



11400 Robinwood Drive • Hagerstown, MD 21742-6514 • 240-500-2000
Office of the Vice President of Academic Affairs and Student Services

January 19, 2021

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

Dear Dr. Fielder,

I am pleased to submit for approval an Associate of Applied Science in Medical Laboratory Technician. 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 Collegiate Affairs office for the substantive fee. If I can provide additional information, please contact me.

Sincerely,

C. David Warner, III, Ed.D.
Vice President, Academic Affairs and Student Services



Office Use Only: PP#


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.

- | | |
|---|---|
| <input checked="" type="radio"/> New Academic Program | <input type="radio"/> Substantial Change to a Degree Program |
| <input type="radio"/> New Area of Concentration | <input type="radio"/> Substantial Change to an Area of Concentration |
| <input type="radio"/> New Degree Level Approval | <input type="radio"/> Substantial Change to a Certificate Program |
| <input type="radio"/> New Stand-Alone Certificate | <input type="radio"/> Cooperative Degree Program |
| <input type="radio"/> Off Campus Program | <input type="radio"/> Offer Program at Regional Higher Education Center |

Payment <input checked="" type="radio"/> Yes	Payment <input type="radio"/> R*STARS # 1114277	Payment \$850.00	Date
Submitted: <input type="radio"/> No	Type: <input checked="" type="radio"/> Check # 1114277	Amount:	Submitted: 1/21/2021 ⁺

Department Proposing Program	Health Sciences Division		
Degree Level and Degree Type	Associate of Applied Science		
Title of Proposed Program	Medical Laboratory Technician		
Total Number of Credits	63		
Suggested Codes	HEGIS: 5205.01	CIP: 51.1004	
Program Modality	<input checked="" type="radio"/> On-campus <input type="radio"/> Distance Education (fully online)		
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: 2021		
Provide Link to Most Recent Academic Catalog	URL: http://catalog.hagerstowncc.edu/		
Preferred Contact for this Proposal	Name:	C. David Warner, III, Ed.D.	
	Title:	Vice President, Academic Affairs and Student Services	
	Phone:	(240) 500-2231	
	Email:	cdwarner@hagerstowncc.edu	
President/Chief Executive	Type Name:	James Klauber, Ph.D	
	Signature:	 Date: 01/21/2021	
	Date of Approval/Endorsement by Governing Board:	01/21/2021	

Revised 1/2021

Academic Program Proposal for Associate of Applied Science in Medical Laboratory Technician Hagerstown Community College

A. Centrality of 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.

Hagerstown Community College (HCC) is a state and county supported comprehensive community college. Its central purpose is to offer a diverse array of courses and programs designed to address the curricular functions of university transfer, career entry or advancement, adult basic skills enhancement, general and continuing education, as well as student and community service. It is part of the College's mission to promote and deliver educational excellence within a learning community environment and to foster regional economic and cultural development through community service and collaboration. The College is charged to provide high quality education at a reasonable cost to meet the post-secondary educational needs of the citizens of Washington County and the surrounding region. The College believes in and teaches the ideals and values of cultural diversity and a democratic way of life and also seeks to cultivate in its students critical and independent thought, openness to new ideas, a sense of self-direction, moral sensitivity, and the value of continuing education. The HCC mission statement is, "Hagerstown Community College ensures equitable access to affordable high quality educational programs, promotes practices and policies that ensure student success, and fosters innovation and collaboration to strengthen its regional workforce and community cultural development".

The A.A.S. Medical Laboratory Technician (MLT) degree will prepare students for practice as a medical laboratory technician, also known as a clinical laboratory technician in a variety of practice settings, such as diagnostic labs, doctor's offices, hospitals, industry, and biotechnology. Hagerstown and the surrounding area (Allegany County, Garrett County, and Frederick County) is home to many such settings, including Meritus Health, Family Healthcare of Hagerstown, John Hopkins Community Physicians, and Western Maryland Hospital Center. Medical laboratory technicians, under the supervision of medical laboratory technologists, apply knowledge of test procedures and quality control methods in the areas of hematology, chemistry, serology, urinalysis, blood bank, microbiology, and phlebotomy; performs tests accurately and efficiently using both automated and manual methodology; evaluates the clinical significance of test results. Upon successful completion of the MLT program, students will be eligible to take the Medical Laboratory Technician certification examination through the American Society of Clinical Pathology (ASCP).

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

HCC is dedicated to offering programs that prepare our students for university transfer, career preparation, or personal development. HCC's strategic goal 2, addresses the development of

courses that support a “responsive and dynamic curricula.” The development of the Associate of Applied Science in Medical Laboratory Technician is in line with this goal; the development of curricula in the MLT field is in response to the needs of healthcare employers in HCC’s region and provide students curricula to pursue career opportunities. In collaboration with community partners and an advisory committee, the educational goals and outcomes will be reviewed and measured annually to reflect the principles and ethics of the health information management field, and uphold the mission of HCC. These partnerships will be critical to HCC’s program development as is reflected in strategic goal 8, which states, “expand community and business services and strategic partnership and alliances,” specifically “establish strategic partnerships and alliances in fulfilling the mission” and “cooperate with other community organizations in seeking educational solutions.” HCC faculty and administrators, who have years of industry experience, will work closely with community partners and advisory committee members to evaluate, update and revise the curriculum to meet needs. Additionally, curricula will be in alignment with the requirements of the National Accreditation for Clinical Laboratory Sciences (NAACLS). Completing the proposed Medical Laboratory Technician degree program at HCC allows our graduates to pursue positions in the healthcare industry as entry-level technicians.

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

Expenses for the proposed Medical Laboratory Technician degree program would be funded by student tuition and fees collected by students enrolled within the program. Collectively, the current college resources and future tuition revenue will support and sustain the program for the next five years (See Table 1 and Table 2). Equipment and library resources are to be budgeted within the general operating budget on an ongoing basis. Since the proposed program will be a career program, it will be List A Perkins eligible; hence Perkins funding could purchase new equipment that may be necessary to stay current in the field, as well as professional development for instructors. Additionally, HCC will investigate opportunities available for an Appalachian Regional Commission (ARC) Grant, specifically as it related to State Objective 2.6, in which all Appalachian counties will equal or exceed the national average for enrollment in post-secondary education and ARC Investment Goal 2, ready workforce by increase in education, knowledge, skills, and health of residents to work and succeed in Appalachia.

4. Provide a description of the institution’s commitment to:
a) Ongoing administrative, financial, and technical support of the proposed program.
b) Continuation of the program for a period of time sufficient to allow enrolled students to complete the program.

HCC has a commitment to ongoing administrative, financial and technical support for all educational programs. The proposed program will be housed in the Career Programs Building on campus. The proposed program will be overseen by a program coordinator and the Health Sciences Division Director. Unit plans are built upon the College’s vision, institutional priorities, and strategic plans, as well as needs within the unit. As such, units report projected needs for maintaining productivity and improving results; resources needed to maintain or

improve productivity (e.g., personnel, supplies, equipment, technology, facilities). This information is the foundation for the unit's plan and budget.

Hagerstown Community College will begin the proposed program with a small cohort of students with the anticipation that the cohort size will grow as the program matures. It is anticipated that students will be able to complete the program on a full-time or part-time basis. Hagerstown Community College is committed to the success of their students and provides a variety of support services to ensure retention and completion.

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.**
 - b) Societal needs, including expanding educational opportunities and choices for minority and educationally disadvantaged students at institutions of higher education.**
 - c) The need to strengthen and expand the capacity of historically black institutions to provide high quality and unique educational programs.**

As shown in Section C - Market Supply and Demand, the employment outlooks for medical laboratory technicians is expected to grow faster than average. The proposed Medical Laboratory Technician program affords students the opportunity to obtain foundational knowledge and a skill set to be entry-level medical laboratory technicians. At an entry level, they will hold the competencies necessary to perform routine clinical laboratory tests, as well as have responsibilities for information processing, training, and quality control monitoring wherever clinical laboratory testing is performed. The proposed program will prepare students for employment opportunities in a variety of healthcare settings, such as general medical and surgical hospitals, medical and diagnostic laboratories, physician offices and outpatient care centers.

- 2. Provide evidence that the perceived need is consistent with the Maryland State Plan for Postsecondary Education.**

The 2017-2021 Maryland State Plan for Postsecondary Education: Increasing Student Success with Less Debt has three goals: Access, Success, and Innovation. As stated in the summary of the plan: "The 2017-2021 Maryland State Plan for Postsecondary Education embraces the need to develop creative, unique, successful initiatives, and these initiatives can only be embraced if they support all students." The proposed Medical Laboratory Technician degree program would meet the following strategies:

- Strategy 6: Improve the student experience by providing better options and services that are designed to facilitate prompt completion of degree requirements. The curriculum for the proposed program has been developed to follow a focused pathway

that will help encourage students to complete the degree program in a timely manner, as well encourage college completion and student success.

- Strategy 8: Develop new partnerships between colleges and businesses to support workforce development and improve workforce readiness will be met by developing affiliation agreements with area hospitals, clinics, laboratories for the MLT students to complete their clinical rotations and potential places of employment. Additionally, HCC will investigate articulation agreements with the 4-year Bachelor of Science in Medical Laboratory Science programs in Maryland to facilitate career ladder in the profession of clinical laboratory science.
- Strategy 9: Strengthen and sustain development and collaboration in addressing teaching and learning challenges. The proposed project will include didactic and clinical/laboratory courses. Courses will be developed to incorporate innovative strategies to improve student outcomes. Examples of these strategies may include flipped classrooms, utilization of technology and competency-based learning. Additionally, faculty are providing opportunities for professional development to enhance their pedagogical practices.

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

1. Describe potential industry and industries, employment opportunities, and expected level of entry (ex: mid-level management) for graduates of the proposed program.

The potential industry or industries in the tristate area and beyond that all utilize medical/clinical laboratory technicians includes hospital clinical laboratories, commercial clinical laboratories, physician offices, and public health laboratories within this geographic region. The expected level of graduates once they complete this proposed degree program would be entry-level medical laboratory technicians. The occupational projections shared below reflect growth over the next ten years.

2. Present data and analysis projecting market demand and the availability of openings in a job market to be served by the new program.

According to the Maryland Department of Labor, Licensing, and Regulation, employment growth for medical/clinical laboratory technicians is projected at 9,205 through 2028, and total job opening are projected to grow by 21.66 percent over the current demand with long-term occupational projections and 7.8 percent increase by 2021 with short-term projections. A search of job openings using Indeed.com shows multiple listings of job openings for medical/clinical laboratory technicians in the tristate region.

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.

It is difficult to quantify the number of potential students for this program, but student interest in all health professions programs is very strong. The number of applicants for all health professions programs at HCC exceeds the number of students that can be admitted. Student enrollment in medical and clinical laboratory technician programs across the country is robust. It is anticipated that HCC's proposed Medical Laboratory Technician program would generate similar interest. In addition, students who currently are enrolled or who have completed our Phlebotomy Certificate have an opportunity to ladder into the Medical Laboratory Technician program. The proposed program will attract a diverse group of students from Washington County and the surrounding area. The program will recruit students from several sources: (1) incoming freshman seeking a degree in Medical Laboratory Technician, (2) current HCC students, and (3) current phlebotomy professionals seeking to expand on their current skill set. The total class size for the first cohort is projected at 12 (10 full-time students and 2 part-time students) with an anticipated increase of 30% for each cohort thereafter through year 5. Each cohort completes the program through two academic years.

Student Enrollment Projects

	Year 1	Year 2	Year 3	Year 4	Year 5
Full-Time	10	23	30	39	51
Part-Time	2	6	8	14	16
Total	12	29	38	53	67

The proposed medical laboratory technician program will follow a cohort design. The cohort scheduling model will provide additional support for students in the program. Cohort classes follow a more structured schedule than the typical college classes and offer more one on one time with the instructor. Studies demonstrate that when students are able to learn together in a cohort, they have greater success and are more likely to finish their respective program.

4. Provide data showing the current and projected supply of prospective graduates.

According to the Bureau of Labor Statistics (BLS), "employment of medical/clinical laboratory technicians is projected to grow 7 percent from 2019 to 2029, faster than the average of all occupations. An increase in the aging population is expected to lead to a greater need to diagnose medical conditions through laboratory procedures. Medical/clinical laboratory technician will be in demand to use and maintain the equipment needed for diagnosis and treatment" (BLS, 2020). BLS expects a national employment of 362,500,800 by 2029 and annual projected job openings of 24,700.

Bureau of Labor Statistics – Long Term Occupational Projects 2019-2029 (National)

Occupation	Base Year	Base	Projected Year	Projected Jobs	Change	Percent Change	Average Annual Openings
Medical/Clinical Laboratory Technician	2019	337,800	2029	362,500	24,700	7.3%	17,942

In Maryland, the long-term projections are expected to yield 9,205 jobs by 2028, which is a 21.66 percent increase over the current demand. The short-term demand for Maryland is expected to increase by 7.8 percent by 2021.

Occupation	Base Year	Base	Projected Year	Projected Jobs	Change	Percent Change	Average Annual Opening
Long-Term	2018	7,566	2028	9,205	1,639	21.7%	630
Short-Term	2019	2,732	2021	2,808	76	7.8%	38

According to the Workforce Regional Occupations Projections, medical/clinical laboratory technicians is projected to grow 6 percent from 2016 to 2026 in the Western Maryland Workforce Region.

Healthcare Practitioners and Technical Occupations – Maryland Occupational Projections 2012-2022 - Workforce Information & Performance

		Employment			Openings	
Occ. Code	Occupational Title	2012	2022	Change	Replacement	Total
29-2012	Medical and Clinical Laboratory Technicians	3,740	4,377	637	980	1,617

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.**

According to data obtained from the Maryland Higher Education Commission's Academic Program Inventory, five of the sixteen community colleges in Maryland offer an Associate degree in Medical Laboratory Technician or Medical Laboratory Technology.

Institution	Program Name	Degree Awarded
Allegany College of Maryland	Medical Laboratory Tech	Associate Degree
Anne Arundel Community College	Medical Laboratory Technician	Associate Degree
College of Southern Maryland	Medical Laboratory Technician	Associate Degree
Community College of Baltimore County	Medical Laboratory Technology	Associate Degree
Howard Community College	Medical Laboratory Technician	Associate Degree

- 2. Provide justification for the proposed program.**

The nearest community colleges that offer a medical/clinical laboratory technician program is Howard Community College which is approximately 66 miles away and Allegany College of Maryland which is approximately 71 miles away. Therefore, HCC's proposed program would not compete with any other existing programs in the State due to the distance between campuses.

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

- 1. Discuss the program's potential impact of the implementation or maintenance of high-demand programs at HBIs.**

Not applicable.

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 or 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 proposed medical laboratory technician program is designed to offer students an associate of applied science degree as at entry level, possessing the entry level competencies necessary to perform routine clinical laboratory tests in areas such as clinical chemistry, hematology/hemostasis, immunology, immunohematology/transfusion medicine, microbiology, urine and body fluid analysis and laboratory operations. Additionally, the proposed medical laboratory technician program was established to provide a career opportunity for individuals seeking to work in the healthcare field. The healthcare industry depends on the important work of medical laboratory technicians as they are a critical component in a healthcare facility. They traditionally work under the supervision of physicians, lab managers or lab technologists to conduct lab tests on specimens to aid in the detection of diseases or illnesses.

Hagerstown Community College currently has a few dedicated faculty positions that currently support the proposed medical laboratory technician program. In addition to current faculty, additional faculty (full-time & adjunct) will be sought that have current credentials as outlined by the National Accrediting Agency for Clinical laboratory Sciences. The Health Sciences Division Director and the Vice President for Academic Affairs & Student Services will oversee the program.

The table below identifies existing faculty as well as planned new faculty needs.

Faculty Member	Credentials	Status	Courses Taught
<i>Existing Faculty</i>			
Laurie Montgomery	MS, Biology BS, Biology & Chemistry Math & Science Division Director	Adjunct	BIO-116 Human Anatomy & Physiology for Allied Health
Cynthia Blank	PhD, Education/Curriculum & Instruction MS, Plant Pathology BS, Biology	Full-time	BIO-205 Microbiology
Veronica Stein	PhD, Physical Chemistry	Full-time	CHM-101 Introductory College Chemistry
<i>New Faculty</i>			
Instructor/Program Coordinator	M.S., MLS (ASCP)	Full-time	MLT Core Courses
Instructor	MLS (ASCP)_	Adjunct	MLT Core Courses

Hagerstown Community College will seek an individual for a full-time, tenure track program coordinator/faculty position who will be responsible for teaching and coordinating the Medical Laboratory Technician program core curricula. In addition to teaching and coordinating the core curricula, this individual will be responsible for the organization, administration, evaluation, continuous quality improvement; curriculum planning and development; participate in the budget preparation process as related to procuring materials and instructional resources; oversight of program accreditation and the advisory committee; and have regular and consistent contact with students, faculty, and program personnel. The individual selected must hold ASCP-BOC or ASCP-BOC generalist certification as a Medical Laboratory Scientist/Medical Technologist, has three years of teaching experience and must have at minimum, an earned master's degree.

Additionally, adjunct faculty members, with an expertise in medical laboratory roles will be employed on an as needed basis.

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

The proposed program consists of didactic and laboratory courses designed to provide students with entry-level knowledge and skill required of the medical laboratory profession. The curriculum will address pre-analytical, analytical and post-analytical components of laboratory services. This includes collecting, processing, and analyzing biological specimens and other substances, principles and methodologies, performance of assays, problem-solving, troubleshooting techniques, significance of clinical procedures and results, principles and practices of quality assessment, for all major areas practiced in the clinical laboratory setting.

Upon successful completion of the proposed program, the student will graduate with an Associate of Applied Science Degree and will be eligible to take a national certification examination.

Educational Objectives: The Medical Laboratory Technician program will:

1. Provide a quality educational program that is flexible to student needs.
2. Prepare graduates to function as safe and competent medical laboratory technicians with the highest level of competence, offering a high level of academic achievement through a combination of academic preparation and technical training.
3. Maintain the level and quality of instructional in the medical laboratory technician core courses by including the latest in technological advances.
4. Provide the healthcare community with graduates with the knowledge and skills to display ethical, professional attitudes on campus and in clinical required of medical laboratory technicians.
5. Educate students in the merits of continuing professional development.

Learning Outcomes: Upon successful completion of the program, students will be able to:

1. Demonstrate entry-level competency for specimen analysis in hematology, coagulation, clinical chemistry, immunology, immunohematology, microbiology, urine/body fluid analysis, and laboratory operations according to established protocols and procedures.
2. Exhibit compliance in the application of safety and governmental regulations in handling chemical and biological materials.
3. Exhibit legal and ethical behavior which adheres to the professional conduct standards for clinical laboratories.
4. Demonstrate critical thinking skills for problem-solving in laboratory and clinical settings.
5. Demonstrate professional and ethical conduct in all forms of communication with patients, laboratory personnel, and other healthcare professionals.
6. Recognize the importance of continued professional development to demonstrate professional competence and growth as a healthcare professional.

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.**

HCC maintains assessment plans for all programs and courses that outline learning outcomes, assessments, curriculum mapping and data collection through Student Learning Outcomes Assessment (SLOA). Assessment practices to measure student learning and achievement of course objectives take many forms including exams, quizzes, written assignments, and competency-base evaluations. 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.

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 data collected during the assessment process is used to provide feedback to students and faculty, reinforcing and improving educational practices that facilitate learning. All core courses in the proposed Medical Laboratory Technician degree program are to be evaluated at the completion of the semester in which they are held. Lead faculty will assess student performance in the cognitive, psychomotor and affective domains. Additionally, on an annual basis courses, program outcomes are reviewed to allow for curriculum improvements.

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

The Associate of Applied Science in Medical Laboratory Technician will require 44 program credits and 19 general education credits for a total of 63 credits. Required program courses are as follows:

BIO 116 Human Anatomy and Physiology for Allied Health 4 credits

This is a single semester course (lecture and lab) designed to provide an understanding of the structure and function of human anatomy, including the nervous, endocrine, integumentary, muscular, skeletal, digestive, urinary, reproductive, respiratory, circulatory, and immune/lymphatic systems. The laboratory work involves a complete study and dissection of typical mammal specimens for comparison to the human body.

BIO 205 Microbiology 4 credits

This course is an introduction to the biology of microorganisms including microbial diversity, structure, metabolism, growth, and genetics. Topics of disinfection, sterilization, immunity, and the relationship to human diseases and the environment are included.

MLT 101 Introduction to Medical Laboratory Technician 3 credits

This course introduces students to the role that the Medical Laboratory Technician plays within the health-care system. This course covers a general overview of the departments of the clinical laboratory and laboratory personnel, laboratory safety, infection control, glassware and equipment, medical terminology, and mathematics as they apply to laboratory science. Students will develop familiarity with the blood bank and the collection of body fluids. Students review the skills needed to draw blood and prepare specimens for testing.

MLT-110 Hematology & Hemostasis 4 credits

This course covers the study of blood cells, disease, theory of coagulation and diagnostic procedures relating to whole blood. Also included is instruction in specimen processing and handling. Basic elements of automation and quality control are introduced.

MLT-111 Immunology & Molecular Diagnostics 3 credits

This course studies serum immunity and reactions to antigens and antibodies as they apply to blood. In addition, this course discusses serologic procedures including molecular biology testing.

MLT-201 Clinical Chemistry 4 credits

This course studies the basic principles and techniques of biochemistry for clinical and laboratory applications. This specifically addresses enzymes, hormones, proteins, lipids, and carbohydrates, electrolytes, and acid-base balance.

MLT-202 Clinical Microbiology 4 credits

This course focuses on the processing and handling of clinical material for microbiological culture with an emphasis on aseptic techniques, sterilization procedures and specimen handling and treatment. Proper identification of microorganisms through the use of specific media is included as well as antibiotic susceptibility testing, blood culture techniques and gram staining.

MLT-203 Urinalysis and Body Fluids 2 credits

This course studies the physical, chemical and microscopic examination of urine specimens and related tests on other body fluids such as semen, gastric contents, duodenal contents, transudates and exudates. A review of the anatomy and physiology of the kidney is included

MLT-204 Mycology, Parasitology, and Virology 2 credits

This course studies basic theory and clinical procedures used to isolate and identify infectious diseases, including the pathogenesis, epidemiology, treatment and laboratory identification of microorganisms associated with mycology, parasitology, and virology.

MLT-205 Immunohematology/Serology 3 credits

This course studies the theories of blood group antigens, antibodies, ABO grouping, Rh typing, cross matching, antibody screening and identification techniques as well as special emphasis on quality control.

MLT-210 MLT Clinical Practicum 8 credits

Provides direct supervision of clinical laboratory skills application at affiliated hospitals or health-care agencies. Students gain experience working in a variety of laboratory areas, such as hematology, coagulation, urinalysis, immuno-hematology, microbiology and clinical chemistry.

COM 103 Public Speaking 3 credits

This beginning course focuses on the theory of public address. Students will gain practice speaking in public and mediated communication contexts. Rhetorical theory will be addressed as students prepare and deliver original speeches and learn to think critically about the sociocultural challenges facing public speakers in the 21st century. Emphasis placed on informative, persuasive, and multimedia presentations.

or

COM 108 Introduction to Human Communication 3 credits

This course focuses on the communicative processes of speaking and listening from the intrapersonal, interpersonal, and group communication point of view. Skills learned assist students in developing an effective conversational style when speaking with a group or with an individual. Emphasis is also placed on communication theory and the development of students' listening skills in receiving, interpreting, and retaining oral communication.

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

In addition to the Associate of Applied Science Medical Laboratory Technician program specific courses, students will be required to complete 19 general education requirements, including:

English Composition – ENG 101	3 credits
College Algebra - MAT 101	3 credits
Introductory College Chemistry – CHM 101	4 credits
Select from the approved Arts/Humanities general education list	3 credits
Select from the approved Behavioral/Social Science general education list	3 credits
Select from the approved Diversity general education list	3 credits

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

The National Accreditation for Clinical Laboratory Sciences (NAACLS) is an independent, non-profit accrediting body for educational programs involving clinical or medical laboratory sciences and histology. Programs that receive accreditation from the NAACLS have demonstrated themselves to be comprehensive and up to date, and meet current educational standards of quality and expertise. HCC's program will be seeking NAACLS accreditation. Program accreditation by NAACLS allows graduates to be eligible for the American Society for Clinical Pathology (ASCP) national Medical Laboratory Technician Board of Certification examination.

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

Not applicable.

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 <https://www.hagerstowncc.edu/academics/catalogs>. Fact sheets are created for programs that include a summary of the program, admission requirements, course

requirements, curriculum pathways, employment outlook, and contact information. As with several allied health program, a fee sheet is provided to students that outline estimated costs associated with a program. 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 (LMS), Information Technology, Student Services, and Finance.

Each course syllabus follows a standard template that contains the course name, instructor, student learning outcomes, minimum clock hours required for the course including both in class and out of class work. Course specific technology requirements are outlined in the syllabus as well as recording disclosure statement. Each syllabus also gives contact information for Student Services and the Disabilities' Office.

- 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 on the website at HCC. 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.**

There are currently no articulation agreements for this proposed program.

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, and adjunct) and the course(s) each faculty member will teach in the proposed program.**

The program will have qualified faculty/instructors who hold appointments within the education program (e.g., certified professional in their respective fields). Faculty will demonstrate adequate knowledge and proficiency in their content areas and demonstrate the ability to teach effectively at the appropriate level.

The table below identifies existing faculty as well as planned new faculty needs.

Faculty Member	Credentials	Status	Courses Taught
<i>Existing Faculty</i>			
Laurie Montgomery	MS, Biology BS, Biology & Chemistry Math & Science Division Director	Adjunct	BIO-116 Human Anatomy & Physiology for Allied Health
Cynthia Blank	PhD, Education/Curriculum & Instruction MS, Plant Pathology BS, Biology	Full-time	BIO-205 Microbiology
Veronica Stein	PhD, Physical Chemistry	Full-time	CHM-101 Introductory College Chemistry
<i>New Faculty</i>			
Instructor/Program Coordinator	M.S., MLS (ASCP)	Full-time	MLT Core Courses
Instructors	MLS (ASCP)	Adjunct	MLT Core Courses

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

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

The Fletcher Faculty Development Center at Hagerstown Community College provides a facility, staff support, and training and workshops to help the college's faculty members maintain and improve excellence in teaching. The center was founded in 2013 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, application of the Quality Matters Rubric, 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.
- 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 Fletcher Faculty Development Center (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: Soft Chalk, 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 implemented 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.

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 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 instruction equipment are adequate to initiate the program, particularly as related to space for classrooms, staff and faculty offices, and laboratories for studies in the technologies and sciences.

Students at Hagerstown Community College have the opportunity to utilize all physical facilities on campus including the William M. Brish Library; Learning Support Center, Behavioral Sciences and Humanities building; Athletic, Recreation and Community Center; STEM building; Technical Innovation Center; Performing and Visual Arts Education Center; Career Programs Building housing several allied health programs and the nursing program; as well as, a state-of-the art computer lab; and the Student Center housing lounge and dining areas and the school store.

The Health Science Division, housed in the Career Programs Building has sufficient dedicated space for program faculty, staff, and students. Available technology includes state-of-the-art electronic smart classrooms equipped with computers and data projection. In addition, the College is home to some of the latest equipment for use in skills labs for the health sciences programs, including up-to-date technology.

In addition to the traditional classroom environment, the Medical Laboratory Technician program will utilize a designated lab with 20 student stations and an instructor station which provides a learning environment for students to develop and practice technical skills needed as a medical laboratory technician. The laboratory will have a wide array of equipment to provide students an opportunity to become competent and proficient with clinical laboratory skills necessary as an entry-level medical laboratory technician. Additionally, this learning environment is designed as a smart classroom equipped with a computer, projection system, white board, documentation camera, wireless internet access, and course management system.

The department has sufficient dedicated office space for faculty and staff. Faculty offices include a desk, multiple chairs, bookshelves to house resources and locked filing cabinets to secure program materials. There is a conference room available for faculty meetings and private conferences with students.

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**
- b) A learning management system that provides the necessary technological 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 is currently using Brightspace 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 to 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.**

The anticipated program resources for the first five years of implementation are outlined in Table 1. Resources for the program will be driven by tuition, as outlined below. Each resource category is justified separately below:

1. Reallocated Funds: The Medical Laboratory Technician program will be supported partially through internal reallocation of funds from the discontinuation of academic programs within the Health Sciences Division.
2. Tuition/Fee Revenue: The enrollment projections align with other recent career and technical degree programs at HCC. The initial cohort of students to be recruited for the program will be 10 full-time students and 2 part-time students. Annual tuition and fees are calculated based on current rates of \$4,110 for FT students and \$137/credit for 12 credits/year for PT students. The number of enrolled students in a cohort is anticipated to increase by 30% a year. Each cohort is anticipated to completed the program in two years.
3. Grants, Contracts and other External Sources: Hagerstown Community College will investigate grant opportunities available with the Appalachian Regional Commission (ARC) Grant, specifically as it related to State Objective 2.6, in which all Appalachian counties will equal or exceed the national average for enrollment in post-secondary education and ARC Investment Goal 2, ready workforce by increase in education, knowledge, skills, and health of residents to work and succeed in Appalachia. The ARC grant will help to finance the costs associated with equipment, technology, and supplies to

be utilized to develop hands-on skills. The total project amount will be \$100,000, which includes \$50,000 from the ARC grant and a \$50,000 match from HCC. Should a grant application be denied, HCC is prepared to fund the program with the general operating funds. In addition to the ARC grant, HCC will request the associate degree to be added to the Perkins' postsecondary list of approved career and technology education programs, otherwise known as Perkins' List A.

4. Other Sources: None

TABLE 1: RESOURCES					
Resource Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Reallocated Funds	59,750	0	0	0	0
2. Tuition/Fee Revenue (c+g below)	44,388	105,156	139,440	139,996	247,968
a. Number of F/T students	10	23	30	39	51
b. Annual Tuition/Fee Rate	4,110	4,140	4,200	4,260	4,320
c. Total F/T Revenue (a x b)	41,100	95,220	126,000	166,140	220,320
d. Number of P/T Students	2	6	8	14	16
e. Credit Hour Rate (# of credits earned)	12	12	12	12	12
f. Annual Credit Hour Rate	137	138	140	142	144
g. Total P/T Revenue (d x e x f)	3,288	9,936	13,440	23,856	27,648
3. Grants, Contracts & Other External Sources	50,000	0	0	0	0
4. Other Sources	0	0	0	0	0
TOTAL (Add 1-4)	154,138	105,156	139,440	139,996	247,968

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.

The anticipated program expenditures are outlined in Table 2. During Year 1 the primary expenditures is equipment and instruction. Each expenditure category is detailed below:

1. Faculty: In Year 1, one new tenure-track faculty will be hired to teach in the program. During Year 4 an additional adjunct faculty will be hired. Salary is determined based on the candidate's knowledge, skills, abilities, work experience, and credentials and in relationship to other employees in the same grade and/or other similar positions.
2. Administrative Staff: None
3. Support Staff: There is not one designated support staff member for the program. The health sciences division has support staff that assists with various allied health programs within the division.
4. Equipment: In year one, \$75,000 is allocated to establish the teaching laboratory for the Medical Laboratory Technician program.
5. New or Renovated Space: None
6. Other Expenses: None

TABLE 2: EXPENDITURES					
Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Faculty (b+c below)	62,500	64,375	66,306	101,555	105,515
a. # FTE	1	1	1	1.5	1.5
b. Total Salary	50,000	51,500	53,045	81,067	84,412
c. Total Benefits	12,500	12,875	13,261	20,488	21,103
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	75,000	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)	137,500	64,375	66,306	101,555	105,515

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.

Hagerstown Community College (HCC) assesses programs using several methodologies including Student Learning Outcomes Assessment (SLOA), faculty evaluation, and through an annual unit planning process.

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 Associated of Applied Science in Medical Laboratory Technician 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.

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 will include: 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 primary use of student evaluation of instruction is as a source of information to maintain quality instruction in all the College's courses. Directors are expected to review the scores of student evaluations with faculty in their divisions. Scores on individual items can offer specific information on areas where faculty may need to make changes in course methodology, course delivery, etc. Student comments can also be a source of valuable feedback.

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: a) the unit's goals to maintain and improve productivity (e.g., new personnel, supplies, equipment, or facilities); b) timelines; c) Persons responsible; and d) 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). Institutional Learning Outcome (IL02): Globalization and Diversity states that students will be afforded the opportunity to “explore and analyze new ideas, and understand the value of moral sensitivity and cultural diversity.” The Medical Laboratory Technician 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 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 proposed program is not related to low-productivity programs as identified by the Commission.

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

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

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 form MSCHE to offer distance education programs on June 24, 2016.

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