



Office Use Only: PP#

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

|                                 |                              |
|---------------------------------|------------------------------|
| Institution Submitting Proposal | Hagerstown Community College |
|---------------------------------|------------------------------|

*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 #                | Payment \$850 | Date 11/14/22 |
| Submitted: <input type="radio"/> No          | Type: <input checked="" type="radio"/> Check # 1126516 | Amount:       | Submitted:    |

|  |  |  |   |
|--|--|--|---|
| Department Proposing Program                 | Health Sciences Division   |  |   |
| Degree Level and Degree Type                 | Associate of Applied Science (AAS)   |  |   |
| Title of Proposed Program                    | Diagnostic Medical Sonography  |  |   |
| Total Number of Credits                      | 70   |  |   |
| Suggested Codes                              | HEGIS:   | CIP:   |   |
| Program Modality                             | <input checked="" type="radio"/> On-campus   | <input type="radio"/> Distance Education ( <i>fully online</i> ) |   |
| 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: 2023 |
| Provide Link to Most Recent Academic Catalog | URL: <a href="https://catalog.hagerstowncc.edu/">https://catalog.hagerstowncc.edu/</a> |  |   |

|                                     |   |
|-------------------------------------|---|
| Preferred Contact for this Proposal | Name: Dr. David Warner  |
|                                     | Title: Vice President of Academic Affairs & Student Services                    |
|                                     | Phone: (240) 500-2231   |
|                                     | Email: <a href="mailto:cdwarner@hagerstowncc.edu">cdwarner@hagerstowncc.edu</a> |

|  |                              |
|--|------------------------------|
| President/Chief Executive                        | Type Name: Dr. James Klauber |
|  | Signature:  Date: 11/14/2022 |
| Date of Approval/Endorsement by Governing Board: |                              |

Revised 1/2021



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

November 14, 2022

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

Dear Dr. Fielder,

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

Thank you for your consideration of this proposed program; a check was sent to the MHEC office (# 1126516) for \$850 for the New Academic Program fee. If there are any questions or additional information required, please do not hesitate to contact me directly at [cdwarner@hagerstowncc.edu](mailto:cdwarner@hagerstowncc.edu).

Sincerely,

A handwritten signature in black ink that reads "C. David Warner". The signature is written in a cursive, flowing style.

C. David Warner, Ed.D.  
Vice President of Academic Affairs & Student Services

# New Program Proposal: Associate of Applied Science in Diagnostic Medical Sonography 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.

The proposed Associate of Applied Science in Diagnostic Medical Sonography (AAS.DMS) degree prepares students to become competent entry-level multi-specialty sonographers, with the opportunity to select different career pathways that include abdominal sonography, obstetrics and gynecology sonography, cardiac sonography or vascular sonography as they are exposed to each discipline during their learning. Students completing the program will have the ability to work in various practice settings, such as state, local, and private hospitals, offices of physicians, outpatient care centers, and medical/diagnostic laboratories. Hagerstown and the surrounding area (Allegany County, Garrett County and Frederick County) is home to many such settings, including Meritus Medical Center, Family Healthcare of Hagerstown, John Hopkins Community Physicians, and Western Maryland Hospital Center. The program is designed to prepare students to produce diagnostic images of the human body using special equipment to direct high frequency sound waves into different anatomic structures in a patient's body. The sonographer is a central member of the healthcare team and assists the radiologist in gathering diagnostic data for interpretation. Upon successful completion of the DMS program, students will be eligible to take the national registry exam, administered by the American Registry of Diagnostic Medical Sonographers, in one or more of the following specialties: abdominal sonography, adult echocardiography, breast sonography, musculoskeletal sonography, obstetrics and gynecology sonography, pediatric echocardiography, or vascular sonography.

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, and 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, while fostering workforce development and cultural vitality in the region.” This program aligns perfectly with HCC’s mission to foster workforce development in the region. As stated earlier, sonographers are central members of healthcare teams and the needs and opportunities for sonography positions in the region are ample.

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 students for university transfer, career preparation, and personal development. The new Strategic Plan outlines six commitments. Commitment #5 (Partnerships) promises to, “develop and strengthen community partnerships to meet institutional needs and improve the economy of the region.” Data provided later in this proposal detail how Diagnostic Medical Sonography is a high growth field with robust internship, experiential, and employment opportunities and partnerships in the surrounding area and state. HCC faculty and administrators, who have years of industry experience, work closely with community partners and advisory committee members to continuously evaluate, update, and revise the curricula to meet regional needs. Therefore, the proposed AAS.DMS aligns firmly with HCC’s strategic goals and is well-positioned as a key institutional priority program.

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 Diagnostic Medical Sonography degree program will be funded by 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 in Section L). Equipment and library resources are to be budgeted within the general operating budget on an ongoing basis. Since the proposed program is a career program, it is “List A Perkins eligible.” Hence, Perkins funding can be utilized to purchase new equipment that may be necessary to stay current in the field, as well as fund professional development opportunities for instructors. Additionally, HCC will investigate opportunities available for an Appalachian Regional Commission (ARC) Grant (specifically as it relates 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 increases 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, and the AAS.DMS is no exception. The proposed program will be housed in the Career Programs Building on campus and administered by a Program Coordinator and the Health Sciences

Division Director. The proposed program fully aligns with the College's strategic plan and funding for resources, personnel, supplies, equipment, technology and facilities is a part of the operating 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 its students and provides a variety of support services to ensure retention and completion.

HCC has a clear policy in place to allow discontinued programs sufficient time for enrolled students to complete. In keeping with this policy, outlined in the catalog, if the AAS.DMS happens to be discontinued, students will be afforded time to complete the program requirements. The Division Director is responsible for approving a student's plan to complete their coursework. This plan may include a combination of waivers and substitutions for program requirements, not to exceed nine combined credits. Under no circumstances can an alternative completion plan result in students graduating with fewer than the required number of credits. The length of time for services and benefits to be extended is determined by the number of credits the student needs to complete the program with a maximum of two years after the discontinuance of the program. Requests for further extension must be submitted in writing to the Vice President of Academic Affairs and Student Services.

## 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.

a) The need for advancement and evolution of knowledge in the field is evidenced by the data in Section C (Market Supply and Demand) which shows that the future employment outlook for diagnostic medical sonographers is expected to grow faster than average in our region and State. *In fact, our county hospital, Meritus Medical Center, has asked that we please provide this program for students.* The proposed Diagnostic Medical Sonography Program affords students the needed opportunity to obtain foundational knowledge and a skillset to be entry-level professionals.

b) The AAS.DMS program, and HCC at large, is fully committed to expanding educational opportunities for minority and educationally disadvantaged students. HCC's current credit minority enrollment, 29% exceeds that of the county's minority population (approximately 25.5 %). Nearly half of all HCC credit students are first-generation college students, and roughly 30% receive Pell grants. Females represent

65%, of the student body. The AAS.DMS provides a needed opportunity by providing more choices for minority and educationally disadvantaged students in diverse and innovative healthcare areas in the region.

c) Hagerstown Community College acknowledges the need to strengthen and expand the capacity of historically black institutions to provide high quality and unique educational programs. HCC acknowledges the need for diversity, equity, and inclusion and fully recognizes its impact on health outcomes. No HBI in Maryland currently offers a degree or certificate in Diagnostic Medical Sonography. Hagerstown Community College will not be a competitor in this regard. The AAS.DMS at HCC should have no impact on the uniqueness and institutional identities and missions of the HBIs in Maryland.

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

As stated in its summary, the **2022-2026 Maryland State Plan** highlights recent initiatives and current challenges in higher education. The proposed Diagnostic Medical Sonography Degree Program aligns closely with the following goal:

Goal 2: Promote and implement practices and policies that will ensure student success. The curriculum for the proposed program has been developed to follow a clear and focused pathway that will help encourage students to complete the degree program in a timely manner, as well encourage college completion and student success. Furthermore, the proposed program incorporates innovative teaching strategies to improve student learning outcomes. Examples of these strategies include flipped classrooms and competency-based learning. Tutoring support and peer mentoring are available in all areas and students are afforded the opportunity to partake in a number of experiential opportunities with area hospitals, clinics, and laboratories to bolster chances for employment success. Additionally, faculty are provided opportunities for professional development in order to enhance their pedagogical practices and student support strategies.

## 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 diagnostic medical sonographers include: state, local, and private hospitals, offices of physicians, outpatient care centers, and medical/diagnostic laboratories within the geographic region. The expected level of graduates once they complete this proposed degree program would be entry-level diagnostic medical sonographers. 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 U.S. Bureau of Labor Statistics (BLS), overall national employment of diagnostic medical sonographers (29-2032) is projected to grow 15% and cardiovascular technologists and technicians (29-2031) is projected to grow 5% from 2021 to 2031, faster than the average for all occupations. “About 10,100 openings for medical sonographers and cardiovascular technologists and technicians are projected each year, on average, over the decade. Many of those openings are expected to result from the need to replace workers who transfer to different occupations or exit the labor force, such as to retire.”

**Bureau of Labor Statistics – Long Term Occupational Projections 2021-2031 (National)**

| Occupation   | 2021:<br>Actual Jobs | 2031:<br>Projected Jobs | Change | Percent<br>Change |
|--|----------------------|-------------------------|--------|-------------------|
| 29-2031 (Cardiovascular Technologists & Technicians) | 58,100               | 60,800                  | 2,700  | 5%                |
| 29-2032 (Diagnostic Medical Sonographer)             | 82,300               | 94,400                  | 12,100 | 15%               |

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

According to the Maryland Department of Labor, Licensing, and Regulation, employment growth in Maryland through 2030 for diagnostic medical sonographers is projected at 2,530 with total job openings projected to grow by 16 percent; and for cardiovascular technologists and technicians, employment growth is projected at 1,837 with total job openings projected to grow by 16.6 percent over the current demand. A search of job openings using Indeed.com shows multiple listings of job openings for diagnostic medical sonographers and cardiovascular technologists and technicians *in the tristate region*. Opportunities for graduates of health professions programs are expected to grow as the county and regional populations continue to age.

**Healthcare Practitioners and Technical Occupations – Maryland Occupational Projections 2020-2030**

| Occupation   | 2020:<br>Actual Jobs | 2030:<br>Projected Jobs | Change | Percent<br>Change |
|--|----------------------|-------------------------|--------|-------------------|
| 29-2031 (Cardiovascular Technologists & Technicians) | 1,576                | 1,837                   | 261    | 16.6%             |

|  |       |       |     |     |
|--|-------|-------|-----|-----|
| 29-2032 (Diagnostic Medical Sonographer) | 2,180 | 2,530 | 349 | 16% |
|--|-------|-------|-----|-----|

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

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 the diagnostic medical sonography programs across the country is robust. It is anticipated that HCC’s proposed Diagnostic Medical Sonography Program would generate similar interest. The proposed program will attract a diverse group of students from Washington County and surroundings areas. The number of enrolled students in a cohort is anticipated to increase during the first three years with the addition of 5 full-time students and 2-4 part-time students each year and maintain at 35 full-time students and 8 part-time students at year three and beyond. Each cohort is anticipated to complete the program in two years.

#### Student Enrollment Projections

|           | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|-----------|--------|--------|--------|--------|--------|
| Full-Time | 10     | 25     | 35     | 35     | 35     |
| Part-Time | 2      | 6      | 8      | 8      | 8      |
| Total     | 12     | 31     | 43     | 43     | 43     |

The proposed diagnostic medical sonography 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.

### 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

The Diagnostic Medical Sonography program is limited to only two other community colleges in Maryland. The table below includes information on the programs offered at those two community colleges and the proposed program at HCC:



| <b>Table 1: Institution Comparison - Diagnostic Medical Sonography Program</b> |   |   |
|--|---|---|
| <b>College</b>   | <b>Program</b>  | <b>Program Description &amp; Curriculum</b>   |
| Hagerstown Community College   | Proposed Diagnostic Medical Sonography, Associate of Applied Science Degree | <p>Number of Credits: 70<br/>           Number of Terms: 5<br/>           General Education Credits: 19<br/>           Discipline Credits: 51<br/>           Selective Admission: Yes</p> <ul style="list-style-type: none"> <li>• Minimum of 16 general education credits;</li> <li>• ACT WorkKeys National Career Readiness Assessment (Applied Math -5, Graphic Literacy – 3, Workplace Documents – 5);</li> <li>• All pre-requisite courses must be completed with a “C” or higher;</li> <li>• A minimum GPA of 2.0 for all college coursework</li> <li>• Completion of science courses within 5 years of application deadline.<br/>           Prerequisites: Yes</li> <li>• BIO-116, Arts &amp; Humanities, MAT-114, ENG-101, PSY-101</li> </ul> <p>Number of Students Accepted: 24 (full-time and part-time annually when at full cohorts)<br/>           Graduates: projection 85%<br/>           Distance from Hagerstown Community College – N/A</p> |
| Howard Community College   | Diagnostic Medical Sonography, Associate of Applied Science Degree          | <p>Tracks: 3 (general, vascular, cardiac)<br/>           Number of Credits: 67-70<br/>           Number of Terms: 6 plus prerequisite courses<br/>           General Education Credits: 29<br/>           Discipline Credits: 38-41<br/>           Selective Admissions: Yes</p> <ul style="list-style-type: none"> <li>• All general education and science courses must be completed with a grade of ‘C’ or higher with the exception of Anatomy and Physiology I, Anatomy and Physiology II, Physics and Statistics which must be completed with a grade of ‘B’ or higher.</li> <li>• An overall GPA of 2.5 or higher in all prerequisites; and</li> <li>• A cumulative GPA of 2.0 or higher.</li> <li>• All applicants must reside in Howard County for a minimum of 90 days prior to the application deadline to receive Howard County priority in the lottery.<br/>           Prerequisites: 29 credits</li> </ul>                                       |

|   |  |  |
|---|--|--|
|   |  | <ul style="list-style-type: none"> <li>BIOL-101 or BIOL-107 or BIOL-200, BIOL-203, BIOL-204, PHYS-101, MAT-138, ENGL-121, SPCH-101 or SPCH-105 or SPCH-110, PSYC-101</li> </ul> <p>Number of Students Accepted: 16<br/>Graduates: 14-15</p> <p><b>Distance from Hagerstown Community College:<br/>66 miles</b></p>   |
| Montgomery College – Takoma Park/Silver Spring Campus | Diagnostic Medical Sonography, Associate of Applied Science Degree | <p>Areas of Concentration: 3 (Vascular, Echocardiography, General)<br/>Number of Credits: 63 - 70<br/>Number of Terms: 7 plus prerequisite courses<br/>Discipline Credits: 30 - 37<br/>Selective Admissions: Yes, minimum GPA of 2.5 based on last 24 credits; TEAS Score (minimum 70%-Reading, AITS-66%);<br/>Prerequisites: ENGL102/ENGL103, BIOL212, BIOL213, MATH117 or higher, PHYS010/PHYS103 or higher<br/>Number of Students Accepted: 26-30<br/>Graduates: 16-17</p> <p><b>Distance from Hagerstown Community College:<br/>65 miles</b></p> |

In reviewing the current programs available in Maryland, it appears Hagerstown Community College’s proposed program has both **similarities and differences**. Howard Community College and Montgomery College have three (3) areas of concentration or tracks that are General or Abdominal-Extended & OB/GYN, Vascular, and Echocardiography/Cardiac; whereas Hagerstown Community College has included these areas as core curriculum requirements. Each program has a combination of general education courses, foundation sonography courses, and practicums. When evaluating the required credits for the general education courses, there appears to be a significant difference between the proposed program and the other two programs, with Hagerstown Community College including 19 credits and the other two programs including 29-33 credits. The courses identified in this category include biology, English, mathematics, behavioral/social science, arts/humanities, and diversity with the majority in the biology/science category. It also appears that both Howard Community College and Montgomery College identify several courses under their general category that have been identified as program requirements at Hagerstown Community College. For example, all programs require a medical terminology course with credits ranging from 3 to 4 credits. Another difference can be seen with the general sonography courses with total credits ranging from 11 to 21. Yet another difference can be seen with one course in the proposed program titled *DMS-105 Patient Care for Sonographers*. All programs, including the proposed program, require practicums that allow students to utilize their skills and techniques in an approved medical facility.

A significant difference that HCC’s program offers is that at the completion of the program graduates will be entry-level *multi-specialty* professionals with the opportunity to select different career pathways that include abdominal sonography, obstetrics and gynecology sonography, cardiac sonography or vascular sonography as they are exposed to each discipline during their learning.

## 2. Provide justification for the proposed program.

The proposed Associate of Applied Science in Diagnostic Medical Sonography degree program will help meet the growth projection of diagnostic medical sonographers. It will also create a program in a *different geographical area of Maryland*. As noted, Howard Community College and Montgomery College each have well-established programs. Howard Community College is approximately 66 miles away from HCC and Montgomery College is 65 miles away from the Hagerstown area. Creating a new program will allow students from Washington County and neighboring regions such as Allegany County and Frederick County to have the opportunity to obtain professional credentials and meet workforce demands.

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

Hagerstown Community College acknowledges the need for diversity, equity, and inclusion and fully recognizes its impact on health outcomes. No HBI in Maryland currently offers a degree or certificate in Diagnostic Medical Sonography. Hagerstown Community College will not be a competitor in this regard.

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

As mentioned above, no Historically Black Institution in Maryland currently offers a degree (or certificate) in Diagnostic Medical Sonography. The AAS.DMS at HCC should have no impact on the uniqueness and institutional identities and missions of the HBIs in Maryland.

### 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 proposal for a new Diagnostic Medical Sonography Program will provide a career opportunity for individuals seeking to work in the healthcare field. As noted above, this is a rapidly growing field in our region and across the state.

A Program Coordinator, with current credentials as outlined by the Commission on Accreditation of Allied Health Education Programs, will be sought to oversee the program and teach some of the diagnostic medical sonography program courses. In addition to the Program Coordinator and faculty, the Health Sciences Division Director and the Vice President of Academic Affairs and Students Services will provide oversight to the program.

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

The proposed Diagnostic Medical Sonography Program consists of didactic, laboratory, and clinical courses designed to provide students with entry-level knowledge and skills required in the profession. The curriculum exceeds the professional course content as published by the Commission on Accreditation of Allied Health Education Programs requirements for associate degree programs. Upon successful completion of the Diagnostic Medical Sonography Program, students will graduate with an Associate of Applied Science Degree and will be eligible to take a national certification examination(s).

**Education Objectives:** The Diagnostic Medical Sonography Program will:

1. Provide a quality educational program that is flexible to student needs;
2. Prepare graduates to function 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 instruction in the 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 healthcare professions;
5. Educate students in the merits of continuing professional development.

**Learning Outcomes:** Upon successful completion of the Diagnostic Medical Sonography Program, students will be able to:

1. Apply ultrasound principles and instrumentation relative to imaging and image quality;
2. Demonstrate entry-level clinical competence to perform appropriate procedures and record anatomic, pathologic, and/or physiologic data;
3. Perform the skills involved in specialty areas and the profession of Diagnostic Medical Sonography;
4. Demonstrate the ability to provide patient care while following ethical standards, HIPAA guidelines, and maintaining professionalism;
5. Demonstrate critical thinking skills during performance of sonographic procedures to provide optimum diagnostic services;
6. Demonstrate professional and ethical conduct in all forms of communication with patients and healthcare professionals;
7. 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-based 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 Diagnostic Medical Sonography 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, program outcomes are reviewed to allow for curricula improvements.

As a program accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), the proposed Diagnostic Medical Sonography Program will be engaged in a robust assessment process to ensure accurate and ongoing assessments of the program goals, learning domains, evaluation systems, outcomes, etc. Appropriate action plans will be developed based upon these analyses.

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

The proposed Associate of Applied Science Degree in Diagnostic Medical Sonography will require a combination of core courses and general education courses. The proposed program will require 51 credits in core courses and 19 general education credits. Total program credits will be 70.

| <b>Course Code</b> | <b>Core Diagnostic Medical Sonography Courses<br/>(51 Credits)</b> | <b>Credits</b> |
|--------------------|--|----------------|
| HIM-102            | Medical Terminology  | 3              |
| PHS-104            | General Physical Science   | 4              |
| DMS-101            | Introduction to Diagnostic Medical Sonography                      | 3              |
| DMS-102            | Sectional Anatomy  | 3              |
| DMS-103            | Ultrasound Physics & Instrumentation                               | 4              |
| DMS-105            | Patient Care for Sonographers                                      | 2              |
| DMS-201            | Abdominal-Extended Sonography I                                    | 3              |
| DMS-202            | Abdominal-Extended Sonography II                                   | 2              |
| DMS-203            | OB/GYN Sonography I  | 3              |
| DMS-204            | OB/GYN Sonography II   | 2              |
| DMS-205            | Vascular Sonography  | 4              |

|         |                                      |   |
|---------|--------------------------------------|---|
| DMS-206 | Echocardiography Sonography          | 4 |
| DMS-207 | Superficial & Small Parts Sonography | 2 |
| DMS-210 | Clinical Practicum I                 | 3 |
| DMS-211 | Clinical Practicum II                | 3 |
| DMS-212 | Clinical Practicum III               | 3 |
| DMS-213 | Clinical Practicum IV                | 3 |

## Course Descriptions:

### **HIM 102 Medical Terminology 3 credits**

This course is an integral component in understanding the language of medicine. It is designed to give the student a foundation in the basic structure of medical terms, word building, and definitions, as well as the applications of medical terminology. A human body systems approach is utilized, and topics covered in each system include anatomy and physiology overview, medical terms, symptoms and signs, diseases and disorders, treatments, procedures, and devices.

### **PHS 104 General Physical Science 4 credits**

This is an active/collaborative learning science course with laboratory, designed and recommended for students pursuing the AAT degree program. The course is open to all students and meets general education science requirements. Topics include basic laws and concepts of physics, practical applications, problem solving and technology, data collection and analysis, computer graphics, and presentation.

### **DMS 101 Introduction to Diagnostic Medical Sonography 3 credits**

This course introduces the student to the field of diagnostic medical sonography (ultrasound). Students learn the history of medical ultrasound, scope of practice, sonographic terminology, standard presentation and annotation of ultrasound images, body mechanics, legal and ethical issues and an overview of diagnostic related imaging specialties.

### **DMS 102 Sectional Anatomy 3 credits**

This course will focus on the study of specific areas of the human body in serial sections. Emphasis is placed on sectional anatomy in the transverse, longitudinal, and coronal planes with corrected sonographic images. There will be a review of structures observable on diagnostic medical sonography, computerized tomography and related imaging studies.

### **DMS 103 Ultrasound Physics & Instrumentation 4 credits**

This course reviews the relevant fundamental physics principles as well as the basic instrumentation used in diagnostic ultrasound. Basic sound and ultrasound physics are covered, including: frequency, wavelength, propagation speed, reflection, and resolution. Content will also include the interactive properties of ultrasound with human tissue, possible biologic effects, types of equipment and instrumentation, and safety and quality control.

**DMS 105 Patient Care for Sonographers 2 credits**

This course covers patient care skills necessary to perform diagnostic sonographic procedures on all patient populations including considerations for the physical and psychological needs of the patient and family. Routine and emergency patient care procedures are described, as well as infection control procedures using standard precautions. The role of the diagnostic medical sonographer in patient education is identified.

**DMS 201 Abdominal-Extended Sonography I 3 credits**

This course focuses on the basic anatomy and physiology relating to abdominal sonography. Emphasis is placed on the sonographic anatomy of the abdomen and small parts reviewing proper scanning techniques and protocols for identifying normal and abnormal sonographic patterns. Discusses clinical signs and symptoms, along with interpretation of clinical lab tests.

**DMS 202 Abdominal-Extended Sonography II 2 credits**

This course is a continuation of DMS-201 with emphasis placed on normal and abnormal peritoneal, retroperitoneal, gastrointestinal, superficial structures and associated sonographic patterns. Included is an extensive study of the disease process and physiological alterations, sonographic methods to visualize adult and pediatric abdomens, normal variants, congenital anomalies, physiology, and related laboratory tests.

**DMS 203 Obstetrical & Gynecological Sonography I 3 credits**

This course focuses on the breast, female reproductive and urogenital systems as they pertain to ultrasound examination. Starting with the basic female reproductive system, the course expands into early pregnancy sonographic evaluation. Normal and abnormal anatomy and physiology, instrumentation set-up, patient preparation, proper scanning technique, and normal and abnormal findings are presented.

**DMS 204 Obstetrical & Gynecological Sonography II 2 credits**

This course is a continuation of DMS-203 with emphasis on second trimester, third trimester, maternal and fetal complications involved in Obstetrical Sonography. This course includes specific indications for obstetrical ultrasound examinations, interpretation of lab values, pathophysiology, image analysis, and differential diagnosis.

**DMS 205 Vascular Sonography 4 credits**

This course focuses on the study of cerebrovascular, peripheral arterial vascular system and abdominal vessels as related to ultrasound imaging. Focus on anatomy, venous hemodynamics, pathology and sonographic appearance of normal and diseased vessels, testing methods and sonographic impressions. Review of direct/indirect testing methods and the sonographic findings along with explanation of medical and surgical interventions used in the treatment of vascular disease.

**DMS 206 Echocardiography****4 credits**

This course focuses on the basic theory of echocardiography including study of the adult and pediatric normal anatomy, anatomic variants, physiology, and pathology of the heart with ultrasound. Visual pathology recognition and identification on transthoracic examination with an understanding of the etiology of cardiovascular disease and affects are reviewed.

**DMS 207 Superficial & Small Parts Sonography****2 credits**

This course covers the basic positioning and scanning of pediatric, small part and superficial structures; related anatomy and pathology; clinical symptomatology and how they relate to the sonographic appearance. Interpretation of normal and abnormal anatomy with correlation of clinical information will also be presented.

**DMS 210 Clinical Practicum I****3 credits**

This course, the first in a series, provides supervised clinical experience supplementing the student's experience in the classroom and allows them to utilize their skills and techniques at an approved medical facility. This clinical practicum permits the student to apply theory while acquiring real world knowledge of the diagnostic medical sonography field. Students are rotated through a variety of learning experiences. Clinical practicums are scheduled during day, evening, and weekend hours. Minimum of 240 contact hours is required.

**DMS 211 Clinical Practicum II****3 credits**

This course, the second in a series, provides supervised clinical experience supplementing the student's experience in the classroom and allows them to utilize their skills and techniques at an approved medical facility. This clinical practicum permits the student to apply theory while acquiring real world knowledge of the diagnostic medical sonography field. Students are rotated through a variety of learning experiences. Clinical practicums are scheduled during day, evening, and weekend hours. Minimum of 240 contact hours is required.

**DMS 212 Clinical Practicum III****3 credits**

This course, the third in a series, provides supervised clinical experience supplementing the student's experience in the classroom and allows them to utilize their skills and techniques at an approved medical facility. This clinical practicum permits the student to apply theory while acquiring real world knowledge of the diagnostic medical sonography field. Students are rotated through a variety of learning experiences. Clinical practicums are scheduled during day, evening, and weekend hours. Minimum of 240 contact hours is required.

**DMS 213 Clinical Practicum IV****3 credits**

This course, the final in a series, provides supervised clinical experience supplementing the student's experience in the classroom and allows them to utilize their skills and techniques at an approved medical facility. This clinical practicum permits the student to apply theory while acquiring real world knowledge of the diagnostic medical sonography field. Students are rotated through a variety of learning experiences. Clinical practicums are scheduled during day, evening, and weekend hours. Minimum of 240 contact hours is required.



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

In addition to the proposed Associate of Applied Science Diagnostic Medical Sonography program core courses, students will be required to complete 19 general education requirements, including:

|   |           |
|---|-----------|
| English Composition – ENG 101                                   | 3 credits |
| Introduction to Applied Algebra – MAT 114                       | 3 credits |
| Human Anatomy and Physiology for Allied Health – BIO 116        | 4 credits |
| General Psychology – PSY 101                                    | 3 credits |
| Select from the approved Arts/Humanities 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 Commission on Accreditation of Allied Health Education Programs (CAAHEP) is a programmatic postsecondary accrediting agency recognized by the Council of Higher Education Accreditation (CHEA). The Commission on Accreditation of Allied Health Program accredits programs upon the recommendation of the Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS). Programs that receive accreditation from the CAAHEP have demonstrated themselves to be comprehensive and up-to-date, meeting current educational standards of quality and expertise. HCC's proposed Diagnostic Medical Sonography Program will be seeking CAAHEP accreditation. Program accreditation by CAAHEP allows graduates to be eligible to apply to take the American Registry for Diagnostic Medical Sonography (ARDMS) examination(s) leading to credentials as a Registered Diagnostic Medical Sonographer.

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

Not applicable at this time.

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 programs, a fee sheet is provided to students that outlines 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 (includes the Learning Management System), 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 direct instruction and student work. Course specific technology requirements are outlined in the syllabus as well as a 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

Because this is an AAS degree and is not intended to be a transfer degree program, there are currently no articulation agreements for this proposed program. However, if students are interested in transferring to a four-year institution in Maryland, we are more than happy to work with them to assist with their transition pathway.

## 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 proposed Diagnostic Medical Sonography Program will require one full-time Program Coordinator (e.g., certified professional in their respective field) to provide program oversight and instruction. To assure the quality, the individual hired for this position will meet or exceed the accrediting body qualifications for a program coordinator. In addition, one full-time faculty member with content expertise will be hired to support instruction, laboratory, and clinical supervision of students. To assure the quality, the individual hired for the faculty position will meet or exceed the accrediting body

qualifications for faculty/instructional staff. Faculty will demonstrate adequate knowledge and proficiency in their content areas and demonstrate the ability to teach effectively at the appropriate level. In addition to program specific faculty, Hagerstown Community College currently has dedicated faculty positions that support the proposed Diagnostic Medical Sonography Program.

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

| Faculty Name            | Academic Title                                  | Credentials   | Status    | Courses Taught                      |
|-------------------------|---|---|-----------|-------------------------------------|
| <i>Existing Faculty</i> |   |   |           |                                     |
| Megan Dayhoff           | Assistant Professor, Radiography Program        | AAS, Radiography<br>BS, Healthcare Administration<br>MS, Human Services<br>ARRT, Registered Technologist of Radiography | Full-Time | HIM-102<br>Medical Terminology      |
| Timothy McCollum        | Associate Professor, Physics & Physical Science | MS, Physics<br>MS, Mathematics  | Full-Time | PHS-104<br>General Physical Science |
| <i>New Faculty</i>      |   |   |           |                                     |
| To Be Hired             | DMS Program Coordinator/Instructor              | Master's Degree<br>Meets CAAHEP Requirements  | Full-Time | DMS courses to be determined        |
| To Be Hired             | Instructor                                      | Master's Degree<br>Meets CAAHEP Requirements  | Full-Time | DMS courses to be determined        |

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 (FFDC) 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 classrooms, D2L Brightspace training (LMS), academic integrity, writing 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 has revised the COTE (Course in Online Teaching Excellence) training for faculty by condensing the course down to two weeks. The FFDC also provides ongoing face-to-face training for faculty in the following areas: 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 are conducted regularly. Consequently, full time faculty members and academic Division Directors are now being strongly encouraged to become certified in the Quality Matters 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 as well as 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 8:00 AM to 6:00 PM Monday through Thursday and 8:00 AM to 4:30 PM on Fridays. HCC students also have access to the 24 hour 7 days per 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, the Learning Support Center, the Behavioral Sciences and Humanities building, the Athletic, Recreation and Community Center, the STEM building, the Advanced Technology Center, the Kepler Center for the Performing and Visual Arts, the 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 a student lounge, dining areas, and a 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.

In addition to the traditional classroom environment, the proposed Diagnostic Medical Sonography Program will utilize a designated laboratory space equipped with stations that provide an excellent learning environment for students to develop and practice technical skills needed as a diagnostic medical sonographer. The laboratory will have a wide array of equipment to provide students an opportunity to become competent and proficient with clinical skills necessary as an entry-level diagnostic medical sonographer. Additionally, this learning environment is designed as a smart classroom, equipped with a computer, projection system, white board, documentation camera, and wireless internet access.

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, grades throughout the semester. 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 teaching tools on the LMS that facilitate opportunities for excellent distance education (i.e. asynchronous online discussion tools for collaborating with students and having virtual office hours, video tools for providing virtual lectures and animations, grading tools for quizzes or exams, and outcomes assessment reporting tools, etc.).

## 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 proposed Diagnostic Medical Sonography Program will be supported partially through internal reallocation from the College's operating budget. The College will match an ARC grant award with 50K.
2. **Tuition/Fee Revenue:** The enrollment projections align with other 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 two part-time students. Annual tuition and fees are calculated based on current rates of

\$4,795 for FT students and \$137/credit (tuition plus general college fee) for 12 credits/year for part-time students. The number of enrolled students in a cohort is anticipated to increase during the first three years, with the addition of five full-time students and 2-4 part-time students each year, and maintain at 35 full-time students and eight part-time students at year four and beyond. Each cohort is anticipated to complete 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), specifically as it relates 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 the workforce by increasing education, knowledge, skills, and health of residents so they may work and succeed in Appalachia. The ARC grant will help to finance costs associated with equipment, technology, and supplies needed to develop hands-on skills. The total project amount will be \$100,000, which includes \$50,000 from the ARC grant and, as stated above, a \$50,000 match from HCC. *Should a grant application be denied, HCC is prepared to fund the program with its general operating funds. In addition to the ARC grant, HCC will request that the AAS.DMS be added to the Perkins postsecondary list of approved career and technology education programs, otherwise known as "Perkins List A."*

**4. Other Sources: None**

| <b>TABLE 1: RESOURCES</b>                           |                  |                  |                  |                  |                  |
|---|------------------|------------------|------------------|------------------|------------------|
| <b>Resource Categories</b>                          | <b>Year 1</b>    | <b>Year 2</b>    | <b>Year 3</b>    | <b>Year 4</b>    | <b>Year 5</b>    |
| 1. Reallocated Funds<br>(College ARC grant match)   | \$50,000         | \$0              | \$0              | \$0              | \$0              |
| 2. Tuition/Fee Revenue (c+g below)                  | \$51,238         | \$130,686        | \$184,940        | \$197,806        | \$204,048        |
| a. Number of F/T students                           | 10               | 25               | 35               | 35               | 35               |
| b. Annual Tuition/Fee Rate                          | \$4,795          | \$4,830          | \$4,900          | \$4,970          | \$5,040          |
| c. Total F/T Revenue (a x b)                        | \$47,950         | \$120,750        | \$171,500        | \$173,950        | \$176,400        |
| d. Number of P/T Students                           | 2                | 6                | 8                | 8                | 8                |
| 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 (ARC) | \$50,000         | \$0              | \$0              | \$0              | \$0              |
| 4. Other Sources                                    | \$0              | \$0              | \$0              | \$0              | \$0              |
| <b>TOTAL (Add 1-4)</b>                              | <b>\$151,238</b> | <b>\$130,686</b> | <b>\$184,940</b> | <b>\$197,806</b> | <b>\$204,048</b> |

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 are equipment and instruction. Each expenditure category is detailed below:

1. **Faculty:** In Year 1, one new tenure-track faculty will be hired to coordinate and teach in the program. During Year 2, an additional tenure-track faculty will be hired to teach in the program. 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 already has support staff that assists with various Allied Health Programs within the division.

4. **Equipment:** In Year 1, \$75,000 is allocated to establish the teaching laboratory for the proposed Diagnostic Medical Sonography Program.

5. **Library Resources:** None

6. **New or Renovated Space:** None

7. **Other Expenses:** None

| <b>TABLE 2: EXPENDITURES</b>   |                  |                  |                  |                  |                  |
|--------------------------------|------------------|------------------|------------------|------------------|------------------|
| <b>Expenditure Categories</b>  | <b>Year 1</b>    | <b>Year 2</b>    | <b>Year 3</b>    | <b>Year 4</b>    | <b>Year 5</b>    |
| 1. Faculty (b+c below)         | \$62,500         | \$126,875        | \$130,681        | \$135,406        | \$140,686        |
| a. # FTE                       | 1                | 2                | 2                | 2                | 2                |
| b. Total Salary                | \$50,000         | \$101,125        | \$104,159        | \$108,089        | \$112,552        |
| c. Total Benefits              | \$12,500         | \$25,750         | \$26,522         | \$27,317         | \$28,137         |
| 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                |
| <b>TOTAL (Add 1-7)</b>         | <b>\$137,500</b> | <b>\$126,875</b> | <b>\$130,681</b> | <b>\$135,406</b> | <b>\$140,686</b> |



## 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 are used to provide feedback to students and faculty, reinforcing and improving educational practices that facilitate learning. The proposed Associated of Applied Science in Diagnostic Medical Sonography 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 includes: a written report based on a classroom observation (annually for non-tenured faculty, and every three years for tenured faculty), a listing of the prior two semesters of student evaluations of teaching, and the supervisor's assessment of the faculty member's performance in meeting the full range of faculty duties, including professional development and 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 research and evaluation processes. Through this department the institution manages student satisfaction, as well as cost-effectiveness based on enrollment. Assessment of student retention and learning outcomes (outlined earlier) happens annually 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 to College leadership (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 for goal implementation; c) persons responsible for goal implementation; 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.

Through its vast network of learning support structures in place (including ones designed to support at-risk students – up to 40% of whom are in a minority or marginalized group – and help them persist, complete, and graduate), the AAS.DMS has been designed to help foster the success of all students in the program. The program aligns closely with HCC's strategic [vision](#) to be the "College of choice through demonstration of *inclusive* educational excellence, transformative growth, and community enrichment. Furthermore, one of HCC's Institutional Learning Outcomes (ILO's) is "Globalization and Diversity," which challenges students to explore and analyze new ideas and understand the value of moral sensitivity and cultural diversity. As noted in an earlier section, the AAS.DMS Program requires that all students take a three-credit course in diversity.

## 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 the 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.” The Middle States 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 the 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 States Commission on Higher Education (MSCHE). Hagerstown Community College is currently accredited through MSCHE, and follows the appropriate guidelines in order to adhere to the national standards and integrity for our distance education programs. As stated previously, HCC received approval from MSCHE to offer distance education programs on June 24, 2016.

## Resources

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