

ANNE ARUNDEL COMMUNITY COLLEGE

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Dr. Dawn Lindsay

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June 10, 2019

Dr. James D. Fielder Jr.
Secretary of Higher Education
Maryland Higher Education Commission
6 N. Liberty Street
Baltimore, MD 21201

Dear Dr. Fielder: *JLM*

Anne Arundel Community College is requesting approval for the new lower division certificate, Medical Laboratory Assistant. The proposed Medical Laboratory Assistant (MLA) certificate will prepare students as trained clinical laboratory assistants in a variety of clinical laboratory settings including hospitals, clinics and physician office laboratories. If approved, it will serve as a career ladder from the Phlebotomy Letter of Recognition into the Medical Laboratory Assistant Certificate and into Medical Laboratory Technician A.A.S. degree. MLA Certificate graduates will qualify for entry-level specimen processor positions in the clinical laboratory sector.

This program is consistent with the college's mission in that it will allow us to respond "to the needs of our diverse community by offering high quality, affordable, accessible, and innovative life-long learning opportunities."

All documentation is attached and the chart below reflects the program name.

I look forward to your positive response. Should you have any questions, please contact Dr. Alycia Marshall, Associate Vice President for Learning and Academic Affairs at aamarshall@aacc.edu or (410) 777-2776.

MHEC Title	MHEC Fee
Medical Laboratory Assistant	
Total	250.00

Sincerely,

Dawn

my

Dr. Dawn Lindsay
President

- cc: Michael H. Gavin, Ph.D., Vice President for President
Alycia Marshall, Ph.D., Associate Vice President for Learning & Academic Affairs
Nanci Beier, M.A., Registrar
Elizabeth Appel, M.S.W., Dean, Health Sciences
Tara Carew, M.A., Financial Aid



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

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

- | | |
|--|--|
| <input type="radio"/> New Academic Program
<input type="radio"/> New Area of Concentration
<input type="radio"/> New Degree Level Approval
<input checked="" 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 |
|--|--|

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:
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Department Proposing Program	Health Technologies/Medical Laboratory Technician	
Degree Level and Degree Type	Lower Division Certificate	
Title of Proposed Program	Medical Laboratory Assistant Certificate	
Total Number of Credits	29	
Suggested Codes	HEGIS: 520501	CIP:
Program Modality	<input type="radio"/> On-campus <input type="radio"/> Distance Education (<i>fully online</i>) <input checked="" 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: https://catalog.aacc.edu/	
Preferred Contact for this Proposal	Name: Dr. Alycia Marshall	
	Title: Associate Vice President for Learning and Academic Affairs	
	Phone: (410) 777-2776	
	Email: aamarshall@aacc.edu	
President/Chief Executive	Type Name: Dawn Lindsay	
	Signature:	Date: 7/2/19
	Date of Approval/Endorsement by Governing Board: 02/26/2019	

Revised 6/13/18

Maryland Higher Education Commission
New Certificate Program Proposal
Medical Laboratory Assistant (MLA) Certificate

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 mission of AACC identifies teaching and learning as its primary focus and states that "With learning as its central mission, Anne Arundel Community College responds to the needs of our diverse community by offering high quality, affordable, accessible and innovative lifelong learning opportunities." Anne Arundel Community College's vision is that of "...a premier learning community that transforms lives to create an engaged and inclusive society." Anne Arundel Community College's philosophy is to "strive to embody the basic convictions of our country's democratic ideal: that individuals be given full opportunity to discover and develop their talents and interests; to pursue their unique potentials; and to achieve an intellectually, culturally and economically satisfying relationship with society."¹

The proposed Medical Laboratory Assistant (MLA) certificate program at Anne Arundel Community College (AACC) would prepare students as trained clinical laboratory assistants in a variety of clinical laboratory settings including hospitals, clinics and physician office laboratories. Input was received for this proposal from clinical laboratory managers, the American Society for Clinical Pathology (ASCP), which is the credentialing organization for the MLA credential, and the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) that grants accreditation for what they term the Clinical Laboratory Assistant or CLA program. This proposed MLA program is designed to ensure that students will learn the practical skills needed to excel as a medical laboratory assistant in both in-patient and out-patient phlebotomy and processing, blood donor phlebotomy and processing, specimen accessioning, Point-of-Care and Clinical Laboratory Improvement Amendment (CLIA'88) waived testing, and computer and customer service skills. Students would apply what they learn through their experience in two laboratory practicums, one for phlebotomy skills and one for laboratory assistant skills. This proposed certificate program emphasizes the professional competencies necessary to meet industry standards. It would serve as a career ladder from the AACC's Phlebotomy Letter of Recognition into the Medical Laboratory Assistant Certificate and into the Associate of Applied Science (A.A.S.) Medical Laboratory Technician (MLT) degree. MLA Certificate graduates would qualify for entry-level specimen processor positions in the clinical laboratory sector and, with completion of the MLT program, advance to increasing responsibility related in the clinical laboratory, and, potentially, to four-year Bachelor of Science Medical Laboratory Scientist (MLS) academic programs. Upon completion of the program, students would be immediately eligible to apply for certification as a MLA through ASCP.²

¹ <http://www.aacc.edu/about/mission-and-vision>

² <https://www.ascp.org/content/board-of-certification/get-credentialed>

Because MLA's are in high demand at the local, state, and national levels, the MLA certificate program would assist the college in fulfilling its mission, vision and philosophy. As a leader in career education and training, AACC has been encouraged by the laboratories in the Baltimore-Washington corridor to implement an MLA program, preparing students to address community needs as future clinical laboratory assistants within a variety of clinical laboratory settings.

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

AACC is committed to helping students achieve their educational goal, which is the theme of AACC's strategic plan. Every decision is grounded in how students can be helped to achieve academic excellence and remain engaged with their own goals. The college's strategic plan, *Engagement Matters: Pathways to Completion*³, focuses on creating the ideal conditions to ensure that more students complete their educational goals and earn family sustaining wages. The college is pursuing this plan while adhering to the mission's central tenet of committing to academic excellence, which is the fundamental foundation upon which the work and continued reputation as a college of distinction is built.

The strategic plan is strongly rooted in national research and best practices and reflects the student journey through the key milestones of engagement, entry, progress and completion. This guided pathways approach aims to provide better structure through intentional programming and interventions that will help all students through each milestone. The overriding purpose of *Engagement Matters: Pathways to Completion* is to "increase completion by transforming the culture of the institution to ensure equity and that the college remains student-ready and committed to academic excellence." The three Engagement Matters goals are:

- **Goal 1: Engagement & Entry** - Increase connection and enrollment of all students through a college-wide emphasis on equity, student success and academic excellence.
- **Goal 2: Progress** - Increase progress of all students through a college-wide emphasis on equity, student success and academic excellence.
- **Goal 3: Completion** - Increase completion of all students through a college-wide emphasis on equity, student success and academic excellence.

Successful completion of the MLA certificate program would adequately prepare and connect students to certification, transfer and entry-level employment opportunities in a variety of health fields further supporting the College's strategic goals of progress and completion.

³ http://www.aacc.edu/media/college/leadership/StrategicPlanBrochure_F16_WEB.pdf

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.)

There are no reallocated funds. Laboratory expenses for the MLA certificate program would be funded by student laboratory fees collected by students enrolled within the program. The tuition collected for enrolled students will cover the cost of faculty salaries and benefits. It is estimated that there will be 10 students per semester in years 1-3, or 20 per academic year rising up to a total of 25 students per academic year in years 4-5. Collectively, the current college resources and future tuition revenue would support and sustain the program for the next five years.

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

a) ongoing administrative, financial, and technical support of the proposed program

The proposed program would be housed in the Thomas E. Florestano Sr. Allied Health and Public Service Building (FLRS) at the main campus. The Medical Laboratory Technician (MLT) program coordinator would be overseeing this program and reporting to the Assistant Dean of Health Sciences and Strategic Initiatives. Student tuition fees would be used to cover the additional costs of this program (see above). Current MLT adjunct faculty would be used initially until enrollment grows sufficient to justify hiring a full-time faculty member. Since the certificate program would fall under the MLT coordinator, existing resources including administrative support would also help to support the program along with the technical support of AACC's Information Services department. This consists of an onsite technical call center and Anne Arundel Community College's Virtual Campus maintenance of the learning management system housing its online courses.

b) continuation of the program for a period of time sufficient to allow enrolled students to complete the program

AACC fully anticipates continuation of this certificate program beyond the time needed for students to complete. The College is committed to the success of its students and provides various support services to ensure timely progression and completion, including a dedicated Student Success Coach for Allied Health students, and a variety of academic support programs including tutoring, and specialized academic support in science and math courses.

A teach-out plan would be added to the MLA program in the case that the MLA program may have to be suspended or deleted due to declining enrollments. All courses in the MLA program except for the MLA practicum currently, are part of the phlebotomy program or the MLT program. Since the program is a one year, two semester program, if a decision is made to suspend or delete the program due to insufficient enrollment, then a new class would not be admitted into the MLA

program. However, all students currently reenrolled in the MLA program will be able to continue in the program until 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

Currently there are no MLA programs in Maryland. Individuals who perform the duties of the MLA receive only on-the-job training with limited knowledge pertaining only to the requirements at that particular laboratory, and limited opportunities for career advancement. The MLA program at AACC would fulfill this need serving as a career ladder beginning with the MLT 125 Phlebotomy and MLT 275 Phlebotomy Practicum courses. The next step of the career ladder is completion of MDA 100 Introduction to Medical Terminology; MDA 110 Professionalism in Health Care; and MLT 103 Entry Level Clinical Laboratory Testing to earn the Phlebotomy Letter of Recognition. From there, students can advance as a phlebotomist and expand their knowledge by completing MLT 100 Introduction to the Medical Laboratory; MLT 101 Urinalysis and Body Fluids; MLT 102 Quality Assurance and Quality Control; BIO 231 Human Biology 1; CTA 100 Computing and Information Technology; and MLT 274 Medical Laboratory Assistant Practicum to complete the Medical Laboratory Assistant certificate program. Students may progress to the Medical Laboratory Technician (MLT) degree program as MLT 100, MLT 101, MLT 102, BIO 231, and CTA 100 are within the MLA program and are required in the MLT program. The MLT program also requires MAT 137 College Algebra, CHE 111 General Chemistry, and BIO 223 General Microbiology. MLT students who are not successful in any of these courses can decelerate into the MLA program. Once they have earned a grade of at least C in those courses they can reapply to the MLT program. The academic curriculum ladder benefits students by providing specific and employable skill sets at each step along the way.

b) Societal needs, including expanding educational opportunities and choices for minority and educationally disadvantaged students at institutions of higher education

The MLA program would expand educational opportunities for phlebotomy students and working phlebotomists, including minority and educationally disadvantaged students, which are represented within the community and student population that AACC currently serves. Currently, there are no MLA programs in Maryland and individuals who perform the duties of the MLA receive only on-the-job training with limited knowledge pertaining only to the requirements at that particular laboratory, and limited opportunities for career advancement. The MLA

certificate program at AACC would fulfill this need serving as a career ladder beginning with the MLT 125 and MLT 275 Phlebotomy courses. Many of the phlebotomy students are minority students and many of the students also have limited financial resources. The cost of the one semester 12 credit phlebotomy Letter of Recognition program is less than \$2000. Students who are particularly economically disadvantaged could take only the six credit phlebotomy courses, lowering the cost to approximately \$1000 while simultaneously developing an employable skill. Although the phlebotomy courses currently do not qualify for financial aid; it is hoped that if approved, the proposed MLA Certificate program would qualify for Federal financial aid. This would allow those students who are economically disadvantaged to utilize Federal financial aid to fund their enrollment in the MLA program.

c) The need to strengthen and expand the capacity of historically black institutions to provide high quality and unique educational programs

See Section F on page 8.

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 main goals: Access, Success, and Innovation. An overall summary of the plan states: “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.”⁴ The Medical Laboratory Assistant (MLA) certificate program would meet Strategy 6 of the Success goal as it would be the only MLA program in Maryland creating a focused pathway to a certificate, associate’s degree and later a bachelor’s degree while preparing students to earn two nationally recognized credentials in phlebotomy and medical laboratory assistant. Program approval status would be sought by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) to enable certificate graduates to qualify under Route 1 for the Medical Laboratory Assistant national examination by the American Society for Clinical Pathology.⁵

The proposed program is also creative and innovative as it would be the only program of its kind in this geographical area that would provide a career ladder from the phlebotomy Letter of Recognition into the MLA certificate program that can be completed in three terms (fall/winter/spring). The MLA graduate could utilize the courses earned in the certificate to further earn an Associate of Applied Science degree in Medical Laboratory Technician. Additionally, Strategy 8 under the Innovation goal is met by developing affiliation agreements with area hospitals, clinics, and reference laboratories for the MLA students and while continuing to expand the articulation agreements with the 4-year Bachelor of Science in Medical Laboratory Science programs in Maryland to facilitate

⁴ <https://mhcc.state.md.us/About/Documents/2017.2021%20Maryland%20State%20Plan%20for%20Higher%20Education.pdf>

⁵ <https://www.naacls.org/Find-a-Program.aspx?state=Maryland&program=MLT>

further career laddering in the profession of clinical laboratory science.

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.

The potential industry or industries in the Baltimore-Washington area that all use specimen processors are the 35 hospitals within this geographic area. In addition, two reference laboratories, Quest and Kaiser Permanente, employ specimen processors and Lab Corp has a specimen processing site near the Baltimore-Washington airport. There are an additional 16 hospitals within the state of Maryland. All of the hospitals use specimen processors and it is expected that MLA graduates would be employed as specimen processors in all of these hospitals and reference laboratories. The expected level for graduates once they complete the MLA program would be entry-level specimen processors.

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 2016-2017 ASCP Vacancy Survey, the rate of retirement for laboratory specimen processors in the next five years is projected to be 14.69%.⁶ The staff retirement rate is 9.69%; for supervisors, it is 2.92%. The overall vacancy rate for the mid-Atlantic region is 6.1% for all departments. A search of job openings using Indeed.com⁷ shows multiple listings of job openings ranging from Mercy Hospital to Quest Diagnostics for specimen processors and/or medical laboratory assistants. According to the Maryland Department of Labor, Licensing, and Regulation, employment growth for Medical and Clinical Laboratory Technicians is projected at 25.67% through 2024, and total job openings are projected to grow by 1,969 to a total of 9,639.⁸

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.

A 10-question Survey Monkey survey was sent to 20 laboratory managers in the Baltimore-Washington area regarding needs assessment of the Medical Laboratory Assistant certificate. Thirteen managers responded with 100% support of the proposed certificate. The average vacancy rate was 22.5%. Six of the 13 (46%) were willing to take students for their clinical practicum and 4 of the 13 (31%) answered “maybe” to this question.

⁶ <https://academic.oup.com/ajcp/article/149/5/387/4924356>

⁷ <https://www.indeed.com/jobs?q=specimen+processor&l=maryland>

⁸ <http://www.dlrr.state.md.us/lmi//iandoprojshort/occgrou29short.shtml>

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

Beginning in the fall 2018 semester, the Phlebotomy technician program accepts students into three cohorts throughout the academic year, including summer term for a 15-week semester. In the 2017-2018 year there were over 30 phlebotomy students. The fall 2018 cohort had 11 students and the current spring 2019 cohort has 14 students. It is projected that at least 8-10 Phlebotomy Technician students per semester would seek the MLA certificate based on interest expressed by previous phlebotomy students and students waiting for acceptance into the MLT A.A.S. program. Employees who are currently working as phlebotomists in area hospitals and reference labs have expressed a strong interest in attending this program. The MLA program would be advertised and promoted in all area hospitals, and it is expected that many of current laboratory accessioners who have no formal training would enroll in the MLA program so that they can become nationally credentialed.

The Medical Laboratory Assistant certificate program would follow a cohort design and students could be admitted twice a year in both the fall and the spring semesters. It is estimated that the total enrollment will be 10 per cohort or 20 per year if two cohorts were admitted as the MLA program grows.

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.

There are no other Medical Laboratory Assistant (MLA) programs in Maryland. The closest program is over 50 miles away at the Northern Virginia Community College (NOVA) Health Campus in Springfield, Virginia. This MLA program began in the summer of 2018. The next closest program is over 200 miles away near Pittsburgh, Pennsylvania. Due to geographical distance, neither program is expected have an impact on the success of Anne Arundel Community College's proposed MLA Certificate program.

2. Provide justification for the proposed program.

The positive feedback received from the area hospitals and reference laboratories concerning the need for an MLA program in Maryland justifies the establishment of an MLA program at AACC. MLA's provide a vital pre-analytical role in the accuracy of clinical laboratory testing by properly handling and processing patient samples into the clinical laboratory workflow. As indicated above, these positions are plentiful and qualified workers are and will continue to be in high demand as a result of retirements. Currently, practicing MLA's who were trained on-the-job, with permission by the MLT Coordinator, could take MLT 103 to increase their didactic knowledge of the MLA profession. By qualifying through the work experience route, these practicing MLA's could become nationally credentialed by ASCP. MLA students or practitioners could continue on the career ladder into the MLT program. Phlebotomy Technician students,

and working phlebotomists could continue on their career ladder by entering the MLA program, and continue further by completion of the MLT program. Overall, this program would allow for multiple entries and pathways for increasing training and improving credentials in the field while addressing the immediate needs of the surrounding community.

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.**

There is no foreseeable impact on the implementation or maintenance of high-demand programs at Maryland's Historically Black Institutions as none of the HBI's have an MLA 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 is no foreseeable impact on the program's potential impact on the uniqueness and institutional identities and missions of Maryland's Historically Black Institutions as none of the HBI's have an MLA program.

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 MLA program was established to meet the need for formally educated clinical laboratory specimen processors in the Baltimore-Washington area. Currently, most laboratories hire specimen processors with little to no medical knowledge and train them on the job. This leads to mistakes and no career ladder for these entry-level health care workers. Recently, NAACLS re-established an accreditation mechanism for Clinical Laboratory Assistant programs and the ASCP has begun to offer a Medical Laboratory Assistant national credentialing examination. Additionally, many of the phlebotomy students who are adult students with competing responsibilities for their time expressed frustration that with only training as a phlebotomist, there were no career ladders open to them. This new MLA program would provide those individuals and others with a clear career ladder path from the nationally credentialed phlebotomist, to the Letter of Recognition, to the Medical Laboratory Assistant certificate, to the Medical Laboratory Technician A.A.S., and perhaps to the Bachelor of Science Medical Laboratory Scientist degree.

The faculty that would teach the MLA students are current adjunct faculty. As justified by rising enrollment, one adjunct faculty would be hired as a full-time faculty. Additional adjunct faculty may need to be hired as the program grows. All of the Medical Laboratory Technician faculty are nationally credentialed by either the American Society for Clinical Pathology (ASCP) or the American Medical Technologists (AMT) organizations. The two medical technology courses are taught by licensed registered nurses or by nationally credentialed faculty.

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

The Medical Laboratory Assistant certificate program educational objectives are the following:

At the completion of the MLA certificate program the student will be able to:

1. Apply cognitive (knowledge), psychomotor (skills), and appropriate affective (behavior) as an entry-level Medical Laboratory Assistant.
2. Effectively communicate with patients and other health care practitioners in a professional manner.
3. Develop relationships with clinical sites and preceptors that provide for a quality experiential learning opportunities and entry-level employment opportunities.
4. Actively participate in interdisciplinary learning experiences with an emphasis on ethical and diversity issues that impact health care.
5. Emphasize a holistic approach in the management of client care.
6. Form linkages with professional organizations that will accept students as members.

The Medical Laboratory Assistant student learning outcomes are the following:

Upon completion of the Medical Laboratory Assistant Certificate program graduates will be able to:

1. Use technical, critical thinking and problem-solving skills in their didactic and clinical experiences.
2. Practice their profession within the clinical laboratory legal framework, utilizing sound ethical values.
3. Promote and maintain cooperative and successful relationships between clients, patients, physicians, allied health providers, and the health care community.
4. Promote advocacy of the profession through affiliations with professional organizations, marketing of professional skills, and by becoming vital members of the health care delivery system.
5. Obtain eligibility to sit for certification and/or registration exams.
6. Practice the profession of medical laboratory assistant with the recognition of, and sensitivity to, cultural and socioeconomic differences.
7. Demonstrate effective written, oral, and nonverbal communication with colleagues, other health care providers, and the public.
8. Participate in continuing education and the development of new knowledge and skills.

3. Explain how the institution will:

a) provide for assessment of student achievement of learning outcomes in the program

All academic departments maintain assessment plans for their programs and courses that outline learning outcomes, curriculum mapping, assessments, and data collection cycles. Assessments to measure student learning take many forms including exams, research papers and other written assignments, class discussions, performances, and lab exercises. These assessment items are mapped to course-level and program-level learning outcomes. Measures of student learning are aggregated to the appropriate level (course, program, institution) to provide the basis for faculty discussions on curriculum, pedagogy, and assessment. In addition to periodic program-level learning outcomes assessment, all credit degree and certificate programs are reviewed on a 4-year cycle for evidence of: program retention and completion, success in program foundational courses, enrollment, value-added, and assessment practices.

All courses in the MLA certificate program at AACC would assess student performance in the didactic, psychomotor and affective domains. Quizzes and exams are given throughout all MLT didactic courses. All course assessments are mapped to the overall program outcome. Each question in each MLT course final examination are mapped back to the specific lecture or laboratory activity including the taxonomic level of difficulty and if the question assesses didactic, psychomotor or affective domains. Each course in the MLA certificate program would be evaluated yearly and assessed in relation to the program outcomes. In addition, the evaluation of program outcomes is an accreditation standard that must be met by the MLA program to gain and retain program accreditation.

Student performance in the student laboratory is enhanced by the use of an Affective domain grading matrix for each laboratory session for all MLT courses. This matrix is useful to identify students who are not performing up to standards and who may have difficulty in a clinical setting. Since the matrices have been initiated, remediation is offered much sooner as concerns are quickly assessed, apparent and documented. MLA students would be subject to these matrices to ensure student success and progression. Students would be graded in all three domains while completing both their phlebotomy practicum and their medical laboratory assistant practicum.

b) document student achievement of learning outcomes in the program

Departments document evidence of student achievement of learning outcomes on a cyclical basis in the college's assessment management system (AMS). Documentation includes learning outcomes, curriculum maps, assessment plans, findings (data and analyses), and action plans. First, all course assessments are mapped to the learning outcome assessment plan and evaluated for goal achievement. Second, each exam question is mapped to the corresponding learning objective and the didactic test complexity level. Third, the MLA program would undergo an overall program review by AACC every four years. Fourth, the pass rate of the American Society for Clinical Pathology's national certification that students would take after

completion of the MLA program serves as an overall assessment of the student achievement of all learning outcomes of the program.

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

Certificate, Medical Laboratory Assistant 29 Credits			
REQUIRED COURSES	COURSE TITLE	CREDITS	PREREQUISITE
BIO 231	Human Biology 1	4 Credits	Eligibility for ENG 101/101A and either eligibility for any general education math or a score of 27 or better on the Arithmetic Placement Test or a B or better in MAT 005.
CTA 100	Computing and Information Technology	3 Credits	Eligibility for ENG 101/101A
MDA 100	Introduction to Medical Terminology	1 Credit	
MDA 110	Professionalism in Health Care	1 Credit	
MLT 100	Introduction to the Medical Laboratory	4 Credits	Acceptance into the Medical Laboratory Technician Program or permission of the MLT Program Coordinator.
MLT 101	Urinalysis and Body Fluids	3 Credits	MLT 100 with a minimum grade of C or better or permission of the MLT Program Coordinator.
MLT 102	Quality Assurance and Quality Control	1 Credit	MLT 100 with grade of C or better or permission of the MLT program coordinator.
MLT 103	Entry Level Clinical Laboratory Testing	4 Credits	MLT 100 or MLT 125 or permission of the MLT program coordinator.
MLT 125	Phlebotomy	4 Credits	Corequisite(s): MLT 275 or permission of

			the program coordinator.
MLT 275	Phlebotomy Practicum	2 Credits	MLT 100 or permission of the program coordinator. Corequisite(s): MLT 125 or permission of the program coordinator.
MLT 274	Medical Laboratory Assistant Practicum	2 Credits	MLT 100, MLT 101, MLT 102, and MLT 103 or by permission of the department chair

Students in the Medical Laboratory Assistant certificate program would complete a total of 29 required credits. The proposed Medical Laboratory Assistant certificate program courses are listed below:

BIO 231 Human Biology 1

4 credit hours – Three hours of lecture and three hours of laboratory weekly; one term
Learn the biologically significant inorganic and organic molecules and their relationship to human anatomy and physiology, the structure of cells and tissues, cellular physiology, the fundamentals of inheritance and the anatomy and physiology of the integumentary, skeletal, and nervous systems. A course primarily for the two-year nursing program; sometimes accepted as transfer credit. Students are advised to check with the four-year transfer institution. Four-year nursing students usually take BIO 233 and BIO 234. Lab fee \$30.

Prerequisite: *Eligibility for ENG 101/101A and either eligibility for any general education math or a score of 27 or better on the Arithmetic Placement Test or a B or better in MAT 005.*

Note: *Credit is not given for (1) both BIO 101 and BIO 231 or (2) both BIO 230 and BIO 231 or (3) both sequences BIO 231-BIO 232 and BIO 233-BIO 234. Students enrolled in the Pharmacy Technician and Therapeutic Massage certificate programs should consult their program advisor for math eligibility.*

CTA 100 Computing and Information Technology

3 credit hours – Two hours of lecture and two hours of laboratory weekly; one term.
Learn computing and information technology concepts and skills that are fundamental to social, personal, business, and academic environments. Learn about the Internet, networking, hardware, software, security, privacy, ethics, and emerging technologies. Participate in hands-on labs using Microsoft Office applications, including word processing, spreadsheets, databases, and presentations, and the Windows operating system. Designed for the non-major. Lab fee \$25.

Prerequisite(s): *Eligibility for ENG 101/101A.*

MDA 100 Introduction to Medical Terminology

1 credit hour - One hour weekly; one term.

Learn basic medical terminology, including prefixes, suffixes and word roots as they relate to body systems and associated pathological conditions.

MDA 110 Professionalism in Health Care

1 credit hour - One hour weekly; one term.

Introduces health profession students to the elements of professionalism including job commitment, accountability, work ethic, attitude and quality of work. Students gain a fundamental understanding of the health care professional's contributions in the work environment. Teamwork, trustworthiness, communication skills, conflict resolution and customer service in the health care environment are presented. Students prepare a resume, and develop techniques for exploring employment opportunities in health care.

Prerequisite(s): *Eligibility for ENG 101/ENG 101A.*

MLT 100 Introduction to the Medical Laboratory

4 credit hours - 45 hours of lecture and 30 laboratory; one term.

Apply basic principles and practices of laboratory medicine in clinical hematology, immunology and microbiology. Develop familiarity with the blood bank and the study of body fluids, including urinalysis. Demonstrate laboratory activities including specimen-handling and phlebotomy procedures. Students will perform phlebotomy procedures on one another. Prepare for entry-level jobs as medical laboratory assistants in hospitals, medical laboratories and physician office laboratories. Lab fee \$170.

Prerequisite(s): *Acceptance into the Medical Laboratory Technician Program or permission of the MLT Program Coordinator.*

MLT 101 Urinalysis and Body Fluids

3 credit hours - 30 hours of lecture and 30 hours of laboratory; one term.

Recognize the anatomy and physiology of the genitourinary system and the principles and procedures of the complete urinalysis. Topics include physical, chemical, and microscopic examinations of urine as well as other body fluids such as cerebrospinal, synovial, serous, seminal, amniotic, gastric, and fecal analysis. Learn Clinical Laboratory Improvement Act of 1988 (CLIA 88) Waived and Moderate test methods, specimen collection and handling, analyses, and correlation with disease states. Lab fee \$170.

Prerequisite(s): *MLT 100 with a minimum grade of C or better or permission of the MLT Program Coordinator.*

MLT 102 Quality Assurance and Quality Control

1 credit hour - 15 hours of lecture; one-term.

Identify the structure and function of medical laboratories, and define healthcare team member roles. Recognize how medical ethics, laboratory mathematics, quality assurance procedures, and regulations affect the clinical laboratory.

Prerequisite: *MLT 100 with grade of C or better or permission of the MLT program coordinator.*

MLT 103 Entry Level Clinical Laboratory Testing

4 credits - 45 hours lecture; 30 hours of laboratory; one term

Learn Clinical Laboratory Improvement Amendment of 1988 (CLIA'88) Waived and Point of Care testing methods associated with outpatient drawing stations. Learn accessioning techniques such as centrifugation to prepare samples for clinical laboratory testing. Learn the quality assurance procedures that must be performed to ensure accurate testing results. Lab fee \$125

Prerequisite(s): MLT 100 or MLT 125 or permission of the MLT program coordinator.

MLT 125 Phlebotomy

4 credit hours - Three hours of lecture and two hours of college laboratory weekly; one term.

Learn venipuncture theory and techniques, concepts of cardiovascular anatomy, physiology and terminology and an introduction to standard hospital laboratory tests. Lab fee \$100.

Corequisite(s): MLT 275 or permission of the program coordinator.

MLT 275 Phlebotomy Practicum

2 credit hours - 100 hours of clinical practicum; one-term.

Perform phlebotomy procedures in a practicum setting and gain experience drawing blood. Prepares students for national certification as a phlebotomist. Lab fee \$40.

Prerequisite(s): MLT 100 or permission of the program coordinator.

Corequisite(s): MLT 125 or permission of the program coordinator.

MLT 274 Medical Laboratory Assistant Practicum

2 credit hours – 100 hours of clinical practicum; one-term

Apply practical theory and skills learned in previous MLT courses in the medical laboratory assistant setting under the supervision of a clinical preceptor. Students will rotate through the areas of a clinical laboratory with a focus on the accessioning process either through simulation or at an assigned clinical rotation laboratory or a combination of both. Clinical fee \$40.

Prerequisite(s): MLT 100, MLT 101, MLT 102, and MLT 103 or by permission of the department chair.

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

Not applicable.

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

The MLA certificate program would be seeking approval status from NAACLS so that graduates are eligible for the American Society for Clinical Pathology (ASCP) national Medical Laboratory Assistant (MLA) credentialing 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.

AACC provides all students with clear, complete, and timely information on the curriculum, course and degree requirements, nature of faculty/student interactions, 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. The Medical Laboratory Technician and Phlebotomy department has a Content Manager who regularly reviews, revises, and updates as needed program content for all advertising, recruiting, and admissions materials on the college website and elsewhere including the college catalog which is accessible to all students through the College's website⁹. Anne Arundel Community College ensures accuracy of program presentation in advertising, recruiting and admissions materials by using procedural processes through a connected curriculum/catalog software system where content managers and the College catalog editor review and update catalog content in a collegial partnership with our Strategic Communications (Marketing) department. If this program is approved, the catalog will present clear and accurate curricular information to include course and degree requirements, available course formats and information about technology assumptions about competency, equipment requirements and the learning management system.

AACC would provide resources to students in the Medical Laboratory Assistant certificate program similar to those provided to students in the Medical Laboratory Technician program. Information regarding curriculum, course and degree requirements, including a suggested course sequence that demonstrates how the program can be completed in one year, would also be provided via the college catalog. The Medical Laboratory Technician program can be used as an example of the layout of the courses within the program and the Student Academic Planning tool.¹⁰

Each student also receives a course syllabus from their instructor which outlines the course content to be covered and the nature of faculty/student interactions as appropriate for that course and course format. For online courses or courses with an online component, students are made aware about assumptions of technology competence and skills, technical equipment requirements and the College's learning management system (Canvas). This information for each course may be provided via the course syllabus or directly by the instructor during the first few class sessions.

In addition, each new student is required to attend an orientation session, either online or in person. Orientation offers an introduction to all the various aspects of academic and campus life at AACC. Students learn tips for academic success, hear a variety of AACC student

⁹ <https://www.aacc.edu>

¹⁰ https://catalog.aacc.edu/preview_program.php?catoid=23&poid=8046.

success stories, learn more about MyAACC, the student portal, meet faculty members, join a student organization, meet fellow students and take a campus tour.

Students have access to the complete range of services available at AACC in support of achieving their educational goals¹¹. The college website, catalog¹², and a myriad of other materials outline the comprehensive services available to students: Academic Services, Student Records, Campus Amenities, Careers & Employment, Disability Support Services, Child Care Services, Health & Personal Counseling Services, Student Achievement & Success, and Technology. The majority of AACC credit students receive some form of financial aid, scholarships or financial support. AACC's Financial Aid & Veterans Benefits office¹³ provides financial assistance to students and families, allowing them to participate fully in the total educational experience. More information on how to apply for scholarships and grants is found on the college website¹⁴, as is information on tuition, fees, and methods of payment.¹⁵

All admissions and outreach materials are the same for all students, and accurately represent programs and services available. Notice of nondiscrimination and information on Title IX, ADA and Title 504 contacts are provided.

MLA students will be taking CTA 100 Computing and Informational Technology which provides skill training in computer use. Successful completion of CTA 100 assumes computer technology competence. MLT 103 Entry Level Laboratory Testing provides students with the skills to utilize clinical laboratory instrumentation and other technical equipment such as centrifuges and scientific balances.

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.

Anne Arundel Community College ensures accuracy of program presentation in advertising, recruiting and admissions materials by using procedural processes through a connected curriculum/catalog software system where content managers and the college catalog editor review and update the catalog in a collegial partnership with our Strategic Communications (Marketing) department. Anne Arundel Community College's homepage has links to six major headings, two of which directly apply to college majors and credit courses (earn a degree, certificate or college credits, and earn college credits while in high school). The main page for each heading has relevant advertising, recruiting and admissions information. In addition, across the top of every page are direct links to Programs & Courses, Apply & Register, Costs & Paying for College, Resources for Students, Campus Life & Activities, and About Us.

¹¹ <https://www.aacc.edu/resources/>

¹² <https://catalog.aacc.edu>

¹³ <https://www.aacc.edu/about/administrative-offices/financial-aid/>

¹⁴ <https://www.aacc.edu/costs-and-paying/credit-costs-and-payment/financial-aid-and-scholarships/>

¹⁵ <https://www.aacc.edu/costs-and-paying/credit-costs-and-payment/credit-tuition-and-fees/>

Each program in the School of Health Sciences has Information Sessions, where students receive additional information pertaining to admissions and the overall program structure. Within the School of Health Sciences is an Admissions Office that provides advertising, recruiting, and admissions materials to potential students. All advertising, recruiting and admissions materials are evaluated yearly (at a minimum) to ensure accuracy in content. The AACC Strategic Communications Department works with local newspapers and TV stations and posts on social media to advertise new and existing programs at the college.

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).

The Medical Laboratory Assistant certificate program would maintain adequate and qualified faculty members to meet the requirements as outlined in COMAR 13B.02.03.11, including both full-time and adjunct faculty members. All MLT faculty who would be assigned as faculty in the MLA program are credentialed by ASCP. Four adjunct faculty currently work in the field, and all other faculty have a minimum of 25 years of clinical laboratory experience. The table that follows lists all faculty that may be involved in teaching the MLA students.

Faculty Member	Terminal Degree Title & Discipline/Field	Academic Title	Status	Course(s) Taught
Biology Department faculty, either full time or adjunct	The minimum degree is MS, most biology faculty have a Ph.D. in biology.	Instructor, Assistant, Associate, or Full Professor	Full Time or Adjunct	BIO 231 Human Biology 1
Computer Science Department faculty, either full time or adjunct	The minimum degree is MS.	Instructor, Assistant, Associate, or Full Professor	Full Time or Adjunct	CTA 100 Computing and Information Technology

Tracey Lloyd	M.Ed., RN	Assistant Professor	Full-Time	MDA 100 Introduction to Medical Terminology
Tracey Lloyd	M.Ed., RN	Assistant Professor	Full-Time	MDA 110 Professionalism
Lorraine Doucette	MS, MLS(ASCP) ^{CM}	Full Professor, MLT, MLA, and Phlebotomy programs coordinator	Full Time	<ul style="list-style-type: none"> • MLT 100 Introduction to the Medical Laboratory • MLT 101 Urinalysis and Body Fluids • MLT 102 Quality Assurance and Quality Control • MLT 103 Entry Level Clinical Laboratory Testing • MLT 125 Phlebotomy • MLT 274 MLA Practicum • MLT 275 Phlebotomy Practicum
Merry Bennett	AAS, RMA	Laboratory Instructor	MLT/MLA/ Phlebotomy Adjunct	<ul style="list-style-type: none"> • MLT 100 Introduction to the Medical Laboratory • MLT 101 Urinalysis and Body Fluids • MLT 275 Phlebotomy Practicum
Ernestine Burgess Currently working in a clinical laboratory	BS, MLT(ASCP)	Instructor	MLT/MLA/ Phlebotomy Adjunct	<ul style="list-style-type: none"> • MLT 100 Introduction to the Medical Laboratory

				<ul style="list-style-type: none"> • MLT 101 Urinalysis and Body Fluids • MLT 102 Quality Assurance and Quality Control • MLT 103 Entry Level Clinical Laboratory Testing • MLT 125 Phlebotomy • MLT 274 MLA Practicum • MLT 275 Phlebotomy Practicum
Christine Dang Currently working in a clinical laboratory	BS, MLS(ASCP)	Instructor	MLT/MLA/ Phlebotomy Adjunct	<ul style="list-style-type: none"> • MLT 100 Introduction to the Medical Laboratory • MLT 101 Urinalysis and Body Fluids • MLT 102 Quality Assurance and Quality Control • MLT 103 Entry Level Clinical Laboratory Testing • MLT 125 Phlebotomy • MLT 274 MLA Practicum • MLT 275 Phlebotomy Practicum

<p>Christopher Harmon</p> <p>Currently works in a clinical laboratory</p> <p>Over 15 years clinical laboratory experience</p>	MS, MLS(ASCP)	Instructor	MLT/MLA/ Phlebotomy Adjunct	<ul style="list-style-type: none"> • MLT 100 Introduction to the Medical Laboratory • MLT 101 Urinalysis and Body Fluids • MLT 102 Quality Assurance and Quality Control • MLT 103 Entry Level Clinical Laboratory Testing • MLT 125 Phlebotomy • MLT 274 MLA Practicum • MLT 275 Phlebotomy Practicum
<p>Lynn Krane</p> <p>Over 25 years clinical laboratory experience</p>	BS, MT (ASCP)	Instructor	MLT/MLA/ Phlebotomy Adjunct to become Full time when enrollment grows	<ul style="list-style-type: none"> • MLT 100 Introduction to the Medical Laboratory • MLT 101 Urinalysis and Body Fluids • MLT 102 Quality Assurance and Quality Control • MLT 103 Entry Level Clinical Laboratory Testing • MLT 125 Phlebotomy

				<ul style="list-style-type: none"> • MLT 274 MLA Practicum • MLT 275 Phlebotomy Practicum
<p>Pamela Schneider</p> <p>Over 25 years of clinical laboratory experience</p>	BS, MT(ASCP)	Instructor	MLT/MLA/ Phlebotomy Adjunct	<ul style="list-style-type: none"> • MLT 100 Introduction to the Medical Laboratory • MLT 101 Urinalysis and Body Fluids • MLT 102 Quality Assurance and Quality Control • MLT 103 Entry Level Clinical Laboratory Testing • MLT 125 Phlebotomy • MLT 274 MLA Practicum • MLT 275 Phlebotomy Practicum
<p>Danielle Stroughton</p> <p>Currently working in a clinical laboratory</p>	MS, MLS(ASCP)	Instructor	MLT/MLA/ Phlebotomy Adjunct	<ul style="list-style-type: none"> • MLT 100 Introduction to the Medical Laboratory • MLT 101 Urinalysis and Body Fluids • MLT 102 Quality Assurance and Quality Control • MLT 103 Entry Level

				Clinical Laboratory Testing <ul style="list-style-type: none"> • MLT 125 Phlebotomy • MLT 274 MLA Practicum • MLT 275 Phlebotomy Practicum
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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

Anne Arundel Community College provides professional development for faculty in pedagogy that includes student-centered, content focused, evidenced-based effective teaching practices that improve student learning. Competency-based faculty professional development learning opportunities occur in a variety of formats including face-to-face workshops, online and hybrid courses, focused signature series programs, and department specific mini workshops. These opportunities are facilitated by internal teaching faculty and expert consultants. A menu of focused faculty development programs aligned to the priorities for the Division of Learning is provided yearly. Faculty select from these signature programs for their required professional development plans which outline their proposed professional goals and professional development activities for a renewable two-year period.

Full-time faculty teaching in the program have access to \$3300/year tuition reimbursement funds for graduate-level coursework, including professional development coursework in education and pedagogical approaches to second-language instruction. These faculty members also may apply for institutional funding to attend professional conferences, and priority is given to presentation or attendance at conferences supporting faculty members’ growth and development as effective teachers. Both full-time and part-time faculty are encouraged to enroll in Anne Arundel Community College’s six-credit letter of recognition in Pathways to Teaching Adults. The program includes six one-credit courses focused on enhancing academic success for post-secondary students.

Anne Arundel Community College faculty development is designed to deepen understanding of concepts, skills, and teaching strategies in order provide substantial learning experiences for students. Faculty content experts engage in professional development opportunities focused on understanding and applying a learner-centered approach to college teaching linking theory to practice. Structures and strategies necessary for student learning of challenging content, critical thinking, and collaboration are taught to faculty utilizing adult learning theory and incorporating active

learning. Faculty are provided with formal and informal opportunities to collaborate with colleagues and learn in job-embedded contexts for discipline/course specific content instruction. Faculty are supported in expanding their instructional practices through these formal professional development opportunities and through colleague to colleague professional development including learning structures such as mentoring, coaching, teaching squares, book studies, and colleague to colleague observation and feedback. In addition, supervisors provide opportunities for feedback and reflection.

All faculty in the MLA program are required to complete continuing education on an on-going basis to stay current in their field. Additionally, all faculty receive training in pedagogical techniques at minimum yearly MLT faculty meetings. All faculty also are assigned continuing education modules by an online subscription service¹⁶ Media Laboratory that also meet the credentialing maintenance requirement of ASCP.

b) The learning management system

AACC utilizes the Canvas learning management system for all courses. All full and part-time faculty must complete Online Focus/Online Focus-Applied training prior to teaching and/or developing an AACC online or hybrid course. Online Focus provides online faculty an understanding of teaching online and best practices in course design, facilitation and technology integration. Online Focus-Applied provides online faculty an opportunity to build or substantially improve an online or hybrid course utilizing best practices in course design and quality standards. Separate training is also available for faculty only using the learning management system for teaching in a face-to-face mode. In all of these trainings, instruction regarding online pedagogy is both provided and modeled. An emphasis is placed on strategies that facilitate communication, develop higher order thinking and problem solving skills, and engage learners in the online environment. The value of clear navigation, explicit instructions, accessibility, and format of appropriate assessments are also focused on. Lectures for all didactic courses are placed online through the Canvas system. MLT 102 utilizes Canvas for all of its didactic material as it is an online course.

c) Evidenced-based best practices for distance education, if distance education is offered.

Faculty content developers would work in collaboration with instructional designers to develop courses that adhere to institutional course design best practices as informed by the essential standards for course design. Additionally, trainings, presentations, demonstrations, and model courses are available to faculty regarding evidenced-based best practices for distance education through the College's Virtual Campus. For example, the faculty member who teaches the MLT 102 online course has undergone training in the best practices for online course setup, structure and delivery.

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

¹⁶ <https://www.medialabinc.net>

1. Describe the library resources available and/or the measures to be taken to ensure resources are adequate to support the proposed program.

The college's Andrew G. Truxal Library has a collection of over 148,000 books, 150 print periodicals, 560 CDs, 2650 DVDs and 65 online databases offering access to more than 15,000 electronic journals and magazines, 35,000 electronic books, hundreds of thousands of digital images and hours of streaming video and audio. The library provides access to the Internet for educational research purposes. All textbooks used in the Medical Laboratory Assistant certificate curriculum are available in the library for students to use. The textbooks will be available both to be checked out and in the reference section. Resources are periodically reviewed for current content and availability. Library staff were consulted during the program development phase and determined that adequate resources are available for the students in the proposed program.

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 spaces for classrooms, staff and faculty offices, and laboratories for studies in the technologies and sciences.

The AACC campus currently provides excellent facilities (located in the Florestano building) for students who would enroll in the MLA Certificate program to complete their co-requisite non-MLT-oriented courses, including campus wide Wi-Fi availability, 194 "smart" classrooms wired for computer usage, 19 laboratories (11 biology, 5 chemistry, 3 physical sciences) that include water, sinks, gas, and air outlets along with support facilities, and multiple student study areas equipped with computers. All classrooms are equipped with blackboards, an audiovisual screen, an overhead projector, and PC.

All classrooms and laboratories have a phone that can be used for local calls. All phlebotomy, MLA and MLT students, faculty, and staff are issued photo identification badges. The laboratories that would be used for the MLA certificate program are located in the Thomas E. Florestano Sr. (FLRS) Allied Health and Public Services Building rooms 312 and 314. These laboratories provide adequate facilities for 16-20 students. Instrumentation is up-to-date and accessible to all students. The primary MLA laboratory, FLRS 312, includes a Nikon multi-headed teaching microscope that can have the glass slide images projected on the classroom screen. In addition, there is a refrigerator and microbiology incubator in FLRS 312. Equipment for the phlebotomy, MLA, and MLT courses is kept on the countertops or stored in cabinets in FLRS 312, or stored in a central storage room in FLRS 314. An additional refrigerator/freezer (-4°) is in FLRS 314. Both laboratories have adequate storage and self-contained safety stations that include eye wash, hand wash facilities, first aid kit, and sharps containers. There is a fire extinguisher directly outside of FLRS 314.

The program coordinator's office would be located in FLRS 311. Part-time faculty have access to the adjunct faculty office located throughout the college. The School of Health

Sciences administrative services office is in FLRS 112 and the Admissions office is in FLRS 100. The Instructional Services office is in FLRS 202 and the Dean of the School of Health Sciences is located in FLRS 304E. No additional office space, classrooms, laboratories or equipment would be needed to support the proposed program enrollment.

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

AACC provides all students with a student college email address. In addition, there is an electronic mailing system within the Canvas learning management system. Canvas is a robust and comprehensive learning management system that features tools for group discussions as well as private email communication with the instructor and among students. Additionally, they may use any of the other Canvas features such as posting announcements and discussion boards.

b) A learning management system that provides the necessary technological support for distance education

AACC has an easy-to-use learning management system, Canvas, which students can either learn on their own, virtually attend Canvas online training, or receive help from the HELP desk or instructors. The college has a desk (410-777-HELP) that is available during the week and on weekends. There are also computers in the Truxal Library for student use. Canvas provides the necessary technological support that this certificate needs. All courses have a Canvas course shell in which faculty are required to post their syllabus and to use the Canvas gradebook. Additionally, they may use any of the other Canvas features such as posting announcements and discussion boards. It also features an accessible online gradebook that all instructors are required to use and update regularly. Assignments can be assessed directly in Canvas using easily accessible tools for providing and viewing instructor feedback.

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.**

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)	\$62,920	\$109,600	\$125,840	\$165,420	\$165,420
a. Number of F/T Students	10	20	20	25	25
b. Annual Tuition/Fee Rate	\$4668	\$4668	\$4668	\$4668	\$4668
c. Total F/T Revenue (a x b)	\$46,680	\$93,360	\$93,360	\$116,700	\$116,700
d. Number of P/T Students	5	5	10	15	15
e. Credit Hour Rate	112	112	112	112	112
f. Annual Credit Hour Rate	29	29	29	29	29
g. Total P/T Revenue (d x e x f) + lab fees/2	\$16,240	\$16,240	\$32,480	\$48,720	\$48,720
3. Grants, Contracts & Other External Sources	0	0	0	0	0
4. Other Sources (lab fees)	\$0	\$0	\$0	\$0	\$0
TOTAL (Add 1 – 4)	\$62,920	\$109,600	\$125,840	\$165,420	\$165,420

Financial Data – Resources

1. **Reallocated Funds:** None.
 2. **Tuition and Fee Revenue:** The tuition and fee revenue would begin at \$62,920 for the first year and build up to \$165,420 as the class size rises from 10 students to 25 students. The proposed enrollment is based on current phlebotomy students and potential enrollment from the community.
 3. **Grants and Contracts:** None.
 4. **Other Sources:** None.
 5. **Total Year:** None.
1. **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.

TABLE 2 – EXPENDITURES					
Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Faculty (b+c below)	\$60,000	\$61,200	\$62,424	\$63,672	\$64,945
a. # FTE	1	1	1	1	1
b. Total Salary	\$49,200	\$50,184	\$51,188	\$52,211	\$53,255
c. Total Benefits	\$10,800	\$11,016	\$11,236	\$11,461	\$11,690
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)	\$60,000	\$61,200	\$62,424	\$63,672	\$64,945

Financial Data – Expenditures

1. **Faculty Funds:** The tuition would cover the cost of faculty salaries. It is estimated that there would be 10-15 students per semester, or 20-25 per academic year once the certificate program is established. One faculty member at 1 FTE is necessary to support the program initially.
2. **Admin. Staff Funds:** None
3. **Supportive Staff Funds:** None
4. **Equipment:** Existing
5. **Library:** Existing
6. **New or Renovated Spaces:** None
7. **Other Expenses:** None

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.

All courses and faculty at AACC are evaluated by students using the online Student Opinion Forms (SOFs) at the conclusion of each semester. These forms have standard Likert questions with opportunities for anecdotal feedback. Students are also given the opportunity to leave comments in some of the criteria and to render a summary judgment of the course and teaching faculty. All faculty are evaluated each academic year based on the college's evaluation form which includes a review of student opinion form data. Student opinion form data is also reviewed and evaluated during the faculty promotion and tenure processes. In addition to soliciting student input for faculty and course evaluation, faculty colleagues conduct classroom visitations and peer evaluations in the second and fifth year of employment and at any time of consideration for promotion or tenure for full-time faculty. Adjunct faculty are evaluated by a peer or supervisor in the first year of employment and every three years thereafter and/or at the time of consideration of promotion.

The MLT program coordinator receives all SOFs and classroom visitation forms for each faculty member. In addition, at the end of each semester the faculty of the MLT program (and in the future for the MLA program) complete a course assessment tool to document any potential changes and whether changes that were suggested in previous years were implemented and/or effective and continued. The MLT program is accredited by NAACLS, and the accreditation standards require that there is an ongoing evaluation and assessment of the curriculum. If approved, this would be the case for the MLA program as well.

The College has an established Office of Learning Outcomes Assessment. The Director of Learning Outcomes Assessment meets regularly with a faculty-run subcommittee on Learning Outcomes Assessment (a sub-committee of the Teaching and Learning Committee). The mission of the subcommittee on Learning Outcomes Assessment is to guide and oversee program-level outcomes assessment throughout the college. The Office of Learning Outcomes Assessment provides tools to the college's various programs to assist in regular program assessment, including an Annual Program/Department Assessment Report and a Curriculum Mapping Template (to ensure alignment of course objectives and outcomes with department and/or program outcomes as well as college-level core competencies).

Health Science programs maintain established Learning Outcomes for each course within their programs. Learning Outcomes for each course are reviewed by the college's Education Policies and Curriculum Committee. Anne Arundel Community College's Committee on Educational Policies and Curriculum (EPC) evaluates the addition or modification of new programs, and deletion of existing programs. EPC makes recommendations to the Academic Forum/Council of the college since it is charged with evaluating existing and proposed curricula and courses so that they support educational objectives and policies, and comply with established requirements from accrediting and other approving agencies. A review of learning outcomes is a regular part of the EPC process for new programs.

Student performance in the student laboratory is enhanced by the use of an Affective domain grading matrix for each laboratory session for all MLT courses. This matrix is useful to

identify students who are not performing up to standards and who may have difficulty in a clinical setting. Since the matrices have been initiated, remediation is offered much sooner as concerns are quickly assessed and apparent and documented. MLA students would be subject to these matrices to ensure student success and progression.

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 College has an established Office of Learning Outcomes Assessment. The Director of Learning Outcomes Assessment meets regularly with a faculty-run subcommittee on Learning Outcomes Assessment (a sub-committee of the Teaching and Learning Committee). The mission of the subcommittee on Learning Outcomes Assessment is to guide and oversee program-level outcomes assessment throughout the college. The Office of Learning Outcomes Assessment provides tools to the college's various programs to assist in regular program assessment, including an Annual Program/Department Assessment Report and a Curriculum Mapping Template (to ensure alignment of course objectives and outcomes with department and/or program outcomes as well as college-level core competencies). The Learning Outcomes Assessment (LOA) for all MLT courses in the MLA program would be assessed on yearly basis with the support of the Office of Learning Outcomes Assessment.

The college conducts regular evaluations of degree programs with respect to enrollment, retention, curriculum relevancy, and outcomes assessment. All programs undergo a comprehensive review on a staggered 4-year cycle, using a Comprehensive Program Review Template that contains program data scored on a rubric. The template includes metrics in the areas of program continuation and completion, course success, headcount and program outcomes assessment. Also required is completion of a Program Review Narrative, which includes action items. The entire package is then reviewed in meetings that include the program chair/director, Instructional Data Specialist, Director of Learning Outcomes Assessment, Dean, Associate Vice President for Learning (AVPL), and the Vice President for Learning. The purpose of the program review meeting is to share program successes and address program needs. To ensure progress is being made on action items, the Office of the AVPL requires the Deans to complete two-year interim reports. Program review meetings and discussions also include consideration of programs costs and return on investment to address cost effectiveness and the impact on student and community needs. Each year the program progress is evaluated in the Assessment of Outcomes and Educational Effectiveness Plan. In addition, National exam pass rates are also evaluated during this process.

Student satisfaction with courses and instruction is assessed for each course and instructor each semester through the collection of feedback through student opinion forms (see additional information above in the response to section M1). Through student opinion forms, students can assess and comment on the course content, delivery and instruction. This information is used for faculty evaluation and considerations for promotion and tenure.

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.**

In 2016, AACC strengthened its diversity statement to state:

“AACC is committed to supporting and sustaining a diverse and inclusive educational environment.” Diversity is not merely a goal but a value that is embedded throughout the institution in multiple areas including (but not limited to): learning, teaching, student development, institutional functioning, and engagement in partnerships with the local and global community.

AACC recognizes that proactive steps are necessary to ensure equality of outcomes. The college has a comprehensive Diversity Plan that is managed by the committee on Diversity and is reviewed annually; this plan has led to significant institutional changes including professional development opportunities.”¹⁷

Community colleges, with their greater diversity of students, offer an important opportunity for broadening participation in the health industry. The proposed program is well positioned to increase access to minority and diverse student populations to career opportunities and advancement in clinical laboratory science. The goals of the proposed program include providing diverse students access to high quality curricula, instruction and affordable educational experiences while ensuring equity of course and program outcomes through periodic and comprehensive program assessment as discussed above.

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.**

Not applicable.

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.**

Anne Arundel Community College has been approved to offer one or more degree or certificate/diploma programs for which students could meet 50% or more of their requirements by taking distance education courses by Middle States Commission on Higher Education. AACC utilizes the Canvas platform to provide online lectures to students. In addition, the college has distance education classrooms equipped with cameras and audio to share lectures with students in offsite facilities. Within the MLA curriculum, there is one course (MLT 102 Quality Control and Quality Assurance), whose content is solely delivered online.

¹⁷ <https://www.aacc.edu/about/diversity-and-inclusivity/>

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

Not applicable.

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