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Office of the Vice President of Academic Affairs and Student Services

James D. Fielder, Ph.D.
Secretary of Higher Education
The Maryland Higher Education Commission
6 N. Liberty St.
Annapolis, MD 21201

August 5, 2018

Dear Dr. Fielder,

I am pleased to submit for approval an Associate of Applied Science in Technical Studies. The Hagerstown Community College Board of Directors has approved the new program.

Thank you for your consideration of this proposed program; a check was sent to the MHEC office for the substantive fee. If I can provide additional information, please contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read "Carol Rothstein", is written over a light blue horizontal line.

Carol A. Rothstein, Ed.D.
Dean of Instruction



Cover Sheet for In-State Institutions New Program or Substantial Modification to Existing Program

Institution Submitting Proposal	Hagerstown Community College
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Each action below requires a separate proposal and cover sheet.

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|--|--|
| <input checked="" type="radio"/> New Academic Program
<input type="radio"/> New Area of Concentration
<input type="radio"/> New Degree Level Approval
<input type="radio"/> New Stand-Alone Certificate
<input type="radio"/> Off Campus Program | <input type="radio"/> Substantial Change to a Degree Program
<input type="radio"/> Substantial Change to an Area of Concentration
<input type="radio"/> Substantial Change to a Certificate Program
<input type="radio"/> Cooperative Degree Program
<input type="radio"/> Offer Program at Regional Higher Education Center |
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Payment Submitted: <input type="radio"/> Yes <input checked="" type="radio"/> No	Payment Type: <input type="radio"/> R*STARS <input checked="" type="radio"/> Check	Date Submitted: July 8, 2019
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Department Proposing Program	Technology and Computer Studies	
Degree Level and Degree Type	Associate of Applied Science	
Title of Proposed Program	Technical Studies	
Total Number of Credits	60	
Suggested Codes	HEGIS: 53.9950	CIP: 29 15.9999
Program Modality	<input checked="" type="radio"/> On-campus <input type="radio"/> Distance Education (<i>fully online</i>) <input type="radio"/> Both	
Program Resources	<input checked="" type="radio"/> Using Existing Resources <input type="radio"/> Requiring New Resources	
Projected Implementation Date	<input checked="" type="radio"/> Fall <input type="radio"/> Spring <input type="radio"/> Summer Year: 2019	
Provide Link to Most Recent Academic Catalog	URL: http://catalog.hagerstowncc.edu/	
Preferred Contact for this Proposal	Name: Carol Rothstein Title: Dean of Instruction Phone: (240) 500-2437 Email: carothstein@hagerstowncc.edu	
President/Chief Executive	Type Name: Trevor Jackson for James Klauber Signature: Date: 6/27/19	
	Date of Approval/Endorsement by Governing Board: 05/21/2019	

Revised 6/13/18

New Academic Program Proposal for
Associate of Applied Science in Technical Studies
Hagerstown Community College

A. Centrality to Institutional Mission and Planning Priorities:

1. Provide a description of the program, including each area of concentration (if applicable), and how it relates to the institution's approved mission.

The AAS in Technical Studies is a career oriented program that focuses on applied technical skills. It is designed to support the diverse needs of today's employers and prepare students for in-demand careers in areas like aircraft maintenance, aviation electronics, electrical engineering, electrical energy distribution, alternative energy, advanced manufacturing, and some healthcare fields.

The program is reserved for students who have completed, or will complete, an apprenticeship or recognized industry training. The structure of the degree allows for flexibility in the design of the program courses in order to meet the individual needs of students. The program courses are selected from a list courses that provide the necessary skills and competencies for a particular occupation and are selected in conjunction with a faculty advisor. The restricted elective credits are fulfilled via credit for apprenticeships, recognized industry training, and/or Hagerstown Community College (HCC) courses that are designed based on an employers' needs. General education courses assure students gain a liberal education that enhances students' knowledge base and achieves the competencies of an associate degree.

HCC recognizes the value of employer sponsored training and work experience. The Technical Studies program provides an avenue for students in technical fields to receive credit for their knowledge and earn an associate degree, which can greatly impact their career mobility. Students in the Technical Studies degree will meet with faculty to design an individualized program of study that may include college coursework, credit for prior learning, and/or college level training programs and apprenticeships.

Faculty and students will work closely with HCC's Internship Coordinator to develop appropriate credit level experiences that fulfill the outcomes and objectives of the Technical Studies degree. The Technical Studies program provides skilled workers the opportunity to obtain an associate degree through the combination of general education classes and credit for technical experience and training.

The HCC mission focuses on the outcomes of students enrolled in programs. A main tenant of the mission is to, "foster innovation and collaboration to strengthen its [HCC's] regional workforce."¹ The proposed AAS in Technical Studies addresses this purposes by educating students to join a growing and changing workforce in diverse employment opportunities, such as engineering firms, advanced manufacturing facilities, distribution and logistics companies, industrial facilities, health services, information services and technologies, and electrical companies. Hagerstown and the surrounding area is home to many such employers, including Pittsburgh Institute of Aeronautics, First Energy, RHL Engineering, LS Grimm, Washington County Government, Volvo, Staples, TB Woods, CertainTeed, JLG, Hagerstown Regional Airport, First Data, and Meritus Health.

2. Explain how the proposed program supports the institution's strategic goals and provide evidence that affirms it is an institutional priority.

Hagerstown Community College is focused on developing curriculum that is relevant to the needs of today's workforce. As such, strategic goal 2 states, "develop new curricula as needed and establish guidelines for changing or phasing out outdated or under-enrolled courses, services, and programs based on community and student needs".

The Technical Studies degree is in response to the need for Maryland residents to obtain an affordable degree without needing to travel across state lines. HCC administrators met with various industry representatives to discuss potential partnerships and articulation agreements. An example of such partnership is Pittsburg Institute of Aeronautics (PIA). PIA provides a rigorous training program for their aviation technicians; this training includes college equivalent physics, mathematics, and engineering. PIA has several executed articulation agreements with colleges in other states, such as Horry-Georgetown in South Carolina and Blue Ridge Community and Technical College in West Virginia.

Strategic goal 3.5c is, "develop and refine career program offerings to meet growing employer needs" and strategic goal 4 is to, "expand Community and Workforce Development, Strategic Partnerships and Alliances". Strategic goal 4.1a states "review and adjust programs to create a workforce development pipeline of graduates and program completers to meet the needs of local employers".

The Technical Studies program supports these goals by collaborating with area businesses to offer programs tailored to the specific workforce. As mentioned previously, several articulation agreements will be developed to create strategic partnerships. Many of these agreements will include awarding credits for recognized certifications, state sanctioned licenses, and approved apprenticeship experiences, which will directly support HCC's strategic goal 4.1.d, "collaborate with the Maryland Department of Labor, Licensing and Regulation on statewide initiatives including EARN grants and Apprenticeship program growth."

3. Provide a brief narrative of how the proposed program will be adequately funded for at least the first five years of program implementation. (Additional related information is required in section L.

The program does not require significant resources as the general education and program courses are currently offered in other programs, and the restricted electives will be completed via apprenticeships and other similar industry sponsored programs. Current career program faculty, will work with industry representatives and students to create personalized pathways; therefore, no new faculty will need to be hired.

In order to ensure funding and resources are adequate each year, the College engages in an integrated process of planning, evaluation, and budgeting for the following fiscal year. Every unit of the college prepares a plan that reflects its accomplishments (Annual Productivity Report), and, building on the College's mission, vision, institutional priorities, and strategic plan, submits its projected needs (Unit Plan). This planning process identifies challenges and opportunities for each program in the areas of curriculum, recruiting, staffing, and budget. The plan for each unit includes:

- The unit's goals to maintain and improve productivity (e.g. new personnel, supplies, equipment, or facilities);

- Timelines;
- Persons responsible; and
- Assistance that may be required outside the department.

4. Provide a description of the institution's commitment to:

- ongoing administrative, financial, and technical support of the proposed program.**
- continuation of the program for a period of time sufficient to allow enrolled students to complete the program.**

Since becoming HCC's fourth president in June 2018, Dr. James Klauber has focused on developing career programs and furthering opportunities for Washington County residents to bolster their education and advance their careers. Dr. Klauber has not only dedicated financial resources to this effort, he has recruited industry and government entities to form a partnership to support workforce efforts. Dr. Klauber has been instrumental in bringing the WorkKeys Readiness to Hagerstown, and is working closely with business partners to make Washington County a Work Ready community.

By continuously meeting with regional partners, Dr. Klauber demonstrates his support of the College's strategic goal 4.1 e, which is to collaborate with local county and city economic development agencies to support business growth by providing appropriate workforce development courses and programs. The AAS in Technical Studies is a much needed workforce development program that is supported by HCC's President and Board of Trustees.

The Technical Studies program will be part of the Technology and Computer Studies (TCS) Division. As mentioned previously, due to the uniqueness of the program it will not require substantive funding to operate. No new faculty or equipment will need to be hired as the technical core is composed of industry training and/or courses that HCC already provides.

The design of the Technical Studies program allows for flexibility to meet changing workforce needs. It can be tailored to each student and employer's needs. Therefore, it is a dynamic program that can adapt to workforce needs while allowing students to complete their individualized program.

B. Critical and Compelling Regional or Statewide Need as Identified in the State Plan:

1. Demonstrate demand and need for the program in terms of meeting present and future needs of the region and the State in general based on one or more of the following:

a) The need for the advancement and evolution of knowledge

Maryland Governor Larry Hogan recently announced his "Opportunity Zones" funding program in which the state will spend a proposed \$56.5 million to attract businesses to specific communities in Maryland, which includes Hagerstown and Williamsport (Mirabella). This new program will provide tax breaks and other incentives; however, an important consideration in whether a company locates to an opportunity zone is the availability of a trained workforce.

In Maryland, 48% of all jobs are in the middle skills sector; however, only 38% of Maryland workers are trained for middle skills jobs (National Skills Coalition). Closing this skills gap is not easy; however, as stated in *Powerful Partners*, community colleges and employers can form innovative partnerships (called sector partnerships) to “provide course curriculum, professional training, and support services” to develop the middle skills workforce (Brown). The AAS in Technical Studies is an example of an innovative partnership between businesses and a higher education entity. Working together, HCC and area employers can provide the necessary technical skills, as well as much needed soft skills, for current and future employees.

In today’s employment landscape there are several pathways for workers to prepare for careers; apprenticeships, on-the-job training, and post-secondary education; however, “even with these many pathways to middle skills jobs, the importance of postsecondary education of some kind is undeniable....and in many cases, formal education and on-the-job training seem to be complementary, rather than substitutes for one another” (Achieve, Inc.). HCC can work with industry partners, such as Pittsburg Institute of Aeronautics, Volvo, and First Energy to create programs that combine on-the-job training with formal post-secondary training.

2. Provide evidence that the perceived need is consistent with the [Maryland State Plan for Postsecondary Education](#).

Throughout the Maryland State Plan for Postsecondary Education (State Plan) programs like Technical Studies are referenced and encouraged. For example, the following passage highlights collaboration between higher education and industry in order to expand competency based learning:

Due to the diverse opportunities in the State, higher education in Maryland should support and promote practices and policies that ensure all students are successful in their educational goals. Incentivizing institutions and organizations that succeed in educating through non-traditional means can help to expand and promote best practices”. It goes on to say, “Many non-traditional students, by definition, come to college with a unique background that may not meet the tradition of transferring credit. The Lumina Foundation supports this work through one of their initiatives, expanding competency-based learning.”

Apprenticeship and internship experiences are highlighted throughout the State Plan, and higher education institutions are encouraged to create a workforce partnership that provides credit for on-the-job training and/or competency based learning. The State Plan goes on to explain how post-secondary education should support programs like apprenticeships by awarding credit where appropriate and “where the required instruction may culminate in a credential that is portable, e.g., a certificate”(State Plan).

The Technical Studies program matches the workforce needs of employers with educational opportunity for students. In addition to promoting internships and apprenticeships, the State Plan Strategy 8 is all about innovative partnerships that “support a bidirectional information-sharing relationship that improve curriculums and future employment.”

Perhaps one of the best examples in the State Plan of innovative partnerships and awarding credit for business specific training is Amazon.

“Businesses may utilize internal resources to create unique training opportunities specific to their business needs. For example, Amazon has launched the Amazon Web Services (AWS) Training and Certification platform. The platform includes a training catalog of courses tailored to help individuals who use Amazon cloud services in a business context. Business-driven credentials such as these could easily be adapted to be a formal certificate (or as a badge or stackable credential, as discussed in Strategy 7) offered within Maryland.”

Throughout the State Plan, innovative partnerships between industry and higher education are stressed and encouraged. Apprenticeships, internships, industry training, and cooperative education are all emphasized as valuable to students and businesses, and worthy of being recognized in a formal credential. The AAS in Technical Studies perfectly blends post-secondary learning outcomes with workforce technical needs in an innovative partnership between HCC and area employers, which demonstrates it is consistent with the Maryland State Plan for Postsecondary Education.

C. Quantifiable and Reliable Evidence and Documentation of Market Supply and Demand in the Region and State:

- 1. Describe potential industry or industries, employment opportunities, and expected level of entry (*ex: mid-level management*) for graduates of the proposed program.**
- 2. Present data and analysis projecting market demand and the availability of openings in a job market to be served by the new program.**
- 3. Discuss and provide evidence of market surveys that clearly provide quantifiable and reliable data on the educational and training needs and the anticipated number of vacancies expected over the next 5 years.**

There are several potential employment opportunities for students with a degree in Technical Studies. The Technical Studies degree prepares students for careers in occupation such as plumbing, electricians, machinists, aviation mechanics, lineman, firefighters, and police officers. The entry level of graduates will depend on which track they are pursuing; however, graduates will have an advantage over students who do not have an Associate degree.

Although many of the careers listed above previously required only a high school diploma, they now require an extensive apprenticeship, technical or trade schooling, or a community college education. The Bureau of Labor Statistics highlights HVAC as an example, “because HVACR systems have become increasingly complex, employers generally prefer applicants with postsecondary education or those who have completed an apprenticeship.”

According to the Bureau of Labor Statistics, most of the occupations that would be served by offering the Technical Studies program are growing at a faster than average rate. Below is a sample of occupations that students would be able to enter with Technical Studies degree that incorporated hands on training into the curriculum.

Bureau of Labor Statistics – Occupational Employment and Wages, 2017 (National)

Occupation	Number of jobs	Job Growth Outlook	Median Hourly Wage	Annual Median Pay
Aircraft Equipment Mechanic/Technician	149,500	5%	\$63.07	\$61,260
Electrical/Electronic Installers/Repairers	135,000	1%	\$27.51	\$51,210
Electrical Line Installers/Repairers	227,000	8%	\$30.86	\$64,190
Wind Turbine Technician	5,800	96%	\$25.91	\$53,880
Police Officer	807,000	7%	\$30.27	\$62,960
HVAC Mechanic/Installers	332,900	15%	\$22.64	\$47,080

<https://www.bls.gov/ooh/>

D. Reasonableness of Program Duplication:

- 1. Identify similar programs in the State and/or same geographical area. Discuss similarities and differences between the proposed program and others in the same degree to be awarded.**
- 2. Provide justification for the proposed program.**

Allegany College of Maryland (ACOM) offers an AAS in Technical Studies. The proposed program at HCC is similar in structure to what is offered at ACOM; however, due to the individualized nature of the program content and regional industry needs, the programs would be distinct from each other. Each region of Maryland has its own individualized needs in regards to business and industry.

E. Relevance to High-demand Programs at Historically Black Institutions (HBIs)

- 1. Discuss the program’s potential impact on the implementation or maintenance of high-demand programs at HBI’s.**

None of Maryland’s historically black institutions offer a similar program.

F. Relevance to the identity of Historically Black Institutions (HBIs)

- 1. Discuss the program’s potential impact on the uniqueness and institutional identities and missions of HBIs.**

There will be no impact on the uniqueness and institutional identities and missions of HBIs.

G. Adequacy of Curriculum Design, Program Modality, and Related Learning Outcomes (as outlined in COMAR 13B.02.03.10):

1. Describe how the proposed program was established, and also describe the faculty who will oversee the program.

The Technical Studies degree is designed to meet the rapidly changing workforce needs of business and industry. Focused on meeting technical educational needs, the degree can be tailored or individualized to augment the training offered by employers. The curriculum, which is designed and approved by College faculty, allows employers and their employees to develop specific plans of study based on their occupation. Under the supervision of the TCS Division Director, faculty will oversee students in the program and ensure their learning.

The College President met with representatives from various industries to discuss the educational needs of their employees. The President also met with The Vice President of Academic Affairs and Student Services and the Dean of Instruction to discuss the various training needs, and it was determined that a Technical Studies degree would provide the flexibility and responsiveness the employers need. Instead of creating a new program for each new industry need, faculty could work with employers to design specific classes that would fall under the Technical Studies degree. In addition, if employers provide a rigorous training program that meet college standards, it would be a benefit to students to articulate that training into credits.

2. Describe educational objectives and learning outcomes appropriate to the rigor, breadth, and (modality) of the program.

Program Outcomes:

- A. Recall and apply appropriate terminology, abbreviations, acronyms, and symbols that are used in industry
- B. Demonstrate competency in the use of industry equipment specific to occupational area of work (students will obtain specific technical skills that are essential to build, operate, and troubleshoot industry specific equipment)
- C. Apply quality improvement and utilization review principles to ensure the highest quality of information management according to professional standards
- D. Demonstrate an understanding of technical skills required in the specific occupation through the successful completion of an approved apprenticeship, internship, or training program
- E. Collect, organize, and analyze data to identify trends that demonstrate quality and safety in working in project teams, planning and conducting meetings, managing logistics and details, gathering useful data, and communicating results and changes.
- F. Exhibit the knowledge and skills to safely perform laboratory duties and recognize safety issues, in accordance with OSHA standards in the workplace

3. Explain how the institution will:

- a) **provide for assessment of student achievement of learning outcomes in the program**
- b) **document student achievement of learning outcomes in the program**

Student Learning Outcomes Assessment (SLOA) is a deliberate, systematic, and collaborative process driven by the College's commitment to improve student learning. It is a purposeful course of action that defines student accomplishments in terms of expected learning outcomes and core competencies. Actual student achievement is measured using established internal standards and external benchmarks. The outcomes assessment process is learning-centered and accumulates data from numerous sources to determine what students know, what skills they possess, how they conceptualize, and how they will continue to learn. The overall goal of assessment is to create a quality learning environment under ideal conditions through the use of best practices that inspire creativity, innovation, and critical thinking.

Student Learning Outcomes Assessment is an ongoing component of the instructional process. All members of the institution share responsibility for student learning. Continuous improvement of learning is a collaborative enterprise upon which the success of instruction depends. The results of SLOA are never used in a punitive manner toward students, faculty, or staff. The data collected during the assessment process is used to provide feedback to students and faculty, reinforcing and improving educational practices that facilitate learning.

The Technical Studies program will be evaluated at the course and program level on an annual basis. Resource allocation (including equipment, staff, and faculty) is driven by needs addressed in the SLOA process.

4. Provide a list of courses with title, semester credit hours and course descriptions, along with a description of program requirements

This 60 credit hour associate degree consists of 18 credit hours of general education courses, 15 program credits, 15 credit hours of restricted electives, and 12 credits of free electives.

General Education	18 Credits
Program Requirement	15 Credits
Restricted Electives	15 Credits
<u>Free Electives</u>	<u>12 Credits</u>
Total	60 Credits

General Education (18 Credits)

Students will be required to complete a minimum of 18 general education courses, including:

Math General Education	3 credits
English General Education	3 credits
Arts and Humanities General Education	3 credits

Diversity General Education	3 credits
Biological and Physical Science General Education	3 credits
Behavioral and Social Science General Education	3 credits

Program Requirements (15 credits)

The program requirements, or technical core, consists of 15 credits that are variable and tailored to each student’s individual needs. Courses used to fulfill the program requirements must be selected from the following program disciplines:

Select any 15 credits from the following courses:

Program	Discipline Code	Courses
Advanced Manufacturing Systems	ADM	ADM 201 – Lean Manufacturing and Quality Assurance (2 cr.) ADM 240- Capstone for ADM Students (1-3 cr.) ADM 258 – Advanced Motors, Machines, and Devices (3 cr.)
Alternative Energy Technology	AET	AET 101 – Applied Mathematics for Technology (1 cr.) AET 102 – Introduction to Alternative Energy (3 cr.) AET 104 – Geothermal Installation (3 cr.) AET 106 – Photovoltaic Installation (3 cr.) AET 108 – Wind Energy Installation (3 cr.) AET 240 – AET Capstone Project (1 cr.)
Computer Aided-Drawing	CAD	CAD 152 – Computer Aided Design (3 cr.) CAD 153 – Computer Aided Drafting (3 cr.) CAD 226 – CAD: Architectural (3 cr.) CAD 228 – CAD: Solid Modeling (3 cr.) CDA 230 – BIM for Commercial Architecture (3 cr.)
Electronics	ELE	Any ELE course (2-4 cr.)
Engineering Technology	EGT	EGT 101 – Foundations of Engineering Technology (2 cr.) EGT 136 – Mechanics (3 cr.) EGT 150 –Introduction to CNC Programming (3 cr.) EGT 231 – Strength of Materials (3 cr.) EGT 234 – Machine Design (4 cr.)

		EGT 235 – Fluid Power (3 cr.) EGT 236 – Advanced CNC (3 cr.)
Industrial Technology	INT	INT 101 – Introduction to Industrial Technology (3 cr.) INT 102 – Introduction to PLCs (3 cr.) INT 104 – Facilities Safety and Compliance (3 cr.) INT 105 – Plumbing and Pipefitting (3 cr.) INT 106 – Welding (3 cr.) INT 107 – HVAC/R (3 cr.) INT 116 – Welding Layout and Fabrication (3 cr.) INT 206 – AWS Welding and Certification Preparation (3 cr.)

Restricted Electives (15 credits)

This program is exclusive for students who have completed, or will complete, an apprenticeship, internship, American Council for Education endorsed training program, other recognized training program provided by the student’s employer. The trainings will be evaluated by faculty and appropriate credits will be articulated. The articulated credit will be used to fulfill the restricted elective requirement.

Example: Aviation Maintenance Technology training provided to employees by the Pittsburgh Institute of Aeronautics (PIA) requires mastery of college level math, physics, electrical power systems, and manufacturing technology. The student would be awarded 15 credits via articulation agreement or credit for prior learning for completion of the training.

Free Electives (12 credits)

Student will select any combination of 12 credits of college level courses to fulfill the free elective requirements.

5. Discuss how general education requirements will be met, if applicable.

Students will be required to complete a minimum of 18 general education courses, including:

Math General Education	3 credits
English General Education	3 credits
Arts and Humanities General Education	3 credits
Diversity General Education	3 credits
Biological and Physical Science General Education	3 credits
Behavioral and Social Science General Education	3 credits

6. Identify any specialized accreditation or graduate certification requirements for this program and its students.

There are no specialized accreditation or graduate certification requirements for this program or its students.

7. If contracting with another institution or non-collegiate organization, provide a copy of the written contract.

HCC will not contract with another institution or non-collegiate organization for this program.

8. Provide assurance and any appropriate evidence that the proposed program will provide students with clear, complete, and timely information on the curriculum, course and degree requirements, nature of faculty/student interaction, assumptions about technology competence and skills, technical equipment requirements, learning management system, availability of academic support services and financial aid resources, and costs and payment policies.

All program requirements, to include curriculum and course requirements are posted in the College's online catalog <http://catalog.hagerstowncc.edu/>. In addition, programs have their own dedicated webpage to provide additional resources and information, as well as contact information for faculty overseeing the program. Links within the catalog and on the College homepage direct students to Offices of Financial Aid, Learning Technology, Information Technology, Student Services, and Finance.

Each course syllabus follows a standard template that outlines the number of hours required for the class, and includes both in class and out of class work. Course specific technology requirements are outlined in the syllabus as well as course requirements. Each syllabus also gives contact information for Student Services and the Disabilities' Office.

Any credit that is awarded via articulation agreement or credit for prior learning will be evaluated by faculty to determine appropriate credits based on rigor and learning outcomes of the training.

9. Provide assurance and any appropriate evidence that advertising, recruiting, and admissions materials will clearly and accurately represent the proposed program and the services available.

The Public Relations and Marketing (PRM) Office manages the content of the HCC website. PRM staff continuously update program information through ongoing communication with Division Directors, faculty, and program coordinators. The PRM Office collaborates with the Offices of Academic Affairs, Admissions and Enrollment, and Advising and Registration to ensure all materials accurately and clearly represent the program. All materials that represent the program and/or services provided by the college must be approved by the PRM Office.

H. Adequacy of Articulation

1. If applicable, discuss how the program supports articulation with programs at partner institutions. Provide all relevant articulation agreements.

Not Applicable

I. Adequacy of Faculty Resources (as outlined in COMAR 13B.02.03.11).

- 1. Provide a brief narrative demonstrating the quality of program faculty. Include a summary list of faculty with appointment type, terminal degree title and field, academic title/rank, status (full-time, part-time, adjunct) and the course(s) each faculty member will teach (in this program).**

Edward Bass – Instructor – Advanced Manufacturing – Full-time

- Bachelors of Science in Engineering Science, Trinity University
- Masters of Science in Mechanical Engineering, University of Texas
- Courses:
 - All Advanced Manufacturing courses
 - Advanced Manufacturing Capstone and Internship

Gregory Betz – Instructor – Alternative Energy and Industrial Technology – Full-time

- Bachelors of Science in Technology Education, Millersville University
- Masters of Science in Electronics and Computer Technology, Indiana State University
- Courses:
 - All Alternative Energy Courses
 - Alternative Energy Capstone and Internship

Olu Bamiduro – Instructor – Engineering Technology – Full-time

- Bachelor of Science in Mechanical Engineering Technology, University of the District of Co
- Master of Science in Mechanical Engineering Technology, Norfolk State University
- Doctor of Philosophy in Mechanical Engineering Technology, Norfolk State University
- Courses:
 - All Computer-Aided Design courses
 - All Mechanical Engineering courses

Juan Luna – Instructor – Electrical Engineering Technology – Full-time

- Bachelor of Science in Electrical Engineering Technology, Universidad Technologica Naciona, Argentina
- Master of Science in Computer Science, George Mason University
- Courses:
 - All Electrical Engineering courses
 - Electrical Engineering Internships

- 2. Demonstrate how the institution will provide ongoing pedagogy training for faculty in evidenced-based best practices, including training in:**

- a) Pedagogy that meets the needs of the students**
- b) The learning management system**
- c) Evidenced-based best practices for distance education, if distance education is offered.**

The Fletcher Faculty Development Center (FFDC) at Hagerstown Community College provides a facility, staff support, training, and workshops to help the college's faculty members maintain and improve excellence in teaching. The center was founded in 2010 with a generous grant from the Alice Virginia and David W. Fletcher Foundation. Programs and services include:

- Workshops on teaching and learning topics including flipped classroom, academic dishonesty, reading across the curriculum, online course design, and supporting student purposefulness;
- Consultation by request on any teaching topic, from "What's the policy?" to classroom or online course observations for peer-to-peer feedback;
- How to effectively create and utilize advisory boards; and
- Work space, copy service, lockers, and parking tags for adjunct instructors.

In addition to ongoing support for all faculty, the Fletcher Center hosts workshops and guest speakers specifically for career faculty who have extensive industry experience, but need training and support in pedagogy and best practices in education.

The FFDC has revised the COTE (Course in Online Teaching Excellence) training for faculty, by condensing the course down to 2 weeks. The FFDC also provides ongoing face-to-face training for faculty teaching online for the following topics: SoftChalk, Online Course Redesign, Online Accessibility, Open Educational Resources (OERs).

In the fall of 2018, a new Dean of Distance Learning position was created to oversee all distance education at HCC. The new Dean will be implementing an internal review process for all online programs and courses, starting in fall 2019, in which quality assurance reviews will be conducted regularly. All online courses are scheduled to be reviewed within the next three academic years using the Quality Matters (QM) certification rubric. Consequently full time faculty members and academic division directors are now being strongly encouraged to become certified in the QM rubric

J. Adequacy of Library Resources (as outlined in COMAR 13B.02.03.12).

- 1. Describe the library resources available and/or the measures to be taken to ensure resources are adequate to support the proposed program. If the program is to be implemented within existing institutional resources, include a supportive statement by the President for library resources to meet the program's needs.**

The William M. Brish Library is committed to utilizing the latest technology to provide services and resources, both on and off campus, to meet the academic and professional needs of all members of the college community. The library subscribes to a variety of electronic resources and offers a strong core collection of physical materials that fully supports the college's programs and curriculum. In support of student retention, librarians work to empower students to successfully locate and evaluate scholarly information by providing individual and group instruction, as well as

point-of-need reference assistance. The library maintains a calm, welcoming environment that fosters student success.

The Library offers access to full-text articles from a variety of journals available via several online subscription article databases and the Directory of Open Access Journals. The library also subscribes to Films On Demand, Gale Virtual Reference Library, and an extensive collection of e-books.

The library provides access to journals in print and electronic formats that can be located by searching the online library catalog. Altogether, the library's paper and e-book collections contain several thousand items. As well as the books, films, and online databases mentioned above, all students and faculty have access to the library's interlibrary loan services through which they can request copies of articles and temporary loans of books from other libraries.

Students may log in to use any of the library's electronic resources (databases, e-books, and Films On Demand) from anywhere at any time.

The library also produces LibGuides for several courses and units on campus. LibGuides is a content management system in which knowledge is organized around a specific topic, which can then be imbedded into a class or website. Faculty can request a LibGuide to be produced for use as a resource for their classes.

The library is open 8:30 AM to 6:00 PM Monday through Thursday and 8:30 AM to 4:30 PM Fridays. HCC students also have access to a 24 hour 7 days a week "Ask a Librarian" chat forum. Students can send a question to a librarian any time or day and receive an answer within 24 hours.

K. Adequacy of Physical Facilities, Infrastructure and Instructional Equipment (as outlined in COMAR 13B.02.03.13)

- 1. Provide an assurance that physical facilities, infrastructure and instructional equipment are adequate to initiate the program, particularly as related to spaces for classrooms, staff and faculty offices, and laboratories for studies in the technologies and sciences. If the program is to be implemented within existing institutional resources, include a supportive statement by the President for adequate equipment and facilities to meet the program's needs.**

Additional facilities and instructional resources are not required for this program. The majority of the instructional experience will take place in the Advanced Technology Center (ATC), which houses two Advanced Manufacturing lab, an electronics lab, four computer labs, and two lectures classrooms.

- 2. Provide assurance and any appropriate evidence that the institution will ensure students enrolled in and faculty teaching in distance education will have adequate access to:**
 - a) An institutional electronic mailing system, and**
 - a) support for distance education**

All students, faculty, and staff at HCC receive access to the electronic mailing system via their respective accounts. Students are able to access their HCC accounts within 24 hours of admission to the college. Faculty gain access once their hiring process is completed. All students and faculty receive a unique address, and may access their accounts remotely via Outlook Web Access.

HCC has recently purchased and implemented Brightspace Desire to Learn (D2L) as its primary Learning Management System (LMS) for online and hybrid credit classes. Within the online environment, students are able to review assignments, course content, course syllabi, and review grades throughout the semester. Our faculty are trained on the features of the LMS, as well as how to develop and manage their online classrooms by the staff in the Fletcher Faculty Development Center and Learning Technology departments. Faculty have access to several features via the LMS (i.e. asynchronous online discussions for collaborating with students and having virtual office hours, ability to provide virtual lectures including animations and/or videos, automatic grading of student work for some quizzes or exams, reports to analyzing student outcomes data and tracking their students' progress).

L. Adequacy of Financial Resources with Documentation (as outlined in COMAR 13B.02.03.14)

1. Complete **Table 1: Resources and Narrative Rationale**. Provide finance data for the first five years of program implementation. Enter figures into each cell and provide a total for each year. Also provide a narrative rationale for each resource category. If resources have been or will be reallocated to support the proposed program, briefly discuss the sources of those funds.

2. Complete **Table 2: Program Expenditures and Narrative Rationale**. Provide finance data for the first five years of program implementation. Enter figures into each cell and provide a total for each year. Also provide a narrative rationale for each expenditure category.

ABLE 1: RESOURCES					
Resource Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Reallocated Funds	0	0	0	0	0
2. Tuition/Fee Revenue (c+g below)	35384	58476	95760	101520	150912
a. Number of F/T students	8	12	20	20	30
b. Annual Tuition/Fee Rate	4060	4263	4263	4476	4476
c. Total F/T Revenue (a x b)	32480	51156	85260	89520	134280
d. Number of P/T Students	2	5	7	8	11
e. Credit Hour Rate (# of credits earned)	12	12	12	12	12
f. Annual Credit Hour Rate	121	122	125	125	126
g. Total P/T Revenue (d x e x f)	2904	7320	10500	12000	16632
3. Grants, Contracts & Other External Sources	0	0	0	0	0
4. Other Sources	0	0	0	0	0
TOTAL (Add 1-4)	35384	58476	95760	101520	150912

TABLE 2: EXPENDITURES					
Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Faculty (b+c below)	25872	27833	56649	57782	73673
a. # FTE	.5	.5	1	1	1.5
b. Total Salary	21572	23533	48008	48968	62435
c. Total Benefits	4300	4300	8641	8814	11238
2. Admin. Staff (b + c below)	0	0	0	0	0
a. # FTE	0	0	0	0	0
b. Total Salary	0	0	0	0	0
c. Total Benefits	0	0	0	0	0
3. Support Staff (b + c below)	0	0	0	0	0
a. # FTE	0	0	0	0	0
b. Total Salary	0	0	0	0	0
c. Total Benefits	0	0	0	0	0
4. Equipment	0	0	0	0	0
5. Library	0	0	0	0	0
6. New or Renovated Space	0	0	0	0	0
7. Other Expenses	0	0	0	0	0
TOTAL (Add 1-7)	25872	27833	56649	57782	73673

M. Adequacy of Provisions for Evaluation of Program (as outlined in COMAR 13B.02.03.15).

1. Discuss procedures for evaluating courses, faculty and student learning outcomes.

Faculty are evaluated annually by the Division Director responsible for their supervision. The purpose of this evaluation is to provide the faculty member with information from a supervisory perspective, synthesize information from various components of the evaluation process, and assist in the development and implementation of the Annual

Faculty Review and Professional Development Plan. This evaluation includes: a written report based on a classroom observation, annually for non-tenured faculty, and every three years for tenured faculty; a listing of the prior two semesters' of student evaluations of teaching; and the supervisor's assessment of the faculty member's performance in meeting the full range of faculty duties, including professional development, as well as an assessment of college and community service.

Faculty also undergo evaluation in every course taught via student evaluations. The recommended level of minimum acceptable performance on the evaluation instrument is 75%. Faculty members receiving less than acceptable student evaluations are counseled and given advice by his/her Division Director to improve his/her evaluation scores.

- 2. Explain how the institution will evaluate the proposed program's educational effectiveness, including assessments of student learning outcomes, student retention, student and faculty satisfaction, and cost-effectiveness.**

The Office of Planning and Institutional Effectiveness (PIE) is responsible for our research and evaluation processes. Through this department the institution will manage student satisfaction, as well as cost-effectiveness based on enrollment. Assessment of student retention, learning outcomes happens at the division level, and is overseen by the Office of Academic Affairs.

Each year the College engages in an integrated process of planning, evaluation, and budgeting for the following fiscal year. Every unit of the college prepares a plan that reflects its accomplishments (Annual Productivity Report), and, building on the College's mission, vision, institutional priorities, and strategic plan, submits its projected needs (Unit Plan). This planning process identifies challenges and opportunities for each program in the areas of curriculum, recruiting, staffing, and budget. The plan for each unit includes:

- The unit's goals to maintain and improve productivity (e.g. new personnel, supplies, equipment, or facilities);
- Timelines;
- Persons responsible; and
- Assistance that may be required outside the department.

N. Consistency with the State's Minority Student Achievement Goals (as outlined in COMAR 13B.02.03.05).

- 1. Discuss how the proposed program addresses minority student access & success, and the institution's cultural diversity goals and initiatives**

"The College believes in and teaches the ideals and values of cultural and racial diversity and a democratic way of life. HCC also seeks to cultivate in its students critical and independent thought, openness to new ideas, a sense of self direction, moral sensitivity, strength through diversity, and the value of continuing education and life-long learning" (HCC Value Statement).

The Technical Studies program, like all HCC programs, will support the Colleges' value statement and its commitment to cultural diversity. Recognizing the importance of embracing diverse cultures in instruction, HCC offers diversity to its Emerging Issues and Interdisciplinary General Education category, thereby requiring that all degree-seeking students take one three-credit course pertaining to multiculturalism and diversity. In addition, the College employs a full-time multicultural recruiter as well as several support services designed to support and case manage at-risk students (up to 40% of whom are a minority) to help them persist, complete their courses, and graduate.

O. Relationship to Low Productivity Programs Identified by the Commission:

- 1. If the proposed program is directly related to an identified low productivity program, discuss how the fiscal resources (including faculty, administration, library resources and general operating expenses) may be redistributed to this program.**

This program is not related to an identified low productivity program.

P. Adequacy of Distance Education Programs (as outlined in COMAR 13B.02.03.22)

1. Provide affirmation and any appropriate evidence that the institution is eligible to provide Distance Education.

Due to the technical aspects of the classes proposed in this program, it will not be offered completely online, but some individual courses will be available online for students. According to COMAR policy 13B.02.03.22, "An institution may not utilize distance education as a program modality unless the institution: 1) As of January 1, 2018, offers at least one distance education program that has been approved by the Commission and that has received appropriate designation from the institutional accreditor; or 2) Is designated by the Secretary, under §B of this regulation, as an institution eligible to provide distance education". Middle Sates Commission on Higher Education (MSCHE) confirmed that Hagerstown Community College (HCC) was "fully approved" to offer distance education programs in their letter to former HCC president Dr. Guy Altieri, dated June 24, 2016.

HCC currently has several degrees and certificates currently offered via 100% online delivery which have also been submitted to Maryland Higher Education Commission (MHEC).

2. Provide assurance and any appropriate evidence that the institution complies with the C-RAC guidelines, particularly as it relates to the proposed program.

C-RAC is a collective of seven regional organizations including the Middle Sates Commission on Higher Education (MSCHE). Hagerstown Community College is currently accredited through MSCHE, and follows the appropriate guidelines in order to adhere to the national standards and integrity for our distance education programs. As stated previously, HCC received approval from MSCHE to offer distance education programs on June 24, 2016.

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