduled for the last week of January. It will be taught by Marcey Fickbohm, Chelsea Weese, and Margie Jeurgensmeyer. The course will take place over a three-day period and will cover content such as Risk Assessment, Mechanical Features of Critical Environments, Pathogenic Microbes, and Emergency Management. This course is open to traditional students as well as industry professionals.

Updates with current students enrolled in CET

There is one student currently enrolled in the CET program, Ahren Haffener. He currently has an internship planned and has several job prospects!

IET Program Curriculum

The IET Program will be an AAS degree composed of 61 credit hours. Thirty-seven of those credit hours are specialty credits, 16 of which are NC3 certifications and 9 are tech electives. This program is also expected to be cocurricular with the EPD and CET programs at MATC.

The curriculum of this program needs approved by the BILT in order to send the appropriate documentation to KBOR. Letters of support are also needed to show the need of this innovative program in the area.

	Once the program is approved by KBOR and HLC, financial aid will be available for students.	
	It is anticipated that this program fully launch during the fall 2022 semester, however, letters of support and a vote from the BILT team is necessary before this program can move forward!	Kevin Ward moved to approve the program curriculum. Margie Jeurgensmeyer seconded. All members voted to approve.
Other updates	Gary Maple has given multiple tours recently. This shows that there IS student interest in this area!	
	Mark Miller mentioned that the FESTO equipment is used in the "real world" and provides a "top shelf" education for automation.	
	IET is useful for and applicable to multiple fields and disciplines. The set-up for IET has gone quickly. Grant funds, rooms, equipment, etc. were all acquired within 1 year!	
Adjourn	After visiting with the BILT members it was moved and seconded to end the meeting.	Margie Jeurgensmeyer moved to adjourn, Kevin Ward seconded. Meeting adjourned at 7:15 pm.

Minutes: Curriculum Committee

Date: 1/14/2022

Members Present: Marcey Fickbohm (Chair), Cindy Barnes, Laure Weiss-Cook, Casey Field, Deirdre Greeley, Pamela Imperato, Brian Koch, Gary Maple, Justin Meuli, Sarah Phillips (ex officio), Lauren Rust, Morgen Stoecklein, Christopher Weaver, Blaise Wilson

Time: 10:00 AM

Guests: None

Members Absent: Alex Anderson, Suzanne Duncan

Place: 104A

Recorder: Deirdre Greeley

AGENDA ITEM	DISCUSSION	ACTION TAKEN
Call to order		The meeting was called to order at 1004
Acceptance of Minutes	Minutes from December 3, 2021 meeting reviewed	Motion to accept the 12-3-21 minutes: Casey Second: Gary Motion carried
Old Business		
1. IET 100 New Course Form and Course Outline	Gary Maple presented his new IET Course Forms and Course outlines to the Curriculum Committee today. IET 100 is now an OSHA 30 course only. Prerequisites were changed to "None"	Motion to approve IET 100 course form and course outline with changes: Brian Second: Pamela Motion carried
2. IET 101 Course Change Form and Course Outline- Outcomes and Competencies	Per Sarah, IET 101 Learning Outcomes and Competencies have been rewritten and improved to meet higher education guidelines	Motion to accept IET 101 new Learning Outcomes and Competencies: Brian Second: Morgen Motion carried
3. IET 103 New Course Form and Course Outline	Per Marcey, this course outline will replace the IET 103 course outline that was approved on 5-13-21. The semester offering date was changed to Fall 2022, and prerequisites were changed to CET 100 or OSHA 30 and IET 102	Motion to accept IET 103 new course form and course outline with changes: Casey Second: Brian Motion carried
4. IET 104 New Course Form and Course Outline	Small grammatical changes were made to course description	Motion to accept IET 104 new course form and course outline with changes: Casey Second: Justin Motion carried

AGENDA ITEM	DISCUSSION	ACTION TAKEN
5. IET 105 New Course Form and Course Outline	The word "or" was removed from prerequisites, and small grammatical changes were made	Motion to accept IET 105 new course form and course outline with changes: Brian Second: Justin Motion carried
6. IET 121 New Course Form and Course Outline	Grammatical changes and minor sentence structure changes were made. Verbiage that was geared toward marketing and not toward students was removed from course description.	Motion to accept IET 121 new course form and course outline with changes: Justin Second: Blaise Motion carried
7. IET 210 New Course Form and Course Outline	Small grammatical and word changes were made to course description	Motion to accept IET 210 new course form and course outline with changes: Justin Second: Blaise Motion carried
8. IET 220 New Course Form and Course Outline	Grammatical changes were made to course description	Motion to accept IET 220 new course form and course outline with changes: Justin Second: Morgen Motion carried
9. IET 230 New Course Form and Course Outline	Course Offering was changed to Spring. Target audience was changed to All Students. Gary explained that Industry 4.0 has been added to this course. The course description was updated to remove the marketing verbiage. Small grammatical changes were made to the Learning Outcomes and Competencies.	Motion to accept IET 230 new course form and course outline with changes: Brian Second: Blaise Motion carried
10. IET 240 New Course Form and Course Outline	Grammatical changes were made to the course description.	Motion to accept IET 240 new course form and course outline with changes: Justin Second: Blaise Motion carried

New Business

1. MAT 155 New Course Form and Course Outline	Brian explained that MAT 155 is a new trigonometry course being offered by MATC. No changes were made to the documents as presented.	Motion to accept MAT 155 new course form and course outline as written: Justin Second: Blaise Motion carried

AGENDA ITEM	DISCUSSION	ACTION TAKEN
Open Discussion:	No topics were brought forward for discussion	
Next Meeting	February 18, 2022 @ 1430	
Agenda Items for Next Meeting:		
Adjournment	The meeting adjourned at 1123	Motion to adjourn: Justin Second: Blaise Motion carried

Minutes: Curriculum Committee

Date: 5/13/2021

Members Present: Marcey Fickbohm (Chair), Alex Anderson, Cindy Barnes, Deirdre Greeley, Brian Koch, Morgen Stoecklein, Laure Weiss-Cook, Blaise Wilson, Casey Field, Nathan Roberts (ex officio), Sarah Phillips (ex officio)

Time: 1500

Guests: Gary Maple from MATC

Members Absent: Suzanne Duncan, Justin Meuli

Place: Zoom

Recorder: Deirdre Greeley

AGENDA ITEM	DISCUSSION	ACTION TAKEN
Call to order		The meeting was called to order at 1500
Acceptance of Minutes	Minutes from April Zoom meeting were reviewed	Motion to accept the minutes: Brian Second: Morgen Motion carried
Old Business		
None		
New Business		
1. New Course Proposal and Outline: IET 101	Gary Maple introduced and discussed new course IET 101 Fundamentals of Electricity AC/DC as a 3-credit hour blended introductory course designed to prepare students to work with low-voltage electricity and electrical devices. In the first sentence of the course description, the word ***hinges*** was changed to ***depends***, and the word ***understand*** was changed to **understanding**.	Motion to approve new course proposal IET 101 with changes: Morgen Second: Brian Motion carried
2. New Course Proposal and Outline: IET 102	Gary Maple introduced and discussed new course IET 102 Fundamentals of Fluid Power Pneumatics as a 3-credit hour blended course designed to prepare students to work with pneumatically powered and operated industrial systems. The second sentence in the course description was amended to read: ***This course provides a complete overview of compressors, storage, dryers, and distribution as well as the design, construction, and operation of a range of actuators, valves, and ancillary equipment.*** In the last sentence of the course outline, the sentence was changed to read: ***This course ensures a sound competency regarding the safe operation and maintenance of one of the most common automation elements in the industry.***	Motion to approve new course proposal IET 102 with changes: Laura Second: Cindy Motion carried

AGENDA ITEM	DISCUSSION	ACTION TAKEN
3. New Course Proposal and Outline: IET 103	Gary Maple introduced and discussed new course IET 103 Fundamentals of Fluid Power Hydraulics as a 3-credit hour blended course designed to prepare students to work with hydraulically powered and operated industrial systems. In the fourth Learning Outcome and Competency, the word ***graphical*** was changed to ***graphic.***	Motion to approve new course proposal IET 103 with changes: Laura Second: Deirdre Motion carried
Open Discussion:	None	
Next Meeting	August 2021	
Agenda Items for Next Meeting:		
Adjournment	The meeting adjourned at 1550	Motion to adjourn: Morgen Second: Casey Motion carried

Minutes: Curriculum Committee

Date: 3/252022

Members Present: Marcey Fickbohm (Chair), Alex Anderson, Cindy Barnes, Chris Boxberger, Laure Weiss-Cook, Suzanne Duncan, Casey Field, Deirdre Greeley, Pamela Imperato, Brian Koch, Sarah Phillips (ex officio), Morgen Stoecklein, Christopher Weaver, Blaise Wilson

Time: 3:00 PM

Guests: Chris Boxberger

Members Absent: Nathan Roberts, Justin Meuli

Place: 104A

Recorder: Deirdre Greeley

AGENDA ITEM	DISCUSSION	ACTION TAKEN
Call to order		The meeting was called to order at 1502
Acceptance of Minutes	Minutes from February 18, 2022 meeting reviewed	Motion to accept the 2-18-22 minutes as written: Morgen Second: Alex Motion carried
Old Business		
1. **None**		
New Business		
1. **CET 111 and CET 211 Course Deletions**	These courses are being replaced by IET 101 and IET 220. No change to credit hours.	Motion to approve the CET 111 and CET 211 course deletions as presented: Pamela Second: Blaise Motion carried
2. **COM 106 Change Form and Course Outline**	Changing prerequisites. COM 106 will be required if a student does not take the Accuplacer. Minor grammatical changes to the forms were made.	Motion to approve the COM 106 change form and course outline with changes: Laura Second: Brian Motion carried
3. **New Program Request CA1 – IET AAS and Cert B**	This is the New Program Request Form for Industrial Engineering Technology. Within the form, both the AAS and the Cert B courses and credit hour requirements..	Motion to approve the IET New Program Request Form for both the AAS and Cert B pathways with changes: Pamela Second: Laura Motion carried
4. **New Program Request CA1 – Biotech Cert A**		Motion to approve the Biotech Cert A New Program Request Form with changes: Casey

AGENDA ITEM	DISCUSSION	ACTION TAKEN
5. CA 2A MLT Program	Biotech is changing from an AAS to a Cert A; it will be changed to 17 credits that can be completed in 1 semester. Minor grammatical changes were made. The option of taking *Interpersonal Communications* or *Public Speaking* is being added to the MLT program prerequisites.	Second: Cindy Motion Carried Motion to approve the CA 2A MLT change form with the enhanced communication options: Pamela Second: Morgen Motion Carried
Open Discussion:	No topics were brought forward for discussion	
Next Meeting	April 15, 2022 @ 1527	
Agenda Items for Next Meeting:		
Adjournment	The meeting adjourned at 1530	Motion to adjourn: Brian Second: Laura Motion carried

Board of Directors Minutes

Manhattan Area Technical College

March 29, 2022 5:30pm

1. The Board of Directors of the Manhattan Area Technical College met March 29, 2022 at 5:30 p.m. in person and using zoom, with live streaming for employees.
    - Members present: L.J. Baker, Wendy King-Luttman, David Urban, Mike Matson, Tim Flanary, Will Allen, Heather Peterson.
    - Members absent: Brett Ballou.
    - Administration Present: Jim Genandt, President/CEO; Sarah Phillips, VP Student Success/CAO/CSAO; Josh Gfeller, Chief Information Security Officer; Chris Boxberger, Dean of Academic Partnerships and Outreach; Nathan Roberts, Dean of Academic Affairs; Neil Ross, Dean of Student Success; Hannah Miller, Executive Assistant/Board Clerk. Kim Davis, Dean of Nursing & Health Programs.
    - Faculty/Staff/SGO Visitors: Harry Watts, Brian Koch, Mike Boxberger.
    - Meeting was live streamed.
2. **Call to Order**
    - L.J. Baker called the meeting to order at 5:30p.m.
3. **Consent Agenda:** (Routine items requiring BOD action)*
    - Wendy King-Luttman motioned to approve the Consent Agenda. David Urban seconded. Motion carried 6 yeas and 0 nays. Motion passed to accept the Consent Agenda.
4. **General Agenda:** (Items possible requiring BOD action)
    - Mike Matson moved to approve the General Agenda with the addition to the Academic Program Proposal to the agenda. Tim Flanary seconded. Motion carried 6 yeas and 0 nays. Motion passed to accept the General Agenda with addition.
    - Richard Berndt gave our program update for the Construction Technology program. The Construction Technology students are almost all employed in their second semester of the program. The received OSHA 30 during the program which they can take with them to many other areas. Richard works with many local schools and is constantly looking to expand.
    - President Jim Genandt introduced the Trane proposal. Josh Gfeller detailed the proposal and what it offers. It is a data analytic system that can monitor our building/s (AI system for HVAC). Mike Matson motioned to approve the $101,020 for the Trane proposal. Will Allen seconded. Motion carried 6 yeas

and 0 nays. Motion passed to accept Trane proposal.

- President Jim Genandt made the recommendation of changes to tuition and fees to the board. He proposed three options. Tim Flanary motioned to approve Option 4 for Tuition and Option 3 for fee changes to the fiscal year 2023. Will Allen seconded. Motion carried 6 yeas and 0 nays. Motion passed to accept the recommendation.
- Sarah Phillips informed the board of the Academic Program Proposal. The proposed additions are for the Associates of Applied Science and Certificate B for Industrial Engineering Technologies; also Certificate A for Biotechnology. Wendy King-Luttman motioned to approve the academic program proposal for industrial engineering technology. Tim Flanary seconded. Motion carried 6 yeas and 0 nays. Motion passed to accept the program proposal. Mike Matson motioned to approve the academic program proposal for biotechnology. David Urban seconded. Motion carried 6 yeas and 0 nays. Motion passed to accept the program proposal.

5. **Discussion of Ends:** (Demonstration, Testimonial, or Report of Results related to Board Mission)
    - Josh Gfeller updated the board on the progress for the Wamego Center. Building two is finished and ready for classes in the fall. Building three is ready to start the demo process. Roofers were on campus today and yesterday working on installing gutters and larger drain tubes to move water away from the building.
    - Brian Koch gave the board an update on what is going around on campus and in the community.
6. **Executive Session:** Consultation with College Attorney
    - Wendy King-Luttman motioned to move into executive session at 6:35pm. David Urban seconded. Motion carried 6 yeas and 0 nays. Wendy King-Luttman motioned to move to open session at 6:50pm. Tim Flanary seconded. Motion carried 6 yeas and 0 nays. Wendy King-Luttman motioned that the Board direct President Genandt to serve written notice on Frank Avila to terminate his contract as authorized by K.S.A. 72-2251. David Urban seconded. Motion carried 6 yeas and 0 nays. Motion passed.
7. **Executive Session:** Personnel Matters
    - Wendy King-Luttman motioned to move into executive session at 6:51pm. Tim Flanary seconded. Motion carried 6 yeas and 0 nays. Wendy King-Luttman motioned to move to open session at 6:56pm. Will Allen seconded. Motion carried 6 yeas and 0 nays. No action was taken.
8. **Adjournment**: L.J. Baker, Board Chair adjourned the meeting at 6:57pm.