



November 24, 2020

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

Dear Dr. Fielder:

Allegany College of Maryland (ACM) is requesting approval for a new lower division certificate (LDC), *Brewing Operations*. The *Brewing Operations LDC* will prepare individuals to pursue careers in this growing segment of the hospitality industry. This industry continues to be identified as one with projected job growth faster than the average for all occupations. Allegany College of Maryland are developing innovative programs that allow for student success with less debt. The availability of jobs in brewing operations, both nationally and regionally, will allow graduates to immediately enter the workforce following completion of the one-year certificate. The new *Brewing Operations LDC* supports ACM's mission in every facet because it will be, "responsive to the changing needs of the communities we serve." The new LDC has been approved by the faculty and staff and the Board of Trustees of Allegany College of Maryland. The effective date for this certificate will be Fall Semester, 2021.

Thank you and we look forward to the Maryland Higher Education Commission's decision. Should you have any questions, please contact Dr. Bill Rocks, Dean, Career Education at [brocks@allegany.edu](mailto:brocks@allegany.edu) or (301) 784-5567.

Sincerely,

Dr. Cynthia Bambara  
President

cc:

Dr. Emily A.A. Dow, Assistant Secretary, Academic Affairs  
Dr. Kurt Hoffman, Sr. Vice President, Instructional and Student Affairs  
Dr. William R. Rocks, Dean, Career Education  
Dr. Tom Striplin, Dean, Arts and Sciences  
Ms. Vicki Smith, Director, Financial Aid  
Ms. Marianne Shedlock, Registrar



## Cover Sheet for In-State Institutions

### New Program or Substantial Modification to Existing Program

Institution Submitting Proposal	
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***Each action below requires a separate proposal and cover sheet.***

- |                             |   |
|-----------------------------|---|
| New Academic Program        | Substantial Change to a Degree Program            |
| New Area of Concentration   | Substantial Change to an Area of Concentration    |
| New Degree Level Approval   | Substantial Change to a Certificate Program       |
| New Stand-Alone Certificate | Cooperative Degree Program                        |
| Off Campus Program          | Offer Program at Regional Higher Education Center |

Payment Submitted:	Yes No	Payment Type:	R*STARS Check	Payment Amount:	Date Submitted:
Department Proposing Program					
Degree Level and Degree Type					
Title of Proposed Program					
Total Number of Credits					
Suggested Codes			HEGIS:	CIP:	
Program Modality			On-campus		Distance Education ( <i>fully online</i> )
Program Resources			Using Existing Resources		Requiring New Resources
Projected Implementation Date			Fall	Spring	Summer      Year:
Provide Link to Most Recent Academic Catalog			URL:		
Preferred Contact for this Proposal			Name:		
			Title:		
			Phone:		
			Email:		
President/Chief Executive			Type Name:		
			Signature: <i>Cynthia S. Bambara</i>		Date:
			Date of Approval/Endorsement by Governing Board:		

Revised 4/2020

Allegany College of Maryland currently offers A.A.S. degree programs in both Culinary Arts and Hospitality Management (Hotel-Restaurant Management Concentration). Brewing Operations is a subspecialty within hospitality and culinary arts that prepares individuals to seek employment in the craft brew industry. It is anticipated that Culinary Arts students will choose to complete the requirements for the Brewing Operations Certificate in addition to their A.A.S. degree. In addition, those individuals seeking the certificate alone will gain a competitive edge in entry-level job placement in this growing career field.

**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 Allegany College of Maryland includes being responsive to changing needs in the community. Brewing Operations is a rapidly growing career field, and multiple requests have been received by both microbrewery operators and prospective students seeking training in this subspecialty. This certificate program will allow graduates to enter the job market who might have struggled financially or educationally to meet the requirements of the 60-credit Culinary Arts or Hospitality Management degree programs. For those students already pursuing the A.A.S. degree, an additional six courses in brewing and a customized internship experience will enhance their employability.

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

The proposal supports many of the goals of Allegany College of Maryland. Among those goals are:

- To provide convenient geographical access to post-secondary education to people within the service region of the college.
- To promote a college that enhances lives and the community through education and service.
- To develop technical competence, knowledge, and other essential skills that prepare students for direct entry into the workforce, for career change and advancement, or for transfer to another college or university.
- To continually assess our programs and services in order to promote and encourage continuous improvement.

With input from local business leaders, our Program Advisory Committee, and current students, it has been identified that many students wish to, and would benefit from, study in an accelerated path toward completion and employment. By utilizing both current facilities and materials already in place at ACM's School of Hospitality Management & Culinary Arts and regional brewing operations, we hope to provide this path by offering a new certificate program.

- 3. Provide a brief narrative of how the proposed program will be adequately funded for at least the first five years of program implementation.**

As noted on Table 1 and Table 2, the additional costs of the Brewing Operations Certificate are rather small compared with the benefits (financial and educational) from projected enrollment in the program.

- 4. Provide a description of the institution's commitment to provide support and continuation of the program for the first five years**

The Administration of ACM is very supportive of this proposal. The institution agrees to provide administrative, financial, and technical support for the Brewing Operations Certificate. Furthermore, while the institution is planning for long-time success of the program, the institution does agree to continue the program for a period of time sufficient to allow enrolled students to complete the program.

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

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

The craft brew industry has grown dramatically over the past several years. According to the Brewers Association, craft beer has demonstrated a 4% growth in U.S. sales volume since 2018 and now captures 13% of the overall beer market. The number of microbreweries and brewpubs opening nationally has shown an increase of 13% since 2017. The Western Maryland region is no exception, with the recent opening (or soon-to-be-opening) of 1812 Brewery, Dig Deep Brewery, Locust Post Brewery, and Toasted Goat Winery and Brewery.

As the proliferation of microbreweries continues, trained employees are needed who are familiar with the intricacies of agriculture, brewing, production, maintenance of equipment, and sales. Meetings have been held with representatives of the above-mentioned breweries and others, and enthusiastic support of the certificate program has been given. These facilities have offered to provide hands-on training in the form of internships or laboratory experiences and will work closely with faculty on best preparing students for employment.

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

A Brewing Operations certificate will prepare individuals to pursue careers in this growing segment of the hospitality industry. This industry continues to be identified as one with projected job growth faster than the average for all occupations. MHEC is encouraging the development of innovative programs that allow for student success with less debt. The availability of jobs in brewing operations, both nationally and regionally, will allow graduates to immediately enter the workforce following completion of the one-year certificate.

As reported in the Maryland State Plan for Postsecondary Education, workforce development is critical to sustaining the state's economic growth. A one-year certificate in Brewing Operations will assist in developing our hospitality-driven regional workforce by training individuals in "middle skills" which make up 43% of Maryland jobs.

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

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

Graduates of the certificate program can expect to be employed as entry-level brewers, agricultural assistants, production development specialists, and brewery marketing associates.

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

See below.

**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.**

See below.

**4. Provide data showing the current and projected supply of prospective graduates. See Table 1.**

The Occupational Outlook Handbook from the Bureau of Labor Statistics projects an 11% job growth (2104-2024) both regionally and nationally for all food preparation occupations, a gain of about 1.5 million jobs. Brewing jobs are not separated out in

this data, and therefore data from the Brewers Association is more relevant. As noted above, the number of microbreweries and brewpubs has increased 13% since 2017. In Western Maryland alone, we have seen the development of four new microbreweries in the past four years.

As of April 2019, there were 94 craft breweries in Maryland, producing 294,000 barrels. In neighboring Pennsylvania, there are more than 400 licensed craft breweries and in West Virginia, there are more than 20. According to BrewBound, the U.S. beer industry supports more than two million jobs nationally and is referred to, by some in the industry, as “the crown jewel of American manufacturing today”.

**D. Reasonableness of Program Duplication**

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

Not applicable for this degree type.

**E. Relevance to High-Demand Programs at HBIs.**

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

Not applicable for this degree type.

**F. Relevance to the identify of HBIs.**

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

Not applicable for this degree type.

**G. Adequacy of Curriculum Design, Program Modality, and Related Learning Outcomes**

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

The proposed program was developed by examining existing programs across the country, and in a meeting with regional brewing operators where we discussed their staffing needs and recommended skills and competencies. The course sequencing has been designed to increase in rigor from the first to the second semester, culminating in an internship placement in a regional brewing operation. The learning outcomes of each course (and how they will be assessed) are listed following the course descriptions, as are the General Education Goals. The individual who will oversee the program is Debra Frank, Program Director for

Hospitality Management in the School of Hospitality Management & Culinary Arts.  
The certificate model and sequence are listed below:

<u>FIRST SEMESTER</u>		<u>SECOND SEMESTER</u>	
HRMG 102-Brewing History and Introduction*	3 cr	HRMG 200-Sensory Evaluation of Beer*	3 cr
HRMG 110 – ServSafe Sanitation Certification	1 cr	CULA 217-Beverage Management	2 cr
BIOL 175-Microbiology of Brewing*	4 cr	HRMG 203-Purchasing & Receiving	3 cr
HRMG 115-Brewing Equipment and Maintenance*	3 cr	HRMG 218-Marketing	3 cr
HRMG 105-Sustainable Brewing*	3 cr	HRMG 220-Internship	5 cr
HRMG 125-Brewing Methods and Production*	3 cr		
	<hr/>		<hr/>
	17 cr		16 cr

TOTAL CREDITS: 33

\*indicates new course developed for the certificate program

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

See below.

**3. Explain how the institution will:**

**a. Provide for assessment of student achievement of learning outcomes in the program**

See below.

**b. Document student achievement of learning outcomes in the program**

See below.

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

See below.

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

See below.

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

HRMG 110 Applied Foodservice Sanitation is a required course in the curriculum. This course culminates in taking, and passing, the national ServSafe certification exam.

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

Not applicable for this degree type.

- 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.**

Faculty use the same format for course syllabi which details the majority of the information above. Additionally, the adjunct faculty members are brewers with the lab components of pertinent courses occurring in their operations. All students, upon completion of the college application, receive information regarding financial aid resources, costs, and payment policies.

- 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.**

ACM has a very robust marketing and public relations program for the college in general and for individual courses of study. The School of Hospitality Management & Culinary Arts, where the proposed certificate program will be housed, has its own tabbed booklet with details of available programs and rack cards designed specifically for each degree or certificate program.

## **HRMG 102 (Brewing History and Introduction)**

This course provides an introduction to fermented products and their history. Emphasis will be placed on agriculture, production, product characteristics, and taxonomy.

<b>LEARNING OUTCOMES</b>	<b>ASSESSMENT MEASURES</b>
1. Discuss the history and importance of fermented beverages.	Quizzes Research Project
2. Describe the methods used to produce a range of fermented beverage products.	Quizzes Research Project
3. Demonstrate knowledge of various regulatory bodies overseeing breweries in MD, PA, and WV.	Quizzes Case Study
4. Select appropriate fermentation techniques for the production of specific products.	Case Study Research Project
5. Explore various career opportunities in the brewing industry.	Case Study
<b>GENERAL EDUCATION GOALS</b>	
1. Written and Oral Communication	Research Project Case Studies
2. Information Literacy	Research Project



**HRMG 110 (ServSafe Sanitation Certification)**

This course emphasizes the principles of safe ingredient handling and preparation.

Topics include: cause of foodborne illnesses; safe purchasing, storage, and preparation; insect and rodent control; government regulations regarding food/beverage production; personal hygiene; production safety. Upon completion of the course, students will take the national ServSafe certification exam.

LEARNING OUTCOMES	ASSESSMENT MEASURES
1. Identify common causes of food spoilage and foodborne illness	Quizzes In-Class Case Studies
2. Describe factors important in safe food purchase, storage, preparation and service	Quizzes In-Class Case Studies
3. Identify regulations governing foodservice operations	Quizzes
4. Develop practical skills in maintaining a clean and sanitary foodservice operation	Observation Competency Checklists
5. Develop and plan sanitation in-service programs for foodservice employees	Demonstration
6. Apply skills in principles of kitchen and fire safety	Demonstration
7. Become nationally registered from the National Restaurant Association as one receiving sanitation certification	NRA National Certification Exam
GENERAL EDUCATION GOALS	
1. Information Literacy	Demonstration of training
2. Critical Analysis and Reasoning	Quizzes In-Class Case Studies

**BIOL 175 (Microbiology of Brewing)**

This course will discuss microbiology and how it impacts the brewing process. Topics include: yeast and the different strains used in brewing; how to properly manage yeasts during brewing; the microorganisms that contribute to beer quality and deterioration.

LEARNING OUTCOMES	ASSESSMENT MEASURES
1. Describe the biology of yeast including cell structure and physiology	Tests Lab Assignments
2. Identify strains of yeast used in brewing	Tests Lab Assignments
3. Describe the fermentation process and discuss key factors that affect it	Tests Lab Assignments
4. Describe the process of yeast propagation	Tests Lab Assignments
5. Identify microorganisms common to the brewing process and their impact on the process	Tests Lab Assignments
6. Use analytical, microbiological and sensory data to choose and maintain yeast	Tests Lab Assignments
7. Identify common sources of contamination and methods of elimination	Tests Lab Assignments
GENERAL EDUCATION GOALS	
1. Written and Oral Communications	Tests, Lab Assignments
2. Information Literacy	Lab Assignments
3. Critical Analysis and Reasoning	Tests, Lab Assignments
4. Scientific and Quantitative Reasoning	Tests, Lab Assignments

**HRMG 115 (Brewing Equipment and Maintenance)**

This course provides an overview of the various types of equipment used throughout the modern brewing process. Emphasis is placed on the care and maintenance of equipment so that all laws and regulations regarding brewing are followed. Students will be able to troubleshoot common equipment malfunctions in the production process.

LEARNING OUTCOMES	ASSESSMENTS MEASURES
1. Identify and explain the equipment used throughout the brewing process	Quizzes Competency Checklists Equipment Project
2. Recognize the different potential purveyors of the necessary brewing equipment needed in an operation and assess signs of quality of each piece relative to the operation	Equipment Project Competency Checklists
3. Safely clean and sanitize each piece of brewing equipment	Observation Competency Checklists
4. Identify the various types of filters used in the brewing process and the differences between them	Observation Quizzes Case Study
5. Evaluate equipment performance and practice the technical skills needed to troubleshoot common potential equipment malfunctions throughout the brewing process	Observation Case Study Competency Checklists
6. Demonstrate appropriate use of test equipment	Observation Competency Checklists
<b>GENERAL EDUCATION GOALS</b>	
1. Written and Oral Communication	Equipment Project Case Studies Demonstrations
2. Information Literacy	Equipment Project
3. Critical Analysis and Reasoning	Demonstrations Equipment Project Case Studies

**HRMG 105 (Sustainable Brewing)**

This course introduces aspects of environmental sustainability in brewery design and operation. Topics include: wastewater consumption and disposal; waste reduction; utility usage; recycling; design considerations for sustainable development.

LEARNING OUTCOMES	ASSESSMENT MEASURES
1. Define environmental sustainability and discuss its importance in brewing	Quizzes
2. Demonstrate knowledge of sustainable practices for raw materials, water, energy, processing, and brewery waste	Case Study Quizzes
3. Analyze feasible options for improving environmental sustainability in the local brewing industry	Case Study
4. Comprehend the value of integrative aspects of sustainability and the difference between conventional and sustainable systems	Quizzes Case Study
5. Evaluate systems based on sustainability criteria	Case Study
GENERAL EDUCATION GOALS	
1. Written and Oral Communication	Case Study
2. Information Literacy	Case Study
3. Critical Analysis and Reasoning	Case Study
4. Personal and Civic Responsibility	Case Study Quizzes

**HRMG 125 (Brewing Methods and Production)**

This course introduces entry-level skills in craft beer brewing. Topics include: recipe development; techniques and equipment used in the production of craft beer; packaging; storage.

LEARNING OUTCOMES	ASSESSMENT MEASURES
1. Describe the steps of the brewing process and the basic equipment utilized for brewing beer	Quizzes Competency Checklists
2. Describe the morphology of barley grains, and the relevance of the malting process to brewing	Quizzes Case Study
3. Discuss hop products, brewery usage, and processing fundamentals	Quizzes Case Study
4. Demonstrate best manufacturing practices in a brewery setting	Observation Competency Checklists R&D Project
5. Follow standard operating procedures in craft beer production from recipe formulation to packaging	Observation R&D Project
6. Discuss current regional and national beer trends	Quizzes Case Study
7. Collaborate in a team environment	R&D Project Observation
<b>GENERAL EDUCATION GOALS</b>	
1. Written and Oral Communication	Case Studies R&D Project
2. Information Literacy	R&D Project
3. Critical Analysis and Reasoning	Case Studies R&D Project

## **HRMG 200 (Sensory Evaluation of Beer)**

This course provides an introduction to the critical evaluation and judging of a beer's sensory properties. Students will learn the vocabulary associated with judging, and will develop their ability to identify a wide range of beer flavors and detect defects in beer.

\*Students must be age 21 or older prior to enrolling in this course.

<b>LEARNING OUTCOMES</b>	<b>ASSESSMENT MEASURES</b>
1. Describe a wide range of beer styles and the methods used to create them	Quizzes Observation Competitive Judging Project
2. Use discipline-specific terminology to describe beer's quality attributes such as foam, stability, color, aroma, attenuation beer characteristics	Quizzes Observation Competitive Judging Project Case Study
3. Conduct sensory evaluations of beer, including detecting off-flavors in beer	Observation Competitive Judging Project
4. Appraise the style-specific properties of beer	Observation Case Study Competitive Judging Project
5. Categorize beers within the major style characteristics using blind sensory analysis	Observation Competitive Judging Project
6. Design a competitive judging evaluation including set-up, panel selection, and operation	Competitive Judging Project
7. Describe the basics of beer pairing with food	Quizzes Case Study
<b>GENERAL EDUCATION GOALS</b>	
1. Written and Oral Communication	Case Studies Competitive Judging Project
2. Information Literacy	Competitive Judging Project
3. Critical Analysis and Reasoning	Observation Competitive Judging Project

**CULA 217 (Beverage Management)**

This course emphasizes the dining service appropriate to coffee shops and lounges/taverns. Topics include: liquor laws; purchasing/storage of beverages; production of alcoholic and non-alcoholic beverages; supervision of staff in a beverage-service environment; Upon completion of the course, students will take the national ServSafe alcohol certification exam.

LEARNING OUTCOMES	ASSESSMENT MEASURES
1. Demonstrate basic knowledge of various types of alcoholic beverages	Quizzes Assignments
2. Discuss management concerns of staffing, purchasing, receiving, storing, and issuing of alcoholic beverages	Quizzes Assignments
3. Develop an inventory system for alcohol	Assignment
4. Discuss the legal environment surrounding bar management	Quizzes
5. Write a basic beverage menu	Assignment
6. Become nationally registered with the National Restaurant Association as one receiving ServSafe Alcohol Certification	NRA National <u>ServSafe</u> Alcohol Certification Exam
GENERAL EDUCATION GOALS	
1. Written and Oral Communication	Assignments
2. Personal and Civic Responsibility	Assignments
3. Information Literacy	Assignments

### **HRMG 203 (Purchasing)**

This course includes topics relevant to the food and beverage industry: selection, procurement, and inventory procedures; security procedures; quality control; costing techniques for product sales.

LEARNING OUTCOMES	ASSESSMENT MEASURES
1. List proper selection, receiving, and storing factors for different categories of F+B	Quizzes
2. Discuss the effects of economic, political, and legal forces on the channel of distribution	Quizzes
3. Evaluate purchase specifications and procure items accordingly	In-Class Assignment
4. Discuss methods a buyer might use to reduce purchase price	Quizzes
5. Discuss loss prevention and other security issues	Quizzes
6. Discuss HACCP guidelines as pertaining to purchasing	Quizzes Assignment
<b>GENERAL EDUCATION GOALS</b>	
1. Written and Oral Communications	Assignments
2. Information Literacy	Assignments; Reading Assignment
3. Technological Competency	Purchase Specification Assignment

### **HRMG 218 (Marketing)**

This course emphasizes the elements of marketing as applied to the hospitality industry. Topics include: the analysis of marketing opportunities; fundamentals of advertising and promotion; feasibility studies and marketing plans; public relations and personal selling.

LEARNING OUTCOMES	ASSESSMENT MEASURES
1. Explain the three main approaches to marketing and the four elements of the marketing mix	Quizzes
2. Explain consumer behavior and the buying process	Quizzes
3. Describe new production development and introduction	Quizzes Marketing Project
4. Calculate the impact of price, place, product, and promotion on revenue	Quizzes In-Class Assignment
5. Describe the marketing research process	Quizzes
6. Select among major promotional mass media for effective promotions	Marketing Project
7. Create and develop a marketing campaign	Marketing Project
<b>GENERAL EDUCATION GOALS</b>	
1. Written and Oral Communications	Marketing Project
2. Technological Competency	Marketing Project
3. Critical Analysis and Reasoning	In-Class Assignment; Marketing Project

### **HRMG 220 (Internship)**

Supervised on-the-job training in an approved facility. Placement and supervision are coordinated by both the College and the internship site. Students will complete a minimum of 100 contact hours over the semester and will complete projects as determined by the internship site supervisor.

LEARNING OUTCOMES	ASSESSMENT MEASURES
1. Develop and present an employee in-service training program	Observation Rubric
2. Critique leadership styles including one's own	Written Project
3. Conduct an employee performance evaluation	Written Project
4. Create a resume and develop effective job-seeking skills	Resume/Cover Letter Rubric
5. Demonstrate skills proficiency as a member of the internship site team	Internship Site Evaluation
GENERAL EDUCATION GOALS	
1. Written and Oral Communications	Internship Projects; In-Service Training Rubric
2. Critical Analysis and Reasoning	Internship Projects
3. Information Literacy	Internship Projects

#### **H. Adequacy of Articulation**

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

This is a career program and not intended to articulate. However, 18 of the required 33 credits will transfer into the A.A.S. degree program in Hospitality Management and 15 credits will transfer into the A.A.S. degree program in Culinary Arts at Allegany College of Maryland.

#### **I. Adequacy of Faculty Resources**

- 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 the proposed program.**

The program will be directed by Debra Frank, a full-time faculty member who is the Program Director for Hospitality curricula at Allegany College of Maryland. Debra will teach some courses in the Brewing Operations Certificate program and will be joined by David Sanford, a full-time faculty member and Director of the Culinary Arts program. The Microbiology of Brewing course will be taught by a full-time member of the Science Division at ACM. Adjunct faculty members will be used who have extensive experience in brewing operations.

The chart below lists the faculty members who will be teaching courses in the program.

<b>NAME</b>	<b>EDUCATION/EXPERIENCE</b>	<b>COURSES</b>
Debra Frank ACM Program Director Assistant Professor, FT Hospitality Management	B.S. Nutrition – Penn State R.D.-Shadyside Hospital (Pittsburgh, PA) Graduate studies in Education Leadership (University of Nebraska – Lincoln) Certified ServSafe Instructor	HRMG 110 – ServSafe Sanitation HRMG 218 – Marketing HRMG 220 - Internship
David Sanford ACM Program Director Instructor, FT Culinary Arts	A.O.S. Culinary Arts – Culinary Institute of America	HRMG 102 – Brewing History and Introduction CULA 217 – Beverage Management HRMG 203 - Purchasing
Donna Brunelli Professor, FT ACM Division Chair - Science	B.S. – Willkes University D.O. – Philadelphia College of Osteopathic Medicine	BIOL 125 – Microbiology of Brewing
David Heller Owner/Operator – Olde Bedford Brewing Company Adjunct Faculty, PT	Master Brewer B.S. Electronics Engineering – Capitol College M.A. Security Studies – Center for Homeland Security, Naval Post Graduate School	HRMG 115 – Brewing Equipment and Maintenance HRMG 125 – Brewing Methods and Production
Chandler Sagal ACM Development & Grants Associate Adjunct Faculty, PT	Brewer A.S. – Allegany College of Maryland B.S. – Frostburg State University	HRMG 200 – Sensory Evaluation of Beer
Corey McCagh Owner/Operator – 1812 Brewery Adjunct Faculty, PT	Brewer B.S. Business – James Madison University	HRMG 105-Sustainable Brewing

- 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**

ACM provides a wide-range of pedagogy training for its faculty on a consistent basis. For example, the College holds an Annual Teaching and Learning Day in May and training relates directly to meeting the needs of our students. Additionally, other training opportunities are offered throughout the year.

ACM further provides detailed training for Learning Management System (LMS) use. The College has recently switched to D2L Brightspace and training was provided with ongoing support from learning ambassadors. Our onsite LMS

technical support service, eLets, provides concierge service tailored to each individual's needs.

**J. Adequacy of Library Resources**

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

The current library holdings are appropriate to meet the needs of the program. Additionally, industry-specific materials are housed at the School of Hospitality Management & Culinary Arts for easy access by students. An initial projected expenditure of \$1,000 (see Table 2 below) has been included in this proposal to purchase brewing references and resources.

**K. Adequacy of Physical Facilities, Infrastructure, and Instructional Equipment**

- 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.**

See below.

- 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**
  - b. A learning management system that provides the necessary technological support for distance education.**

Of the eleven courses in the proposal, five are currently taught (and will continue to be) at the School of Hospitality Management & Culinary Arts. The Microbiology of Brewing course is a science course and will be taught on ACM's main campus. The didactic component of the remaining courses will be taught at the School of Hospitality Management & Culinary Arts with practicum/internship hours earned at the various regional breweries who are supporting this program. No new physical facilities nor instructional equipment will be needed for the program.

The certificate program is not intended to be provided via distance education.

## L. Adequacy of Financial Resources with Documentation

As noted in Table 1 below, financial resources to support the new certificate program would be generated entirely from tuition and fees. The projections for enrollment were conservative and based on input from our Program Advisory Committee and regional brewery owners/operators.

**TABLE 1: RESOURCES-BREWING OPERATIONS CERTIFICATE FY22-FY26**

<b>RESOURCES CATEGORIES</b>	<b>YEAR 1</b>	<b>YEAR 2</b>	<b>YEAR 3</b>	<b>YEAR 4</b>	<b>YEAR 5</b>
<u>1..Reallocated</u> Funds	0	0	0	0	0
2.Tuition/Fee Revenue (c+g below)	60,937	86,110	102,424	114,520	127,050
a.# FT Students	5	7	8	9	10
b. Annual Tuition/Fee Rate	9,461	9,650	9,843	10,040	10,241
c. Annual Full Time Revenue (axb)	47,305	67,550	78,744	90,360	102,410
d.# PT Students	3	4	5	5	5
e. Credit Hour Rate	284	290	296	302	308
f. Annual Credit Hours	16	16	16	16	16
g. Total PT Revenue (dxexf)	13,632	18,560	23,680	24,160	24,640
<u>3..Grants, Contracts &amp; Other</u> External Sources	0	0	0	0	0
4.Other Sources	0	0	0	0	0
<b>TOTAL (Add 1-4)</b>	<b>60,937</b>	<b>86,110</b>	<b>102,424</b>	<b>114,520</b>	<b>127,050</b>

As detailed in Table 2 below, expenditures for the new program are minimal in that more than half of the required program credits will be taught by current faculty. The remaining courses will be taught by adjunct faculty. Additionally, it is only in the first year that we are requesting funds for technical equipment (brewing equipment models) and library resources.

**TABLE 2: EXPENDITURES-BREWING OPERATIONS CERTIFICATE FY22-FY26**

<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)	15,973	16,292	16,618	16,950	17,289
a.Number of FTE	0.63	0.63	0.63	0.63	0.63
b.Total Salary	14,800	15,096	15,398	15,706	16,020
c.Total Benefits	1,173	1,196	1,220	1,244	1,269
2.Admin. Staff (b+c below)	2,086	2,128	2,171	2,214	2,258
a.Number of FTE	0.02	0.02	0.02	0.02	0.02
b.Total Salary	1,650	1,683	1,717	1,751	1,786
c.Total Benefits	436	445	454	463	472
3.Support Staff (b+c below)	276	281	286	291	296
a.Number of FTE	0.01	0.01	0.01	0.01	0.01
b.Total Salary	256	261	266	271	276
c.Total Benefits	20	20	20	20	20
4.Technical Support and Equip.	1,000	0	0	0	0
5.Library	1,000	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>20,335</b>	<b>18,701</b>	<b>19,075</b>	<b>19,455</b>	<b>19,843</b>

**M. Adequacy of Provisions for Evaluation of Program****1. Discuss procedures for evaluating courses, faculty, and student learning outcomes.**

See below.

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

See below.

ACM has a robust process for the evaluation of individual courses, faculty members, and programs. First, courses are evaluated each semester by our students to determine whether the students believe that course outcomes are being met. Secondly, program faculty meet regularly to discuss courses and best practices for teaching/learning. Finally, instructors engage in course-level student learning assessment.

Each year, programs within the School of Hospitality Management & Culinary Arts engage in Program Level Assessment where we assess our students and each program specifically, examine the results, and make improvements where necessary. This report is viewed by both the respective Dean and the Coordinator of Student Learning Assessment.

It must be also noted that members of the Program Advisory Committee are an important source of feedback and evaluation of program graduates. PAC members frequently employ our graduates and can assess the success of our outcomes and the relevancy of course material.

**N. Consistency with the State's Minority Student Achievement Goals**

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

Allegany College of Maryland does not discriminate against any individual for reasons of race, ethnicity, color, sex, religion or creed, sexual orientation, gender identify or expression, national origin, age, genetic information, familial status, disability or veteran status in the admission and treatment of students. The College complies with applicable state and federal laws prohibiting discrimination and prohibits retaliation in any form against any person who reports discrimination or who participates in any investigation.

Allegany College of Maryland educates students from all walks of life, and we appreciate the richness that differences in cultures, ideas, and backgrounds bring to our learning environment. ACM's Center for Diversity and Student Engagement is located in the College Center and students are encouraged to (1) use the Center for diversity-oriented activities, (2) befriend students who are different from you, (3) help organize programs, and (4) attend diversity programs.

**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.**

The proposed certificate program is not related to any low productivity program on campus.

**P. Adequacy of Distance Education Programs**

Not applicable for this certificate program.

The College would like to implement this certificate beginning in the Fall 2021 semester.



August 18, 2020

Cynthia Bambara, President  
Allegany College of Maryland  
12401 Willow Brook Road  
Cumberland, MD. 21502

Dear Dr. Bambara,

We are writing to express our support of the development of a one-year Brewing Operations Certificate program at Allegany College of Maryland. As an owner/operator, we are very excited for this new venture.

By way of background, Olde Bedford Brewing Company (OBBC) is a Veteran/Women owned Six-Barrel brewery located in historic Bedford County, Pennsylvania. OBBC was established in 2014 and went into full production in 2018. We are a farm-to-cask brewery, using several adjuncts in our recipes from our Hideaway Ranch located in the foothills of northern Bedford county. We cultivate and harvest our own hops as well as raspberries, cherries, pumpkins, apples and spruce-tips. This year we have added active bee hives for harvesting honey.

OBBC has realized a steady growth in production and expanded locations. Over the past two years, we have increased our annual production from 100 barrels to 150 barrels. Additionally, we have expanded to two additional locations establishing a separate tap-room at each location.

As a new brewery we are honored to have received the following recognitions and awards:

**2018 National Brewers Association:** OBBC profiled in article for aligning synergies with Fat Jimmy's Outfitters for multiple business collaborations.

**2019 Hops & History National Publication:** OBBC selected as one of Five PA breweries to be profiled for "American History and Folklore as Remembered by American Breweries and Beers."

**2019 PA Farm Show:** 1<sup>st</sup> Place Sons of the Forest Spruce Tip Ale; 3<sup>rd</sup> Place Fat Jimmy's Arancia

**2020 PA Farm Show:** 2<sup>nd</sup> Place Hazy Grey & Underway IPA; 3<sup>rd</sup> Place 1794 Red Rye IPA

**2020 Uncoveringpa.com:** Selected OBBC as one of the 31 best Pennsylvania Breweries for every craft beer fan.



We are excited to partner with the College in working with the students as a training site and hands-on internship experience. The industry is growing rapidly both nationally and regionally, and having a trained workforce will benefit us all.

Sincerely,

*David E. Heller*

David E. Heller  
Owner/Operator  
Olde Bedford Brewing Company  
109 Railroad Street  
Bedford, PA 16625  
Phone: 907.229.7942

August 17, 2020

Cynthia Bambara, President  
Allegany College of Maryland  
12401 Willow Brook Road  
Cumberland, MD. 21502

Dear Dr. Bambara,

I am writing to express my support of the development of a one-year Brewing Operations Certificate program at Allegany College of Maryland. As an owner/ operator, I am very excited for this new venture.

In June of 2020, we celebrated our three year anniversary. In 2017, we started with our current 4 BBL brew system and five 2 BBL Unitanks that we fermented and carbonated in. We have grown since into having one 2 BBL Unitank used for small batches, three 10 BBL Fermenters, and another 10 BBL Fermenter about to be plumbed in to add to our capacity, along with a new 10 BBL Brite tank. This year we started canning beer and selling 4 packs, so we needed to add more fermenters to keep up with demand.

I am excited to partner with the College in working with the students as a training site and hands-on internship experience. The industry is growing rapidly both nationally and regionally, and having a trained workforce will benefit us all.

Sincerely,  
Cory McCagh  
Owner/Operator  
1812 Brewery

August 22, 2020

Cynthia Bambara, President  
Allegany College of Maryland  
12401 Willow Brook Road  
Cumberland, MD. 21502

Dear Dr. Bambara,

I am writing to express my support of the development of a one-year Brewing Operations Certificate program at Allegany College of Maryland. As an owner/operator, I am very excited for this new venture.

I am one of the co-owners of Carter Hospitality Group and we oversee the operations of the Hotel Gunter, Toasted Goat Winery & Restaurant, and soon to be The Speakeasy at The Hotel Gunter featuring Route 40 Distillery and Brewery products produced here on site. We opened the doors to our Winery/ Restaurant in late November 2018. We have prided ourselves on serving local products, including alcohol. We currently have 16 taps which we feature different beers from local breweries in Maryland, Pennsylvania, and West Virginia. We have noticed our draft beer sales continue to grow each week since we have been open and are to the point now where we are only carrying a few domestic bottles and all other beer we serve is draft from local breweries. Route 40 Brewing Company has also started to brew beer this year. We currently have one type available, Braddock's Trail Pale Ale. It has only been available for a few weeks now, but we already have noticed how much more we are selling of it than other beers. We can't wait to get more beer brewing!

As a company we are very supportive in our community and education. We are currently involved in the AMP (Apprenticeship Maryland Program) with area high school students, allowing them to work/ internship at our establishments while earning credits for school. I am excited to partner with the College in working with the students as a training site and hands-on internship experience. The industry is growing rapidly both nationally and regionally, and having a trained workforce will benefit us all.

Sincerely,

*Phillip A Carter*

Phillip Carter  
Co-owner/Operator  
Carter Hospitality Group