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July 19, 2021

Dr. James D. Fielder, Jr.  
Secretary of Higher Education  
Maryland Higher Education Commission  
6 North Liberty Street, 10<sup>th</sup> Floor  
Baltimore, MD 21201

Dear Dr. Fielder:

Howard Community College (HCC) requests your approval of a new lower division certificate (LDC) in Data Business Analytics. This certificate, which was established as a result of need in the business industry, will provide increased data literacy and analysis skills, which are valuable in many areas of business and will enhance employability.

By offering this new certificate, HCC will be able to offer flexibility and opportunity to our students, while maintaining streamlined program oversight, resources, and assessment.

Please contact me if you need additional information or clarification.

Sincerely,

for Jean Svacina

Dr. Jean Svacina  
Vice President of Academic Affairs  
[JSvacina@howardcc.edu](mailto:JSvacina@howardcc.edu)  
443-518-1850



Office Use Only: PP#

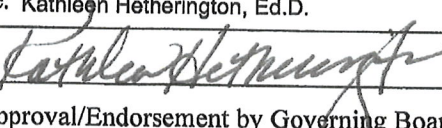
**Cover Sheet for In-State Institutions**  
**New Program or Substantial Modification to Existing Program**

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

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

Payment <input checked="" type="radio"/> Yes	Payment <input type="radio"/> R*STARS # TBD	Payment	Date
Submitted: <input type="radio"/> No	Type: <input checked="" type="radio"/> Check # TBD	Amount: 850.00	Submitted: 7/21/21

Department Proposing Program	Business and Computer Systems		
Degree Level and Degree Type	Lower Division Certificate [HEGIS Code should read 05.0503; form will not accept #]		
Title of Proposed Program	Data Business Analytics		
Total Number of Credits	18		
Suggested Codes	HEGIS: 50503.00	CIP: 52.1301	
Program Modality	<input checked="" type="radio"/> On-campus <input type="radio"/> Distance Education (fully online)		
Program Resources	<input checked="" type="radio"/> Using Existing Resources <input type="radio"/> Requiring New Resources		
Projected Implementation Date	<input checked="" type="radio"/> Fall <input checked="" type="radio"/> Spring <input type="radio"/> Summer Year: 2021 <u>2022</u>		
Provide Link to Most Recent Academic Catalog	URL: <a href="http://howardcc.smartcatalogiq.com/2021-2022/Catalog">http://howardcc.smartcatalogiq.com/2021-2022/Catalog</a>		
Preferred Contact for this Proposal	Name:	Melinda Moore on behalf of Jean Svacira	
	Title:	Manager, Curriculum Services	
	Phone:	(443) 518-4734	
	Email:	mmoore2@howardcc.edu	
President/Chief Executive	Type Name:	Kathleen Hetherington, Ed.D.	
	Signature:	 Date: 7-20-21	
	Date of Approval/Endorsement by Governing Board:		

INITIAL HERE

Revised 1/2021

**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.

Howard Community College's (HCC) mission is "Providing pathways to success." The proposed lower division certificate (LDC) in Data Business Analytics is designed for individuals who want to develop their skills in data mining, data visualization, data interpretation, and data storytelling. This certificate will provide increased data literacy and analysis skills, which are valuable in many areas of business and will enhance employability.

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

A major strategic goal at HCC is "Student success, completion, and lifelong learning." The proposed LDC in Data Business Analytics provides students with data analytics skills that can be applied within many business environments. The skills are desired in the current business environment to inform decisions and develop strategic plans. Business analytics uses data to generate insights, which provide information to businesses to plan, schedule, optimize, determine marketability, and provide solutions for many other needs within companies.

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).

HCC currently offers associate of arts (AA) degrees in Business Administration and General Studies– Business, Leadership, Technology Emphasis. This proposed certificate will complement the AA degrees, while offering new skills in data analytics. HCC's accounting AA degree will also be positively impacted by this new certificate. Because of HCC's current offerings, adequate funding for ongoing support of the Data Business Analytics certificate in terms of facilities, faculty, and administrative support is currently in place.

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

Ongoing support for the proposed program will be provided by the faculty and staff of the business and computer systems division, which will oversee this certificate.

If HCC decides to discontinue the certificate in the future, the college will establish a teach-out plan, and students will be able to complete the program during a set teach-out period. HCC will support students throughout the completion of 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 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

The proposed program addresses the need for the advancement and evolution of knowledge, as well as the societal need for expanded educational opportunities for minority and educationally disadvantaged students. HCC is an open access institution and provides educational opportunities to students regardless of their racial, socioeconomic, or educational backgrounds.

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

The Data Business Analytics certificate supports the State Plan for Postsecondary Education Goal: Access. This program will provide students the ability to complete the certificate at a fraction of the cost compared to a four-year institution. The certificate is aimed at preparing students for positions in a wide range of business, technology, and accounting industries.

As an open access institution, HCC provides access to postsecondary education irrespective of academic preparation. This certificate also supports the State Plan for Postsecondary Education Goal: Success. The certificate provides opportunities for students to enhance their capacity to think and communicate creatively and clearly. HCC provides students with flexible options to help them complete the certificate and achieve their goals.

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

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

The Data Business Analytics certificate will provide employment opportunities in multiple industries, as analyzing data trends to make informed decisions and strategic plans places businesses in positions to succeed in current and future markets. A November 20, 2020 U.S. News & World Report Education article written by Jordan Friedman quotes Dimitris Bertsimas, associate dean of business analytics at the Massachusetts Institute of Technology Sloan School of Management, "Those looking to pursue a career related to data may consider business analytics. More data is available to businesses than ever, which is why business

analytics is a growing field. But how and why professionals use data to reach decisions varies depending on the industry. Airlines may rely on business analytics to determine ticket prices, for example, while hospitals use data to optimize the flow of patients or schedule surgeries. It's the process, in other words, of going from data to models to decisions to value. Business analytics professionals collect data and analyze it to influence decisions in an organization."

Learning business analytics can lead professionals to various jobs, including business analyst, business intelligence analyst, analytics manager, data analyst, [market research analyst](#), and [operations research analyst](#).

U. S. News and World Report's Best Business Jobs (<https://money.usnews.com/careers/best-jobs/market-research-analyst>) ranks Market Research Analyst at number nine, with a median salary of \$63,790. "Market research analysts help their clients figure out who their consumers are, what those consumers want, and how much they'll pay for what they want. Analysts reach these conclusions with traditional methodologies like focus groups and surveys, as well as newer technologies. Market research analysts also create reports on sales trends and consumer demographics, preferences, needs and buying habits. They must be able to present their findings in an easy-to-understand way. The process of collecting and analyzing data is logical and quantifiable; gauging why target audiences might be attracted to a particular product is not. This is why some of the most successful analysts seem to understand human emotions as much as they understand logic."

Operations research analysts are high-level problem-solvers who use advanced techniques, such as optimization, data mining, statistical analysis, and mathematical modeling to develop solutions that help businesses and organizations operate more efficiently and cost-effectively. Anne Robinson, chief strategy officer for supply chain management software company Kinaxis and past president of the Institute for Operations Research and the Management Sciences, says, "In a nutshell, operations research analysts provide the insights for businesses to make decisions at the next level. This is really decision guidance. Companies are trying to get value out of big data and analytics platforms investments, and they need the right talent to take it from raw data to an intelligent asset for business." Operations Research Analyst is ranked at number five in the U.S. World and News Report (<https://money.usnews.com/careers/best-jobs/operations-research-analyst>), with a median salary of \$84,810.

These positions require a bachelor's or master's degree, and the Data Business Analytics certificate provides a starting point from which to grow into this type of position. The certificate is also valuable to professionals who are interested in making a career change to data business analytics.

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

"Our industry has changed so much even in the last five years," says Ted Donnelly, managing director for the marketing research and focus group firm Baltimore Research, and chairman for the Marketing Research Association's national board of directors. "We have so many new tools in the tool kit. A range of employers, including research companies, colleges and government agencies, should galvanize growth in this field."

The Bureau of Labor Statistics (BLS) projects 17.7 percent employment growth for market research analysts between 2019 and 2029. In that period, an estimated 130,300 jobs are expected to be created. The BLS projects 24.8 percent employment growth for operations research analysts between 2019 and 2029. In that period, an estimated 26,100 jobs are expected to be created.

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.

An article on study.com states, "A bachelor's degree is standard, and occasionally employers prefer candidates with a master's degree. Relevant degrees include [business administration](#), business, management, [accounting](#), marketing, economics, statistics, and computer and information science" ([https://study.com/become\\_a\\_business\\_analyst.html](https://study.com/become_a_business_analyst.html)). The training possibilities are wide ranging and available through many avenues. The proposed certificate is a starting point to move toward data analyst positions or to assist professionals in making a career adjustment.

Currently there are 728 mid-level data analyst positions and 43 entry-level positions in Maryland that are posted on [www.indeed.com](http://www.indeed.com). According to Michael Witkowski, Lead Game Economy Designer at Rage Quit Games, "A data analyst who is responsible for understanding what's in data, designing research, interpreting its results and spreading knowledge throughout the company has a bright future. It's one of the jobs that is extremely hard to automate. They are based on human relations and understanding what meaning is. Also, as big data grows, people who have skills to take data and translate them into understandable communication will become ever more important."

A September 2020 [article on Investopedia by Greg Depersio](#) states, "Jobs in the data analytics sector are plentiful, salaries are high, and the career paths you can take are abundant. Data analytics offers a wide variety of opportunities across industries and corporate levels. As such, it can be difficult to pinpoint salary and growth expectations. The BLS offers several different classifications for salaries and growth.

#### Financial Analyst

The financial analyst category is generally the most widely encompassing classification for data analysts. This type of role can include business analysts, management analysts, and a wide variety of different types of investment analysts. BLS data from 2018 shows the average hourly wage for a financial analyst at \$48.55 with an average annual salary of \$100,990. Hourly salaries can range from \$25 to \$80. The BLS expects this class of workers to grow at a faster than average rate of five percent through 2029 (<https://www.bls.gov/oes/2018/may/oes132051.htm>).



#### Market Research

A second BLS classification often looked to for the salary expectations of data analysts is the market research analyst category. As of 2019, this category shows the average hourly wage at \$34.41 with an annual salary expectation of \$71,570. Hourly wages for market researchers can range from \$16.51 to \$58.96. The BLS also expects high growth from this category with a growth rate of 18 percent through 2029 (<https://www.bls.gov/ooh/business-and-financial/market-research-analysts.htm>).

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

HCC anticipates eight graduates in the first year of the certificate's offering. This number is expected to steadily increase in future years.

#### 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.

Of the 16 community colleges in Maryland, Montgomery College and Anne Arundel Community College offer credit-bearing certificates in Data Analysis.

The Data Science certificate program at Montgomery College offers a first stop for students who want to increase their data literacy, improve their marketability, and/or prepare for a career in a data science field. It is also suitable for those who wish to advance their professional careers by supplementing their work experience or an existing college or graduate degree with data science.

The Data Literacy certificate at Anne Arundel Community College is intended for students already possessing an associate's or bachelor's degree who seek a career-boosting credential in the growing field of analytics.

Montgomery College and Harford College offer data analytics training as part of their workforce development program.

There are similarities in particular to the Montgomery College certificate. However, HCC primarily serves Howard County and includes surrounding areas, while Montgomery College serves a different area.

For the fourth consecutive year, HCC was named one of the nation's best two-year colleges for adult learners. HCC received **the 2019 Malcolm Baldrige National Quality Award** in the category of education. The award represents a commitment to best educational practices and constant quality improvement.

2. Provide justification for the proposed program.

Howard Community College serves a distinct geographical area (mainly Howard County residents) and provides in-depth, hands-on learning experiences. Program duplication concerns are not applicable.

**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 HBIs.

The proposed program will not impact the implementation or maintenance of high-demand programs at HBIs.

**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.

The proposed program will not impact the uniqueness and institutional identities and missions of HBIs.

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

**Outcomes** (as outlined in [COMAR 13B.02.03.10](#)):

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

This certificate was established as a result of need in the business industry. Students who complete the certificate will gain skills that are applicable to a variety of positions within a wide array of business industries. Students who enroll in the certificate may be career-changers who want to transition to work in the area of data analytics. With the inclusion of business communication, project management, and python programming, in addition to data analytics courses, the certificate offers a well-rounded program that will prepare for employment, complement existing experience, or serve as an entry point for data analytics knowledge and skills. This program will be overseen by the dean of the business and computer systems division and the department chair for business.

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

The learning outcomes are:

1. Describe the applications and implications of data analytics in different industries.
2. Collect and organize data from a variety of sources.
3. Use tools such as spreadsheets to manage and analyze large data sets.
4. Formulate strategic business insights from data.
5. Communicate patterns and relationships using a variety of data visualization techniques.



3. Explain how the institution will:

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

Program and course reviews are completed according to the schedule provided by HCC in collaboration with faculty members, department chairs, academic deans, the eLearning department, and the office of learning outcomes assessment (LOA).

- b) document student achievement of learning outcomes in the program

Artifacts for the assessment of outcomes are collected and shared through HCC's learning management system, Canvas. Course and program reviews are completed with support from the LOA office. Once an assessment is completed, an action plan will address findings as part of the outcomes assessment process.

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

## Data Business Analytics - Certificate (Career)

The amount of data available to organizations is large and growing rapidly. Organizations—big and small—are now using the abundance of data to make better predictions, decisions, and strategies to increase productivity, profitability, and performance. Data analysts are in high demand because many existing and emerging workers do not have the full skill set employers need.

The Business Analytics Certificate develops student skills in data mining, data visualization, data interpretation, and data storytelling. Related skills include business communication, critical thinking, and decision-making. This Certificate is ideal for students looking to 1) increase their data literacy, 2) prepare for a career in business (data) analytics in any field, and/or 3) advance their careers or improve their marketability.

### Suggested Semester 1

Course Number	Title	Minimum Credits
BMGT 206	Business Analysis for Decision Making	3
BMGT 241	Project Management	3
CMSY 156	Introduction to Python	3

### Suggested Semester 2

Course Number	Title	Minimum Credits
ACCT 245	Introduction to Data Analytics	3

Course Number	Title	Minimum Credits
CMSY 208	Data Visualization	3
SPCH 175	Business Communications	3

**TOTAL CREDIT HOURS: 18**

## **Course Descriptions**

### **ACCT-245 Introduction to Data Analytics (3 credits)**

This course will provide an introduction to business analytics as a means for organizations to gain a competitive advantage by using data to make better decisions. Many different organizations, including businesses, governments, and non-profits, are making significant investments in analytics to support managerial decision making which increases the demand for data analytics skills. Students will use Microsoft Excel to summarize, visualize, and analyze data in practical business situations. Exposure to other data analytics software tools will also be provided. Elements of appropriate levels of business statistics and Microsoft Excel will be developed through this course.

### **BMGT-206 Business Analysis for Decision Making (3 credits)**

This course introduces students to the business analysis discipline and the roles of a business/data analyst. It provides foundational skills to analyze opportunities for business improvement, business innovation, and customer experience enhancement. Students will use a variety of financial, business, and modeling analysis tools to solve business problems as well as managerial strategies to engage stakeholders, assess and mitigate risks, and overcome resistance to change. The course takes a holistic and agile approach to solution development with an emphasis on the analytic and technology skills needed to address business needs. Topics include essential concepts of quantitative and qualitative analytics, business process modeling techniques, and numerous business analyst tools for problem solving, feasibility assessment, and process improvement.

### **BMGT-241 Project Management (3 credits)**

This course is designed to increase the knowledge and skills of students who are managing or working towards managing projects in a way that will be coherent, thoughtful, timely, and in alignment with an organization's objectives. It will teach a wide array of principles and components that include project initiation, planning, executing, performance, monitoring and controlling, cost management, and terminology, among others. It will also provide practical knowledge on managing the project scope, schedule, and resources. Concepts are applied through team projects and tutorials using project management software. Additionally, this course will fulfill the training requirement for the PMI Certified Associate in Project Management (CAPM®) certification for those who elect to become certified.

### **CMSY-156 Introduction to Python (3 credits)**

This course is an introduction to programming with Python. Python is a computer programming language that is increasingly used in industry, scientific research, computer forensics, scripting, game programming, networking, and web applications. Students will solve programming problems using procedural programming constructs such as loops, branching structures, and functions. Students will

write programs that are testable and maintainable using good programming style, naming conventions, and comments. By the end of the course, students will be able to apply strategies of inquiry and exploration in finding information for providing and developing software tools and solutions to real life problems. The provision and development of software tools is done while demonstrating the ethical use of information.

**CMSY-208 Data Visualization (3 credits)**

This course will assist students in applying data analysis visualization tools to meet business requirements. Upon completion, students will demonstrate the ability to organize and visualize data to support decision-making in the emergent data-driven business environment. Students will also demonstrate best practices for communicating data visualization to key decision makers.

**SPCH-175 Business Communications (3 credits)**

This course encompasses the vital components of business communication applicable to any employment setting: business writing, interpersonal business communication, business etiquette and professionalism, and business communications utilizing technology. Students will create a business writing portfolio, an individual presentation, and work together with a team to create a group presentation, using current technologies and learning to communicate in diverse environments.

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

This is a lower division certificate and therefore general education requirements are not applicable.

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

There are no specialized accreditation or graduate certification requirements associated with this certificate.

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

Not applicable to this certificate.

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.

HCC will provide students with timely and accurate information on all curriculum requirements, course offering methodology, Canvas, academic support services, financial aid services, and policies regarding costs and payment by making the information easily accessible to students

on HCC's website, in the college catalog, schedules of classes, and admissions and orientation materials.

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.

All advertising, recruiting, and admissions materials will be clear and accurate in the representation of the proposed program and services available to students.

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

- a) If applicable, discuss how the program supports articulation with programs at partner institutions. Provide all relevant articulation agreements.

N/A

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

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

Courses in this certificate will be taught by qualified faculty, either full- or part-time. All faculty will possess the knowledge to fully engage in the course material and to design an engaging learning environment. It is anticipated that the courses in data analytics will be taught by adjunct faculty in the early semesters. Full-time faculty will also teach data analytics courses as professional development occurs and teaching load allows.

<b>Name &amp; Degree</b>	<b>Title</b>	<b>Status</b>	<b>Courses/Areas Taught</b>
Kathy Norton, M.B.A.	Assistant Professor, Business	Full-time	SPCH-175 Business Communications
Paul Hogan, B.S. in Computer Science	Assistant Professor, Computer Science	Full-time	CMSY-156 Introduction to Python
Kathy Kelly, Ed.D, Information Technology	Adjunct Professor, Business/Data Analytics	Part-time	BMGT-206 Business Analysis for Decision Making

Thomas O'Brien, M.B.A.; M.A., Business and Technology Management	Adjunct Professor, Business	Part-time	BMGT-241 Project Management
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Additional coursework may be taught by adjunct faculty experienced in teaching data analytics, python, and business courses.

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.

HCC provides continuous teaching improvement and ongoing training for full- and part-time faculty year-round in distance education, the learning management system (Canvas), and other pedagogical-related topics, with concentrated training available during professional development periods in May, August, and January, which always include sessions on learner-specific needs and universal design.

**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. **If the program is to be implemented within existing institutional resources**, include a supportive statement by the President for library resources to meet the program's needs.

The James Clark, Jr. Library offers a wide array of print and online resources that are adequate for the proposed program. From the library's website, individuals can search the online catalog for approximately 68,000 items, including books, e-books, and audiovisual titles. Library resources may be used or borrowed by current HCC students, faculty, and staff using their HCC ID card.

The library also provides access to e-journals through online database subscriptions. Off-campus access to databases, e-journals, e-books, and online course reserves is available to the college community via a current HCC login and password.

Research assistance is available at the library service desk, by appointment, and via email. Classes and online learning objects for information literacy instruction are regularly offered. Open seven days a week in the fall and spring semesters, the library is outfitted with group study rooms, quiet zones, silent areas, and seating areas for comfortable reading. Computers are available for research and writing and there is wireless connection and power outlets for mobile devices.

Program faculty may recommend materials for the library collection. First priority will be given to those materials that support the instructional program. Orders for previewing of high-cost video and multimedia items may be arranged through the library. Specialized materials not available in the library and not appropriate for purchase for the College's collection may be requested by faculty through interlibrary loan.

HCC's president affirms that the college's existing library resources will meet the needs of the proposed program.

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

1. Provide an assurance that physical facilities, infrastructure and instruction equipment are adequate to initiate the program, particularly as related to spaces for classrooms, staff and faculty offices, and laboratories for studies in the technologies and sciences. If the program is to be implemented within existing institutional resources, include a supportive statement by the President for adequate equipment and facilities to meet the program's needs.

Existing facilities will be used for the Data Business Analytics certificate, since the necessary technology is already available in current campus classrooms. The college president affirms that the existing resources are adequate to meet the needs of this certificate.

2. Provide assurance and any appropriate evidence that the institution will ensure students enrolled in and faculty teaching in distance education will have adequate access to:

- a) An institutional electronic mailing system, and

All students who register for a credit course at HCC receive an HCC student email account.

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

HCC's office of student computer support (SCS) provides Canvas and Google Apps training and support for HCC students at locations on campus, in classrooms, and online. Technology workshops and "Ask an Expert" sessions are held at various hours and locations each semester.

Students can access Canvas through HCC's website. Canvas is the learning management system through which course information and content is provided to students in online and hybrid courses, and faculty can communicate supplemental course material to students in face-to-face classes.

**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: PROGRAM RESOURCES</b>					
<b>Resource Categories</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
1. Reallocated Funds	\$0	\$0	\$0	\$0	\$0
2. Tuition/Fee Revenue (c + g below)	\$49,369	\$67,321	\$86,062	\$96,407	\$111,518
a. Number of F/T Students	8	12	15	16	18
b. Annual Tuition/Fee Rate	\$3,366	\$3,366	\$3,433	\$3,433	\$3,502
c. Total F/T Revenue (a x b)	\$26,928	\$40,392	\$51,495	\$54,928	\$63,036
d. Number of P/T Students	10	12	15	18	20
e. Credit Hour Rate	\$187	\$187	\$192	\$192	\$202
f. Annual Credit Hour Rate	12	12	12	12	12
g. Total P/T Revenue (d x e x f)	\$22,440	\$26,928	\$34,560	\$41,472	\$48,480
3. Grants, Contracts & Other External Sources	\$0	\$0	\$0	\$0	\$0
4. Other Sources	\$0	\$0	\$0	\$0	\$0
TOTAL (Add 1 – 4)	\$49,368	\$67,320	\$86,055	\$96,400	\$111,516

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: PROGRAM EXPENDITURES</b>					
<b>Expenditure Categories</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
1. Faculty (b + c below)	\$90,440	\$90,440	\$91,770	\$91,770	\$91,770
a. Number of FTE	1	1	1	1	1
b. Total Salary	\$68,000	\$68,000	\$69,000	\$69,000	\$69,000
c. Total Benefits	\$22,440	\$22,440	\$22,770	\$22,770	\$22,770
2. Admin. Staff (b + c below)	\$0	\$0	\$0	\$0	\$0
a. Number of FTE	N/A	N/A	N/A	N/A	N/A
b. Total Salary	\$0	\$0	\$0	\$0	\$0
c. Total Benefits	\$0	\$0	\$0	\$0	\$0
3. Support Staff (b + c below)	\$0	\$0	\$0	\$0	\$0
a. Number of FTE	N/A	N/A	N/A	N/A	N/A
b. Total Salary	\$0	\$0	\$0	\$0	\$0
c. Total Benefits	\$0	\$0	\$0	\$0	\$0
4. Technical Support and Equipment	\$0	\$0	\$0	\$0	\$0
5. Library	\$0	\$0	\$0	\$0	\$0
6. New or Renovated Space	\$0	\$0	\$0	\$0	\$0
7. Other Expenses	\$0	\$0	\$0	\$0	\$0
TOTAL (Add 1 – 7)	\$90,440	\$90,440	\$91,770	\$91,770	\$91,770

**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.

The proposed program will be part of the ongoing assessment process HCC has in place. Courses are assessed on an ongoing basis. Faculty are evaluated on an annual basis, as part of HCC's routine process.

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.

Programs are assessed as a whole every five years. Program assessment includes student learning outcomes, retention, and student satisfaction. HCC uses the IDEA survey to monitor student satisfaction. Faculty satisfaction is reviewed annually as part of the faculty evaluation process. Cost effectiveness is reviewed each year as part of the budget development process.

**N. Consistency with the State's Minority Student Achievement Goals** (as outlined in [COMAR 13B.02.03.05](#)).

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

Howard Community College values diversity and recognizes the critical role of an educational institution in preparing its students, faculty, and staff to become contributing members of the global community. HCC's Diversity Committee promotes conversation, exchange, and an increased awareness of diversity issues affecting the college community. HCC acknowledges that diversity is recognizing, appreciating, respecting, listening to, and learning from the unique talents and contributions of all people.

Faculty and staff of HCC are committed to the success of each student. HCC values and has clear policies on diversity, which are followed by all employees. Employees are required to complete online training modules focused on FERPA rights and responsibilities, harassment awareness and avoidance, safety, and emergency operations, and the College Vision, Mission, Values, Beliefs, and Strategic Initiatives. Refresher training models are required at intervals determined by HCC's president's team.

HCC recognizes the importance of addressing the issue of minority student achievement, as evidenced by our Silas Craft Collegians (SCC) program, Ambiciones program, and Howard P.R.I.D.E. program. The SCC program focuses on recent high school graduates whose academic achievement does not reflect their true potential. The program attempts to close this gap by maximizing academic achievement, retention, graduation, and transfer. The Ambiciones program builds community among Hispanic/Latino students by providing networking opportunities, educational and recreational activities, and workshops with other Hispanic/Latino students and campus organizations. In addition, students can receive specialized guidance with campus services such as advising and financial aid. Howard P.R.I.D.E. encourages the continued academic, professional, and personal development of black and minority male

students via tutoring, mentoring, service learning, leadership seminars, and individual academic advising and career plans.

**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 Data Business Analytics LDC is not related to an identified low productivity program.

**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.

This program is not being proposed as a distance education program.

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

N/A