



**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	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 (fully online)	Both
Program Resources			Using Existing Resources	Requiring New Resources	
Projected Implementation Date <small>(must be 60 days from proposal submission as per COMAR 13B.02.03.03)</small>			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>Jalecia Williams</i> Date:
Date of Approval/Endorsement by Governing Board:	



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

January 10, 2023  
*In response to 22682 originally submitted December 15, 2022*

Dear Dr. Fielder,

Prince George's Community College is requesting the addition of a new program, **Building Trades, A.A.S.** degree program. The new proposed codes are as follows: HEGIS: 5317.01; CIP: 46.0000.

<b>Proposed Program Description</b>
<p>The Building Trades, A.A.S program prepares students for careers in the building and construction trades. Students choose one of four tracks of courses in the building trades, which provides them the skills, knowledge and hands-on training to gain employment as carpenters, electricians, HVAC/R technicians, or plumbers. Students learn the principles of construction and how to use construction equipment. They interpret drawings and specifications and gain hands-on construction skills for use in their trade of choice. Additionally, they develop the communication, management and problem-solving skills necessary for career advancement in the construction industry.</p> <p>Upon successful completion of the program, graduates earn NCCER Levels 1-4 certification in the trade of their choice, as well as OSHA 10 certification. The NCCER Core Craft Skills course and many of the levels in each trade and Construction Management courses are cross-listed as continuing education courses. They may be used towards continuing education certificates in the trades and in Construction Management respectively.</p>
<b>Proposed Program Outcomes</b>
<p>Graduates of the <b>Building Trades, A.A.S. degree</b> program will be able to:</p> <ol style="list-style-type: none"> <li>1. Summarize the basic principles of residential and light commercial construction.</li> <li>2. Safely operate construction equipment.</li> <li>3. Interpret drawings and specifications for use in a particular trade area.</li> <li>4. Apply practical construction skills in a particular trade area.</li> <li>5. Solve problems on the job site by using effective communication, decision making and leadership skills.</li> </ol>
<b>Proposed Courses</b>
<p><b>Common to all tracks</b>            PAS-1000, First Year Experience (1 credit; Institutional requirement)            EGL-1010 Composition I (3 credits; English General Education requirement)            INT-1010 Introduction to Information Technology (3 credits; Institutional Requirement)            CSM-1450 Construction Management 1 (3 credits; Program Requirement)</p>



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MAT-1130 Mathematical Ideas (3 credits; Mathematics General Education Requirement)  
BLD-1010 Core Craft Skills (4 credits, Program Requirement)

**Choose course by trade:**

BLD-2010 NCCER HVAC Level 1 (5 credits; Program Requirement) or  
BLD-2110 NCCER Electrical Level 1 (5 credits; Program Requirement) or  
BLD-2210 NCCER Plumbing Level 1 (6 credits; Program Requirement) or  
BLD-2310 NCCER Carpentry Level 1 (7 credits; Program Requirement)

**Choose course by trade:**

BLD-2020 NCCER HVAC Level 2 (7 credits; Program Requirement) or  
BLD-2120 NCCER Electrical Level 2 (6 credits; Program Requirement) or  
BLD-2220 NCCER Plumbing Level 2 (7 credits; Program Requirement) or  
BLD-2320 NCCER Carpentry Level 2 (7 credits; Program Requirement)  
EGL-1340 Writing About Technical Topics (3 credits; English General Education Requirement)  
COM-1010 Foundations of Communication (3 credits; Humanities General Education Requirement)  
NTR-1010 Introductory Nutrition (3 credits; Science General Education Requirement)  
SOC-1010 Introduction to Sociology (3 credits; Social Science General Education Requirement)

**Choose course by trade:**

BLD-2030 NCCER HVAC Level 3 (7 credits; Program Requirement) or  
BLD-2130 NCCER Electrical Level 3 (7 credits; Program Requirement) or  
BLD-2230 NCCER Plumbing Level 3 (7 credits; Program Requirement) or  
BLD-2330 NCCER Carpentry Level 3 (7 credits; Program Requirement)  
CSM 1830 Construction Print Reading (3 credits; Program Elective) or  
CSM 1510 Residential Construction Management (3 credits; Program Elective) or  
ACC-1000 Fundamentals of Accounting Credits: 3 (Program Elective)

**Choose course by trade:**

BLD-2040 NCCER HVAC Level 4 (7 credits; Program Requirement)  
BLD-2140 NCCER Electrical Level 4 (8 credits; Program Requirement)  
BLD-2240 NCCER Plumbing Level 4 (6 credits; Program Requirement)  
BLD-2340 NCCER Carpentry Level 4 (7 credits; Program Requirement)  
CSM 2920 Construction Internship II (2 credits; Program requirement in HVAC, Electrical, Plumbing tracks only)

**Total Proposed Number of Credits: 60**

Prince George's Community College's Curriculum Committee and Board of Trustees have approved this new program. The additional MHEC paperwork is also included. A payment of eight hundred fifty dollars (\$850) has been forwarded to cover the new program fee. Feel free to contact me with any questions.



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Respectfully,

*Clayton A. Railey, D*

Dr. Clayton Railey  
EVP and Provost of Teaching, Learning, and Student Success  
Prince George's Community College  
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**NEW ACADEMIC DEGREE PROGRAMS, NEW STANDALONE CERTIFICATE PROGRAMS, AND  
SUBSTANTIAL MODIFICATIONS TEMPLATE**

1. Name of Proposed Certificate/Degree Program: Building Trades, A.A.S.
2. Type of Proposal: New Certificate/Degree Program

## PART A: Centrality to Institutional 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**.

For more information: [PGCC Mission Statement](#).

The Building Trades, A.A.S program prepares students for careers in the building and construction trades. Students choose one of four tracks of courses in the building trades, which provides them the skills, knowledge and hands-on training to gain employment as carpenters, electricians, HVAC/R technicians, or plumbers. Students learn the principles of construction and how to use construction equipment. They interpret drawings and specifications and gain hands-on construction skills for use in their trade of choice. Additionally, they develop the communication, management and problem-solving skills necessary for career advancement in the construction industry.

Upon successful completion of the program, graduates earn NCCER Levels 1-4 certification in the trade of their choice, as well as OSHA 10 certification. The NCCER Core Craft Skills course and many of the levels in each trade and Construction Management courses are cross-listed as continuing education courses. They may be used towards continuing education certificates in the trades and in Construction Management respectively.

The program supports PGCC's mission, which is to provide high-quality, transformative learning experiences that enrich lives and empower students to earn credentials leading to personal development, professional advancement, and economic prosperity. The Building Trades AAS program is committed to quality through curriculum and workforce alignment, program assessment, faculty evaluations and student feedback through evaluations. It has the power to be transformative by leading to lucrative jobs for our graduates; and by creating a highly skilled, credentialed workforce for the community.

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

For more information: [FY2022-2025 Vision, Mission, and Strategic Goals](#) and [Vision 2030 Strategic Imperatives](#)

PGCC's vision statement sees is as the region's premier center for dynamic teaching and learning, strategic partnerships, and community engagement that advances knowledge, economic equity, and lifelong personal development. The vision is supported through the implementation of a program that provides affordable, high-quality learning experiences that leads to well-paying jobs for our graduates

as well as a trained workforce for the construction industry in the region. Student success is the underlying foundation of all planning at Prince George's Community College. The Building Trades AAS program prepares students to enter apprenticeship programs and to earn college credit for on-the-job training, lessening the financial burden of a college education. Additionally, the program supports regional impact by training a skilled workforce to serve the construction industry in the region. It also fosters organizational excellence by building upon existing capabilities to offer credentials that lead to lucrative jobs for graduates.

The PGCC Strategic Plan linked above includes strategic goals that shape the future of the College and objectives and outcomes to measure success, and the thoughtful strategies outlined to achieve those goals.

The Building Trades AAS program aligns closely to the following College strategic goals, as evidence that it aligns with institutional priorities:

*Goal 2: Optimize Pathways to Graduation, Transfer, or Entering the Workforce.*

Strategy: Align degrees, certificates, credentials, and curriculum development to career pathways and industry sectors congruent with high wage, high demand occupations.

*Goal 4: Reimagine Workforce Innovations and Strategic Partnerships*

Strategy: Create and embed opportunities for students to complete marketable workforce experiences and earn reputable credentials synchronously with the completion of a certificate or degree

The program courses in the Building Trades AAS program prepare students for in-demand industry credentials. Additionally, all courses in the program are cross-listed, offering maximum flexibility to students seeking credentials either for college credit or through continuing education.

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

All costs of this newly proposed program will be funded through the annual operating budget for Teaching, Learning, and Student Success. This new program will not require any additional expenditures outside those that are offset by increased tuition revenue from projected enrollment in the program (details are provided in Part L – Table 1). New courses have already been developed by faculty who currently support the department. There are no new costs for equipment, instructional supplies, facilities, or staff. The program as is proposed can be fully staffed with both current full-time and adjunct faculty and staff to support its operations. Initially no additional expense will be incurred; however, additional faculty would be hired as necessitated by growth in enrollment in years 3-5 (details are provided in Part L – Table 2.)

4. Provide a description of the **institution's commitment** to:
  - a. *ongoing administrative, financial, and technical support of the proposed program*

The proposed new A.A.S. degree in Building Trades has the necessary support at the department, division, and institutional level to operate successfully. The Technology, Engineering, and

Construction department that will house the degree is well-established at PGCC, with an existing cadre of full-time tenured/tenure-track faculty, as well as qualified adjunct faculty, available to teach the program courses (see the table in Part I for a full listing of faculty), and administrative support personnel. While all courses in the program can be taught by existing faculty, the department intends to add additional faculty positions by year three to help implement the program (see Part L – Table 2 for further details), which serves as evidence of PGCC’s commitment to ensuring the success of this new certificate program.

As outlined in Parts K and L, PGCC is confident that the existing administrative and technical supports and physical facilities available to the department and college as a whole are sufficient to ensure the program’s viability – the department is not seeking any capital investments or specialized facilities, since current classroom/office space in the Center for Advanced Technology (CAT) will suffice, nor is it seeking any additional administrative positions or technology supports to successfully deliver the program. At the college level, E-Learning Services and our Technology Help Desk are able to provide comprehensive technical assistance to faculty and students.

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

The program implementation is long-term, with a tenured/tenure-track faculty dedicated to the ongoing course offerings to ensure students are able to complete the degree within a reasonable time frame. The college is committed to student success and will provide all enrolled students with the necessary courses and resources (such as advisors to guide students through the program) so they can graduate on schedule.

## **PART 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.*

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

Prince George’s Community college is a minority-serving institution. As of 2018, about 60% of Prince George’s County residents identify as black and approximately 20% as Hispanic. The Building Trades AAS program will allow the College to expand the opportunities available to its service population by providing a program of study that provides students with skills that translate to lucrative and in-demand jobs.

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

The Building Trades AAS program is unique in the region for being the only college credit program aligned to the National Center for Construction Education and Research (NCCER) curriculum, widely recognized as a leader in construction craft training and certification. This high-quality training program, combined with the general education requirements that PGCC requires of all graduates of AAS programs, will uniquely position graduates for success and career advancement in the construction industry.

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



The 2022 Maryland State Plan for Higher Education outlines three primary goals for the postsecondary community in Maryland:

**Student Access:** Ensure equitable access to affordable and high-quality postsecondary education for all Maryland residents.

**Student Success:** Promote and implement practices and policies that will ensure student success.

**Innovation:** Foster innovation in all aspects of Maryland higher education to improve access and student success.

This new program aligns most closely with the **Student Success** goals, and specifically with **Priority 6:** Improve systems that prevent timely completion of an academic program.

As is stated on page 52 of the Plan, institutions should be rethinking their focus on traditional 60-credit associate's degrees and incorporating more "stackable credentials" that allow students to build unique portfolios of skills and knowledge in less time and for a lower cost. The courses in this A.A.S. program represent concrete, measurable outcomes that translate into skills that will assist students in obtaining gainful and meaningful employment. All program courses are also cross-listed with continuing education (non-credit), and will allow students to earn industry credentials along the way. Students will earn industry-standard credentials for each level of course work in building trades that they complete. The program's alignment to the NCCER curriculum is an innovative approach to instruction in the building trades. Students can take tests online, thereby reducing the administrative burden on the institution. Students who successfully earn the credentials can earn digital badges, and are automatically entered into a national registry for credentialed tradespersons, which is helpful when they seek employment.

Additionally, the curriculum for the program is designed with a multiplicity of educational tools and resources to support the diverse learners at the College. Some courses offered are accessible in both in-person and online formats, which allows ease of access and flexibility to students enrolled in the program. In addition to the online format, some program courses are also offered in a structured remote format (synchronous) to allow greater flexibility to both students and program faculty. Remote tutoring and advising resources are also available for students as an ongoing effort to support and promote program success and timely completion by all students.

This new program also aligns with **Priority 7:** Enhance the ways postsecondary education is a platform for ongoing lifelong learning.

Through successful completion of the course work in this certificate program, students will learn critical trade skills and tools that will serve them in many aspects of their lives and help them to develop as contributing and engaged members of the local, state, national, and world communities (page 56 of the Plan.)

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

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

Graduates of the Building Trades AAS are well positioned to work in the AEC industry as HVAC technicians, electricians, plumbers, carpenters, building inspectors, code officials, and builders.

Students in the program will be eligible for paid work as apprentices under the supervision of licensed practitioners in the trade of their choice while still in training.

Upon graduation, students who have completed the hours of on-the-job training required by the DLLR would be able to obtain a journey person's license, enabling them gain jobs as trade practitioners at the entry or mid-career level, depending on prior experience. Most jobs are found in the building equipment contractors industry sector, followed by federal government operations in the military and civilian sectors (Source: [Lightcast Data](#)) Other employers include utilities, healthcare and educational facilities, and construction companies.

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

[Lightcast data](#) describes job projections for region as “Aggressive Job Posting Demand Over a Deep Supply of Regional Jobs”. In the Washington DC Metro region, the number of jobs, median earnings and job posts in the building trades are all greater than the national average. Prince George’s County has the greatest number of job openings in the state of Maryland, followed by neighboring Montgomery and Frederick counties. The graduates of the Building Trades AAS program would help supply the needs of the workforce.

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 [Bureau of Labor Statistics](#), about 168,500 openings for construction laborers and helpers 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.

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

The following table from [Lightcast data](#) shows the completions for programs in the trades compared to the job openings. The number does not account for workforce programs, but it is clear that there is a high demand for workers in the trades that the graduates of the Building Trades AAS program can fulfil.

Trade	2020 completions	2020 job openings
Plumbers	23	1456
HVAC technicians	8	1681
Electricians	18	2619
Carpenters	15	1852

## Part 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.

For more information: [Academic Program Inventory](#) and [Degree Trend Data](#)

Anne Arundel Community College has a Skilled Professional Trades Management program that awards college credit to students who have already completed training and licensing requirements in building trades.

Montgomery College offers Building Trades Technology certificate and AAS programs with concentrations in HVAC, Electrical and Carpentry.

The Community College of Baltimore County has certificate and AAS programs for Construction Craft Professionals that award college credit to students who have already completed apprenticeships in the building trades, as well as AAS programs in HVAC and Energy Technology.

Frederick Community College has certificate and letter of recognition programs in the building trades of welding, electrical and HVAC.

Although these building trades programs exist at other community colleges in Maryland, PGCC's is unique for its close alignment with workforce needs through the NCCER curriculum. As such, it is reasonable to allow some program duplication for this degree. In addition, community colleges serve their county's residents.

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

The [Bureau of Labor Statistics](#) identifies the Washington DC Metro region as one of the top regions for employment in construction.

New projects resulting from the Infrastructure Investment and Jobs Act will begin in the second half of 2022 and continue throughout 2023, with expected growth rates of 20.1% and 10.9% for infrastructure put in place in 2022 and 2023, respectively, according to Oxford Economics. This will lead to an uptick in construction in this region and graduates of the Building Trades AAS program can supply the labor required to fill the jobs generated as a result.

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

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

This is not a transfer program. PGCC does not anticipate that this program will have any impact on the implementation or maintenance of high-demand programs at HBIs.

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

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

This is not a transfer program. Therefore, the proposed program will not impact the uniqueness and institutional identities and missions of HBIs.

## PART 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.

### *Establishment of the Program:*

PGCC has an established process for curriculum development and revision which is driven by the faculty and overseen by the Office of the Executive Vice-President & Provost for Teaching, Learning & Student Success. Program proposals originate with faculty at the department level. After a proposal is approved by the department chair and division dean, it moves through several steps in the approval process including Assessment Committee, Curriculum Committee, General Education Committee (as applicable) and Executive Vice President & Provost. The final step in the approval process for new programs or a substantial modification is from the College's Board of Trustees, before submission to MHEC for approval.

### *Faculty who will oversee the program:*

Dr. Mohammed Ali, Department Chair, Technology, Engineering & Construction department

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

### **Graduates of the Building Trades, A.A.S will be able to:**

1. Summarize the basic principles of residential and light commercial construction.
2. Safely operate construction equipment.
3. Interpret drawings and specifications for use in a particular trade area.
4. Apply practical construction skills in a particular trade area.
5. Solve problems on the job site by using effective communication, decision making and leadership skills.

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*

The College's Research, Assessment and Effectiveness (RAE) office manages the assessment cycle and determines when programs are assessed. Course-level assessment is a part of program-level assessment to determine how students are meeting program outcomes. The College uses an all-in-one approach to assessment and assessment instruments are aligned to the course outcomes and peer reviewed by the Teaching, Learning and Assessment Committee (TLAC). The assessment instruments are administered and the data analyzed to generate a Student Learning Outcome Assessment Report

(SLOAR) and Program Learning Outcome Assessment Report (PLOAR). The SLOAR and PLOAR are used to develop an action plan including re-assessment and the results are reviewed.

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

**PAS-1000: First Year Experience (Institutional Requirement)**

**Credits: 1**

This course assists incoming students in making a successful transition to college. Students focus on those behaviors and attitudes that are needed to achieve academic success. Students learn specific academic success skills/strategies and discover resources that are necessary to succeed in their college courses. Students engage in an exploration of the programs of study offered and design goals for learning that lead to an educational and career/professional plan.

**BLD-1010 Core Craft Skills (Program Requirement)**

**credits: 4**

This course equips students with the foundational knowledge needed prior to training in a building trade of their choice and working on a construction job site. Students learn the concepts of basic safety on construction sites, math for the trades, blueprint reading, use of hand and power tools, rigging, and material handling. They also learn the steps involved in pursuing a career in the building trades and how to communicate effectively in a construction setting. Successful completion of the course earns students the National Center for Construction Education & Research (NCCER) Core Craft Skills credential as well as Occupational Safety and Health Administration (OSHA) 10 certification. This course is cross-listed with Continuing Education courses OCU-410: Introductory Craft Skills (Core) **OR** OCT-408: Introductory Craft Skills: Part 1 (Core) **AND** OCU-416: Introductory Craft Skills: Part 2 (Core).

**BLD-2010 NCCER HVAC Level 1 (5 credits; Program Requirement)**

This course provides the first level of training of the National Center for Construction Education & Research (NCCER) curriculum in HVAC (Heating, Ventilating and Air Conditioning). Students gain an understanding of how HVAC systems work and the role of an HVAC technician in construction. They learn mathematics for the HVAC trade and the basic principles of electricity, heating and cooling and air distribution systems. They acquire the skills and knowledge needed to install plastic, copper, and carbon steel piping systems and to perform installation and maintenance tasks on furnaces, cooling systems and air distribution systems. Successful completion of the course earns students the NCCER HVAC Level 1 credential. This course is cross-listed with the following Continuing Education courses: HVC 370: HVAC/R: Level 1, Part 1 **AND** HVC 371: HVAC/R: Level 1, Part 2 **AND** HVC 372: HVAC/R: Level 1, Part 3

The NCCER HVAC curriculum is recognized by North American Technician Excellence (NATE), an independent, third-party certification body for HVACR technicians.

**BLD-2020 NCCER HVAC Level 2 (7 credits; Program Requirement)**

This course provides the second level of training of the National Center for Construction Education & Research (NCCER) curriculum in HVAC (Heating, Ventilating and Air Conditioning). Students gain an understanding of alternating current generation and use, indoor air quality control, and commercial air distribution systems. They acquire the skills and knowledge required for the installation and maintenance of compressors, refrigerants and oils, metering devices, chimneys, sheet metal and

fiberglass duct systems, commercial HVAC systems and air quality equipment. Successful completion of the course earns students the NCCER HVAC Level 2 credential. This course is cross-listed with the following Continuing Education courses: HVC 373: HVAC/R: Level 2, Part 1 **AND** HVC 374: HVAC/R: Level 2, Part 2 **AND** HVC 375: HVAC/R: Level 2, Part 3 **AND** HVC 376: HVAC/R: Level 2, Part 4

The NCCER HVAC curriculum is recognized by North American Technician Excellence (NATE), an independent, third-party certification body for HVACR technicians.

**BLD-2030 NCCER HVAC Level 3 (7 credits; Program Requirement)**

This course provides the third level of training of the National Center for Construction Education & Research (NCCER) curriculum in HVAC (Heating, Ventilating and Air Conditioning). Students gain an understanding of the fundamental concepts of hot water, chilled water and steam systems; refrigeration and refrigerant flow systems; and circuits and motors used in HVAC systems. They learn the skills and knowledge used to troubleshoot of compressors, control circuits, motors, cooling, heat pumps, gas heating, oil heating, and HVAC accessories. Additionally, they learn the communication skills required to achieve good customer relations in the HVAC trade. Successful completion of the course earns students the NCCER HVAC Level 3 credential. This course is cross-listed with the following Continuing Education courses: HVC 360: HVAC/R: Level 3, Part 1 **AND** HVC 361: HVAC/R: Level 3, Part 2 **AND** HVC 362: HVAC/R: Level 3, Part 3

The NCCER HVAC curriculum is recognized by North American Technician Excellence (NATE), an independent, third-party certification body for HVACR technicians.

**BLD-2040 NCCER HVAC Level 4 (7 credits; Program Requirement)**

This course provides the fourth and final level of training of the National Center for Construction Education & Research (NCCER) curriculum in HVAC (Heating, Ventilating and Air Conditioning). Students gain an understanding of water treatment for HVAC systems, building management systems and energy recycling and storage systems. They acquire the skills and knowledge needed to balance air in distribution systems and address problems of indoor air quality. They learn the principles of HVAC systems design to effectively select equipment and prepare takeoffs. Additionally, they learn the communication and problem-solving skills fundamental to crew leadership in the HVAC trade. Successful completion of the course earns students the NCCER HVAC Level 4 credential. This course is cross-listed with the following Continuing Education courses: HVC 365: HVAC/R: Level 4, Part 1 **AND** HVC 366: HVAC/R: Level 4, Part 2 **AND** HVC 367: HVAC/R: Level 4, Part 3.

The NCCER HVAC curriculum is recognized by North American Technician Excellence (NATE), an independent, third-party certification body for HVACR technicians.

**BLD-2110 NCCER Electrical Level 1 (5 credits; Program Requirement)**

This course provides the first level of training of the National Center for Construction Education & Research (NCCER) Electrical curriculum, which is designed to comply with the National Electric Code (NEC). Students gain an understanding of the principles of electrical theory and the role and career path of an electrician in construction. They acquire the skills and knowledge needed to install electrical devices and residential wiring systems using the National Electric Code (NEC). In addition to interpreting electrical drawings, students learn to install conduits, raceway systems, cables and conductors as well as using electrical instruments for measurement and testing. Successful completion of the course earns students the NCCER Electrical Level 1 credential. This course is cross-

listed with the following Continuing Education courses: ELC 301: Electrical Level 1 **AND** ELC 308: Residential Wiring 1: Part 1 **AND** ELC 311: Residential Wiring 1: Part 2 **AND** ELC 322: Residential Wiring 1: Part 3.

**BLD-2120 NCCER Electrical Level 2 (6 credits; Program Requirement)**

This course provides the second level of training of the National Center for Construction Education & Research (NCCER) electrical curriculum, which is designed to comply with the National Electric Code (NEC). Students gain an understanding of alternating current generation and use. They acquire the skills and knowledge required to install electric lighting, conduits and cable trays, pull and junction boxes, conductors and conductor terminations and splices, circuit breakers and boxes and control systems. Successful completion of the course earns students the NCCER Electrical Level 2 credential. This course is cross-listed with the following Continuing Education courses: ELC 312: Electrical Level 2 **AND** ELC 323: Construction Electricity 2: Part 1 **AND** ELC 324: Construction Electricity 2: Part 2.

**BLD-2130 NCCER Electrical Level 3 (7 credits; Program Requirement)**

This course provides the third level of training of the National Center for Construction Education & Research (NCCER) electrical curriculum, which is designed to comply with the National Electric Code (NEC). Students gain an understanding of lighting system design and commercial electrical service. They acquire the skills and knowledge required to perform load and conductor calculations and to prevent explosions and ignitions in hazardous locations. They learn how to install and perform maintenance tasks for overcurrent protection, distribution equipment, transformers, voice, data and video, and motor controls. Successful completion of the course earns students the NCCER Electrical Level 3 credential. This course is cross-listed with the following Continuing Education courses: ELC 346: Electrical: Level 3, Part 1 **AND** ELC 347: Electrical: Level 3, Part 2 **AND** ELC 348: Electrical: Level 3, Part 3.

**BLD-2140 NCCER Electrical Level 4 (8 credits; Program Requirement)**

This course provides the fourth and final level of training of the National Center for Construction Education & Research (NCCER) electrical curriculum, which is designed to comply with the National Electric Code (NEC). Students gain an understanding of basic electronic theory, electrical components of HVAC systems and emergency and standby systems. They acquire the skills and knowledge required to perform electrical installations in healthcare facilities, hazardous locations, and special locations such as marinas and agricultural settings. They learn how to install fire alarm systems, specialty transformers, heat tracing and freeze protection, and advanced electrical controls. Additionally, they learn the communication and problem-solving skills fundamental to crew leadership in the electrical trade. Successful completion of the course earns students the NCCER Electrical Level 4 credential. This course is cross-listed with the following Continuing Education courses: ELC 349: Electrical: Level 4, Part 1 **AND** ELC 350: Electrical: Level 4, Part 2 **AND** ELC 351: Electrical: Level 4, Part 3.

**BLD-2210 NCCER Plumbing Level 1 (6 credits; Program Requirement)**

This course provides the first level of training of the National Center for Construction Education & Research (NCCER) plumbing curriculum. Students gain an understanding of how plumbing systems work and the role and career path of a plumber in construction. They learn mathematics for the plumbing trade, how to read plumbing drawings and the basics of plumbing safety. They acquire the skills and knowledge needed to install plumbing fixtures and copper, plastic, cast iron, and steel piping systems. Successful completion of the course earns students the NCCER Plumbing Level 1 credential. This course is cross-listed with the following Continuing Education courses: PLM 300: Plumbing: Level

1, Part 1 **AND** PLM 301: Plumbing: Level 1, Part 2 **AND** PLM 302: Plumbing: Level 1, Part 3 **AND** PLM 303: Plumbing: Level 1, Part 4.

**BLD-2220 NCCER Plumbing Level 2 (7 credits; Program Requirement)**

This course provides the second level of training of the National Center for Construction Education & Research (NCCER) plumbing curriculum. Students gain an understanding of the geometrical principles that govern plumbing installations. They acquire the skills and knowledge needed to install and test water distribution and drain-waste-vent systems, fixtures and valves, and fuel gas systems. They learn how to prepare commercial takeoffs and install piping penetrations according to building code. Successful completion of the course earns students the NCCER Plumbing Level 2 credential. This course is currently not cross-listed with Continuing Education.

**BLD-2230 NCCER Plumbing Level 3 (7 credits; Program Requirement)**

This course provides the third level of training of the National Center for Construction Education & Research (NCCER) plumbing curriculum. Students gain an understanding of the principles of physics for plumbing. They acquire the skills and knowledge needed to design and install water supply, drain-waste-vent, storm sewer and compressed air systems, and pump and sump systems. They learn the techniques used to troubleshoot water quality and water supply systems. Successful completion of the course earns students the NCCER Plumbing Level 3 credential. This course is cross-listed with the following Continuing Education courses: PLM 304: Plumbing: Level 3, Part 1 **AND** PLM 305: Plumbing: Level 3, Part 2.

**BLD-2240 NCCER Plumbing Level 4 (6 credits; Program Requirement)**

This course provides the fourth and final level of training of the National Center for Construction Education & Research (NCCER) plumbing curriculum. They acquire the skills and knowledge needed to design indirect waste systems, private water supply and waste systems, hydronic and solar waste systems, and plumbing for mobile homes and trailer parks. They learn how to install pressure-boosting systems and medical gas and vacuum systems. Additionally, they learn the communication and problem-solving skills fundamental to crew leadership in the plumbing trade. Successful completion of the course earns students the NCCER Plumbing Level 4 credential. This course is currently not cross-listed with Continuing Education.

**BLD-2310 NCCER Carpentry Level 1 (7 credits; Program Requirement)**

This course provides the first level of training of the National Center for Construction Education & Research (NCCER) curriculum in carpentry. Students gain an understanding of the carpentry profession and the role of a carpenter in construction. They learn how to interpret drawings and to use tools, adhesives and fasteners specific to the trade. They acquire the skills and knowledge required to assemble doors, windows, floor, wall, roof, ceiling and stair systems. Successful completion of the course earns students the NCCER Carpentry Level 1 credential. This course is cross-listed with the following Continuing Education courses: CRP 301: Carpentry: Level 1, Part 1 **AND** CRP 302: Carpentry: Level 1, Part 2 **AND** CRP 307: Carpentry: Level 1, Part 3.

**BLD-2320 NCCER Carpentry Level 2 (7 credits; Program Requirement)**

This course provides the second level of training of the National Center for Construction Education & Research (NCCER) curriculum in carpentry. Students gain an understanding of commercial drawings and specifications for use in carpentry. They acquire the skills and knowledge needed to install cold-formed steel framing, exterior finishing, thermal and moisture protection, roofing, doors and door hardware, drywall, suspended ceilings, cabinets and trims. Successful completion of the course earns



students the NCCER Carpentry Level 2 credential. This course is currently not cross-listed with Continuing Education.

**BLD-2330 NCCER Carpentry Level 3 (7 credits; Program Requirement)**

This course provides the third level of training of the National Center for Construction Education & Research (NCCER) curriculum in carpentry. Students gain an understanding of all aspects of carpentry required for concrete formwork. They acquire the skills and knowledge required to handle and place concrete; use rigging equipment; and build trenches, excavations, foundations, slabs-on-grade, vertical framework, horizontal framework, and tilt-up wall systems. Successful completion of the course earns students the NCCER Carpentry Level 3 credential. This course is cross-listed with the following Continuing Education courses: CRP 318: Carpentry: Level 3, Part 1 **AND** CRP 319: Carpentry: Level 3, Part 2.

**BLD-2340 NCCER Carpentry Level 4 (7 credits; Program Requirement)**

This course provides the fourth and final level of training of the National Center for Construction Education & Research (NCCER) curriculum in carpentry. Students gain an understanding of all aspects of the planning process that precedes the start of work on a construction site. They acquire the skills and knowledge required to lay out buildings on a site. They learn the techniques used in the construction of advanced roof, wall and stair systems, oxyfuel cutting and arc welding. Additionally, they learn the communication and problem-solving skills fundamental to crew leadership in the carpentry trade. Successful completion of the course earns students the NCCER Carpentry Level 4 credential. This course is not currently cross-listed with Continuing Education.

**CSM 1830 Construction Print Reading (3 credits; Program Elective)**

This course covers reading and interpreting construction drawings and specifications of residential and light commercial buildings. Emphasis is on the architectural, mechanical, and site aspects of working drawings.

**CSM 1510 Residential Construction Management (3 credits; Program Elective)**

An overview of the residential construction process, from concept through design, finance and construction, to turnover. This course is aimed at the owner/builder and is designed to explain his/her role in each step of the process.

**CSM-1450 Construction Management 1 (3 credits; Program Requirement)**

This course provides a broad overview of the construction industry and contracting with an emphasis on responsibilities of middle management in a construction project.

**CSM-2920 Construction Internship II (2 credits; Program Requirement for HVAC, Electrical and Plumbing tracks)**

In this course, students complete an introductory practical experience in an entry-level position under supervision within a construction discipline. Students establish essential performance and learning goals and apply course content in a practical setting to achieve internship course goals. Additionally, students reflect on their experience and enhance their professional skills in the workplace. Internships are either be paid (with a minimum of 64 on-site hours) or non-paid (with a minimum of 32 on-site hours), per employer agreement. Internship sites are either selected from placements offered by the College or proposed by the student. NOTE: All placements must be approved by the department chair prior to course registration.

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

*Composition:*

**EGL-1010 Composition I: Expository Writing Credits: 3**

University-parallel freshman English. Fundamentals of effective prose writing, including research-based informative, analytical, and argumentative essays.

**EGL-1340 Writing About Technical Topics Credits 3**

Preparation of various types of technical business, government, and scientific communications, including presentations. Creation of commonly used documents such as letters, memoranda, and résumés, as well as various types of reports such as progress reports, recommendation reports, and proposals. Development of clear, concise, and accurate style for communicating complex information, with emphasis on audience, purpose, and presentation choices. A continuation and extension of the rhetorical principles and composition skills addressed in EGL-1010.

*Humanities:*

**COM-1010 Foundations of Communication Credits 3**

This survey course provides a foundation for the study of communication competency and skills. In this course, students explore basic communication skills across a variety of contexts, and with diverse audiences. Emphasis is placed upon the foundation and characteristics of communication and public speaking. Students learn how to use basic intrapersonal and interpersonal communication, along with listening skills to identify self-concept, perception, and identity management. Students will increase their communication competence by enhancing their listening skills and the uses of verbal and nonverbal communication. Students will discover how one's culture impacts communication. Students learn the public speaking process, from topic creation, outline and message development, to delivery of an effective informative and persuasive presentation.

*Mathematics:*

**MAT-1130 Mathematical Ideas Credits 3**

The course covers a broad range of topics in both historical and modern mathematics. An emphasis is placed on the applications of these topics with calculator/computer technology incorporated. The topics include: sets and logic, probability and statistics, base 10 and other bases, financial mathematics, and voting methods. The objective of the course is to provide an overview of mathematics and its applications in such a way that students gain an appreciation of its current value and past contributions. Math 1130 is a terminal course and is not intended to prepare students for calculus, science, engineering, technology, or business courses.

*Science:*

**NTR-1010 Introductory Nutrition Credits 3**

Nutrition 1010 addresses basic information about nutrients and their functions in the body as well as known and hypothesized relationships between diet and chronic disease. The course explores the US Government's dietary guidance system and information appearing on food labels. Scientific evidence is used to evaluate the accuracy of nutrition statements made by the media. Students identify the anatomical structures of the gastrointestinal system and the natural processes of nutrient metabolism. Students examine their eating habits, lifestyle, and family medical history to determine personal risk factors for nutrition related illness. This course will teach students how to make healthy dietary choices and reduce their risk for chronic diseases.

*Social Sciences:*

**SOC-1010 Introduction to Sociology Credits 3**

Survey of sociological concepts and their application to culture, socialization, social organizations, and social change.

*Computer Literacy:*

**INT-1010 Introduction to Information Technology Credits: 3**

Introduction to Information Technology is a survey course in evolving information technology and its relevance to individuals and society. Students examine the categories of computing devices and different types of computer applications, software and their uses. Emphasis in this course is on enhancing students' skills in data analysis and programming. Additionally, students evaluate ethical principles related to privacy, security, intellectual property and how these apply to their academic and professional life. They also explore strategies to manage risks related to systems security threats. Lastly, students learn about the basic principles of connectivity and data communications. Students possessing skills and knowledge in this area may receive credit for INT 1010 by passing the department's challenge exam (currently the three Internet and Computing Core Certification tests, known as IC3). Students who are already IC3 certified may receive credit for INT 1010 by presenting their three certificates to the transfer evaluator in the Office of Records and Registration.

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

Graduates of the program are eligible for OSHA 10 certification and NCCER certification in a trade area of their choice. This program follows the NCCER curriculum for each trade area.

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

There is no contract with any other institution or non-collegiate organization associated with this program.

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

Clear, complete, and timely information on the curriculum, course and degree requirements will be posted in the [college catalog](#). Each program has a dedicated page in the college catalog where the program description will be located. The nature of faculty and student interaction, assumptions about technology competence and skills, technical equipment requirements, learning management system, availability of academic support services are located in the course syllabus, college catalog or the Learning Management System. Financial aid resources, costs and payment policies are located on the college website under "[Paying For College](#)".

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 PGCC Office of Communications and Marketing will create brochures, flyers and electronic marketing (e-marketing) materials necessary to promote and advertise the program to potential students. The Office of Communications and Marketing department provides communications materials that create awareness and visibility to efforts to promote the program both internally and externally. The internal process of creating recruitment and advertising materials follows the internal process used by the Office of Communications and Marketing. The information regarding prior learning can be found on the College website: [Transfer Credit Policies and Procedures](#)

## PART H: Adequacy of Articulation

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

For more information: [Transfer Agreements](#) and [Articulation Agreements](#)

This program does not have any articulation agreements with programs at partner institutions.

## Part I: Adequacy of Faculty Resources (as outlined in [COMAR 13B.02.03.11](#)).

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

Only program courses have to be included (required and elective). Institutional requirements and general education courses do not need to be included.

In the last column, do not list any courses outside of this program.

<b><i>Faculty Name</i></b>	<b><i>Appointment Type</i></b>	<b><i>Terminal Degree</i></b>	<b><i>Academic Title/Rank</i></b>	<b><i>Status</i></b>	<b><i>Course(s) Faculty Member will teach in this Program</i></b>
Maya Srinivasan	Tenure-track	B.A. Architecture	Assistant Professor	Full-time	CSM-1830: Construction Blueprint Reading, CSM-2920: Construction Internship II
Seun Joshua	Contract	M.S. Construction, Engineering and Management	Instructor	Adjunct	CSM-1450: Construction Management I, CSM-1830: Construction Blueprint Reading, CSM-2920: Construction Internship II
Elias Makaya	Contract	M.S. Cybersecurity; M.B.A.	Instructor	Adjunct	CSM-1450: Construction Management I, CSM-1830: Construction Blueprint Reading, CSM-2920: Construction Internship II
Benson Maloba	Contract	M.S. Project Management	Instructor	Adjunct	CSM-1830: Construction Blueprint Reading, CSM-2920: Construction Internship II
Gregory Prioleau	Contract	M.S. Construction, Engineering and Management	Instructor	Adjunct	CSM-1450: Construction Management I, CSM-2920: Construction Internship II

Raymond Strang	Contract	B.A. Architecture	Instructor	Adjunct	CSM-1510: Residential Construction Management, CSM-2920: Construction Internship II
Amadi Williams	Contract	B.S. Project Management	Instructor	Adjunct	CSM-1830: Construction Blueprint Reading, CSM-2920: Construction Internship II
Brown, Baxter	Contract	National Center for Construction Education and Research (NCCER) Certified-Carpentry	Instructor	Adjunct	BLD-2310: NCCER Carpentry Level 1, BLD-2320: NCCER Carpentry Level 2, BLD-2330: NCCER Carpentry Level 3, BLD-2340: NCCER Carpentry Level 4
Chew, Demetrius	Contract	NCCER Certified-Core	Instructor	Adjunct	BLD-1010: NCCER Core Craft Skills
Cochran, Richard	Contract	NCCER Certified-Core	Instructor	Adjunct	BLD -1010: NCCER Core Craft Skills
Didier, Trevelyan	Contract	NCCER Certified-HVAC	Instructor	Adjunct	BLD-2010: NCCER HVAC Level 1, BLD-2020: NCCER HVAC Level 2, BLD-2030: NCCER HVAC Level 3, BLD-2040: NCCER HVAC Level 4
Gatewood Jr., Robert	Contract	NCCER Certified-Electrical	Instructor	Adjunct	BLD-2110: NCCER Electrical Level 1, BLD-2120: NCCER

					Electrical Level 2, BLD-2130: NCCER Electrical Level 3, BLD-2140: NCCER Electrical Level 4
Grannum, Garth	Contract	NCCER Certified-HVAC	Instructor	Adjunct	BLD-2010: NCCER HVAC Level 1, BLD-2020: NCCER HVAC Level 2, BLD-2030: NCCER HVAC Level 3, BLD-2040: NCCER HVAC Level 4
Hall, Carl	Contract	NCCER Certified-HVAC	Instructor	Adjunct	BLD-2010: NCCER HVAC Level 1, BLD-2020: NCCER HVAC Level 2, BLD-2030: NCCER HVAC Level 3, BLD-2040: NCCER HVAC Level 4
Jackson, Kenneth	Contract	NCCER Certified-Core, Electrical	Instructor	Adjunct	BLD-1010: NCCER Core Craft Skills, BLD-2110: NCCER Electrical Level 1, BLD-2120: NCCER Electrical Level 2, BLD-2130: NCCER Electrical Level 3, BLD-2140: NCCER Electrical Level 4
Johnson, Gregory	Contract	NCCER Certified-Core, Carpentry	Instructor	Adjunct	BLD-1010: NCCER Core Craft Skills BLD-2310: NCCER Carpentry Level 1, BLD-2320: NCCER Carpentry

					Level 2, BLD-2330: NCCER Carpentry Level 3, BLD-2340: NCCER Carpentry Level 4
Rocha, Janaina	Contract	NCCER Certified-Core, Plumbing	Instructor	Adjunct	BLD-1010: NCCER Core Craft Skills, BLD-2210: NCCER Plumbing Level 1, BLD-2220: NCCER Plumbing Level 2, BLD-2230: NCCER Plumbing Level 3, BLD-2240: NCCER Plumbing Level 4
Ture, Sundiata	Contract	NCCER Certified-Plumbing	Instructor	Adjunct	BLD-2210: NCCER Plumbing Level 1, BLD-2220: NCCER Plumbing Level 2, BLD-2230: NCCER Plumbing Level 3, BLD-2240: NCCER Plumbing Level 4
Yhap, Ian	Contract	NCCER Certified-Electrical	Instructor	Adjunct	BLD-2110: NCCER Electrical Level 1, BLD-2120: NCCER Electrical Level 2, BLD-2130: NCCER Electrical Level 3, BLD-2140: NCCER Electrical Level 4
Outlaw, Deloris	Tenure-track	M.B.A. Management	Associate Professor	Full-time	ACC-1000: Fundamentals of Accounting



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

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

The College provides opportunities for continuous teaching improvement through ongoing training for full- and part-time faculty year-round on a variety of evidence-based best practices related to:

- pedagogy to meet the needs of a diverse student population, using a variety of modalities
- pedagogy specific to distance education
- the learning management system (Canvas)

Concentrated training is offered during professional development periods in August, October, and January.

## PART 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 library maintains online accessible and extensive databases, journals, and E-texts. Students may request holdings and inter-library loans either by email or in person. Additionally, the library will provide journals and publications specifically related to the various professions in the field.

The PGCC library has extensive online resources available to students, including:

### Databases

The listed databases are specific to the research topics for AAS trades degree. Each database has scholarly journals, peer-review articles, academic resources, and industry resources.

- Leadership and Management (Gale OneFile)
- Vocations and Careers (Gale OneFile)

### General Databases

The listed databases are not specific to AAS degree, but include academic resources and information related to AAS degree areas.

- ProQuest
- Academic OneFile

### Ebooks

- EBSCO Academic Ebook Collection
- o Ebooks can be found in the engineering and technology category
- Ebook Central

### Journals

The library has 1468 civil engineering and 1631 mechanical engineering journals. These journals can be relevant to the AAS degree

### Streaming Video

- Films on Demand: Technical Education & Skilled trades

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

1. Provide an assurance that physical facilities, infrastructure and instruction equipment are adequate to initiate the program, particularly as related to spaces for classrooms, staff and faculty offices, and laboratories for studies in the technologies and sciences.

This program will mainly be housed in the Center for Advanced Technology. Current buildings, classroom and office spaces, and teaching and learning equipment are sufficient to support this program. All facilities and equipment are subject to routine cleaning, inspection, and maintenance.

PGCC currently has the following dedicated spaces available to the Building Trades AAS program:

7 traditional classrooms (each can accommodate approx. 15 students)

Computer lab – 20 computer stations

Lunch/Break room

17-seat Conference Room

12 office stations for faculty and staff

Carpentry Lab

Electrical Lab

HVAC/R Lab

Locksmithing Lab

Welding Lab

Plumbing Lab

Automotive garage

Motorcycle garage

Additionally, the program will have access to the Center for Advanced Technology building, which includes the following:

25 classrooms with computer labs to include the following specialized instruction labs (average seating capacity 26):

- Cisco CCNA
- Engineer Technology Lab
- Engineering Lab
- A+ Troubleshooting Lab
- Computer Graphics / Multimedia Lab

4 classrooms without lab (average seating capacity 24)

2 open computer labs with various types of workstations and collaboration spaces (35 computers each)

2 study labs (average seating capacity 10)

27 faculty work spaces

2 conference rooms

1 certification testing center

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***

Prince George’s Community College provides access to its electronic mailing system (Microsoft 365 Outlook) to its full-time and part-time faculty members. Each faculty member’s school email address uses the domain @pgcc.edu. Faculty receive emails from both students and colleagues via the Outlook system. Students enrolled in credit programs are issued a school email address upon enrollment. Each Prince George’s Community College student email address uses the domain @students.pgcc.edu.

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

Each course offered at the College is created in a Canvas shell that allows remote access during a given semester. Each faculty member, full-time or part-time, is given access to each class that he/she is assigned to teach via the Canvas Learning Management System (LMS). Within the learning management system, faculty are able to see who is enrolled in the course, create a gradebook, create discussion boards, upload various content formats, and communicate with individual or groups of students. Zoom is integrated into each Canvas course through an LTI (learning tools integration). Panopto is integrated into each Canvas section through as LTI to ensure student privacy as well as provide streaming technology in accordance with the best practices for video.

After successfully enrolling in a course at Prince George’s Community College, each student is provided access to each course that he/she is enrolled for the given semester. Access to the course is granted four days prior to the official start of the course. Within the learning management system, students can access all course content posted by the instructor, access graded assignments, and communicate with the instructor and other students.

**PART L: Adequacy of Financial Resources with Documentation** (as outlined in [COMAR 13B.02.03.14](#)).

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

<b>TABLE 1: RESOURCES</b>					
Resources Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Reallocated	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
2. Tuition/Fee Revenue (c + g below)	\$73,416	\$146,832	\$220,248	\$293,664	\$367,080
a. # F.T. Students	10	20	30	40	50
b. Annual Tuition/Fee Rate	\$4,830	\$4,830	\$4,830	\$4,830	\$4,830
c. Annual Full Time Revenue (a x b)	\$48,300	\$96,600	\$144,900	\$193,200	\$241,500

d. # Part Time Students	13	26	39	52	65
e. Credit Hour Rate	\$161	\$161	\$161	\$161	\$161
f. Annual Credit Hours	12	12	12	12	12
g. Total Part Time Revenue (d x e x f)	\$25,116	\$50,232	\$75,348	\$100,464	\$125,580
3. Grants, Contracts & Other External Sources	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
4. Other Sources	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
TOTAL (Add 1 – 4)	\$73,416	\$146,832	\$220,248	\$293,664	\$367,080

*Reallocated Funds:*

There are no reallocated funds for this program.

*Tuition/Fee Revenue:*

Assuming modest growth in both full-time and part-time enrollments, and tuition and fees are assumed constant over the next five years, the table displays the overall financials for the program. The in-county tuition rate of \$114 per credit and a fee of \$47 per credit for a total of \$161 per credit have been used to calculate revenue; with 30 credits per year for full-time students, and an average of 12 credits per year for part-time.

*Grants, Contracts, & Other External Sources:*

This program does not use grants, contracts, or external sources for funding.

*Other Sources:*

There are no other sources used for funding.

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.

<b>TABLE 2: EXPENDITURES</b>					
Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
<b>1. Faculty (b + c below)</b>	\$ 0	\$ 0	\$74,063	\$74,063	\$74,063
a. # FTE	0	0	1	1	1
b. Total Salary	\$ 0	\$ 0	\$55,000	\$55,000	\$55,000
c. Total Benefits	\$ 0	\$ 0	\$19,063	\$19,063	\$19,063
<b>2. Admin. Staff (b + c below)</b>	\$ 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
<b>3. Support Staff (b + c below)</b>	\$ 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
<b>4. Equipment</b>	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
<b>5. Library</b>	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
<b>6. New or Renovated Space</b>	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

<b>7. Other Expenses</b>	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
<b>8. TOTAL (Add 1 – 7)</b>	\$ 0	\$ 0	\$74,063	\$74,063	\$74,063

*Faculty:*

Current faculty will teach the program courses. Funds to hire an assistant professor are reflected in the table for years 3-5.

*Admin Staff:*

This program will be housed in the Technology, Engineering and Construction department, as part of the STEM Division, which already has a dean, associate dean, department chair, and coordinator in place who will support the program.

*Support Staff:*

This program will be housed in the Technology, Engineering and Construction department. Office associates support the department as a whole, and not individual programs, so it is not expected that any new support staff will be needed.

*Technical Support and Equipment:*

There is no additional or new technical support or equipment needed for this program. Current technical support and equipment is sufficient for the needs of the students and faculty.

*Library:*

Current library materials are sufficient for the needs of the students and faculty.

*New or Renovated Space:*

There is no new or renovated space needed for this program. Current classroom space is sufficient for the needs of the students and faculty.

*Other Expenses:*

There are no other expenses required or needed for this program.

Part 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**.

Prince George’s Community College has identified three sets of learning outcomes for its students: course, program, and the College’s Core Competencies (institutional learning outcomes). Course outcomes define the skills, knowledge, and values that students are expected to acquire upon completion of a course. Program outcomes specify the skills, knowledge, and values that students are expected to acquire upon completion of a program of study. The College has a rigorous course and program assessment process. Course assessment takes place by using embedded tests and assignments that address specific course outcomes. Data from these course-embedded assessments are publicly distributed every semester in the Student Learning Outcomes Assessment Report (SLOAR). An additional report showing student achievement of the Program Learning Outcomes Assessment Report (PLOAR) and Student Core Competencies are published every year and analyzed to improve courses and to ensure program learning outcomes are met.

Non-tenured faculty members are evaluated yearly by students and administrators. Each year, non-tenured faculty members have their course material and student evaluations assessed by their department chairs and deans, with final verification of the assessment conducted by the Executive Vice President and Provost for Teaching, Learning and Student Success. In order to receive high evaluations, faculty members must demonstrate effective teaching above all, but professional development in the discipline and participation in departmental, divisional, and college-wide activities is also assessed. The same criteria for evaluation are carried out for tenured members of the faculty, but once every three years. The above assessment process also provides administrators the opportunity to set out action plans for faculty improvement in teaching, professional development, and/or college service in order for each or any of those facets of the faculty member's career to be enhanced.

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.

Complete program assessment takes place every four years, with progress toward achievement of improvement plans being evaluated every two years. Data regarding enrollment, retention, and graduation are collected and analyzed against program outcomes, courses offered, and other variables. Each program must have an advisory board consisting of professionals in the field assist in the construction and analysis of program review data. The college has a five-year program review cycle which entails program's educational effectiveness, including assessments of student learning outcomes, student retention, student and faculty satisfaction, and cost-effectiveness.

## PART 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 and success**, and the institution's **cultural diversity goals and initiatives**.

Prince George's Community College provides affordable, high-quality learning experiences that support personal, professional, and educational development for diverse populations, contributing to the economic equity and cultural vibrancy of our community. The mission of Prince George's Community College is compatible with the State's minority achievement goals. The College provides accessible and affordable education, and it is committed to diversity. With a majority African American student body and a significant Hispanic/Latino student population, Prince George's Community College is well positioned to provide opportunities for students traditionally underrepresented in higher education. Moreover, the graduates of this program will further align with the racial makeup of the region's workforce. The College will continue to recruit a diverse student base from both public and private schools and the local community. In addition to working with and relying on the college's student recruiting professionals, additional activities to recruit a diverse body of students will include:

- involvement with community-based organizations, high schools, and teen church programs;
- increased visibility of the new programs (e.g. college Website and catalog); and

- clear communication about the integrated nature of the academic work with practical experience and professional networking opportunities.

In sum, the College will continue to engage with community partners and stakeholders who represent the diversity of the region.

PGCC has a Diversity, Equity and Inclusion office and a number of programs geared to special populations, including Diverse Male Student Initiatives (DMSI), Women of Wisdom (W.O.W.), and Vocational Support Services. Additionally, interactive workshops and cultural diversity events are available on an ongoing basis at both the main campus and the extension centers. Furthermore, a Truth, Racial Healing, and Transformation (TRHT) Campus Center organizes Listening Sessions and Racial Healing Circles. Each of these initiatives focuses on improving the retention and success of minority students.

## Part O: Relationship to Low Productivity Programs Identified by the Commission:

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

This is a new program. Therefore, a low-productivity self-analysis is not applicable here.

## PART P: Adequacy of Distance Education Programs (as outlined in [COMAR 13B.02.03.22](#))

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

Prince George's Community College is eligible to provide Distance Education by the Maryland Higher Education Commission (MHEC). Please see File 22293.

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

Prince George's Community College provides assurance that programs that are offered in a distance format comply with current CRAC guidelines. Please find a copy of the institution's accreditation status for offering distance learning through MSCHE at the following link:

<https://www.msche.org/institution/0175/>. The college also participates in the National Council for State Authorization Reciprocity Agreements (NC-SARA) as evidenced on the following link: <https://nc-sara.org/directory>.

The program offers the following courses in a distance learning format:

PAS-1000: First Year Experience

EGL-1010: Composition I

INT-1010: Introduction to Information Technology

MAT-1130: Mathematical Ideas

SOC-1010: Introduction to Sociology  
EGL-1340: Writing About Technical Topics  
NTR-1010 Introductory Nutrition