# 2021–2022 CATALOG UPDATE





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#### MISSION

The mission of University of Maryland Global Campus is improving the lives of adult learners. We will accomplish this by operating as Maryland's open university, serving working adults, military servicemen and servicewomen and their families, and veterans who reside in Maryland, across the United States, and around the world.

### VISION

UMGC will be a global leader in adult education focusing on career-relevant programs that enable students to realize their professional aspirations.

### VALUES

- **Students First:** These are the people who make our work possible.
- Accountability: We are each responsible for our overall success.
- **Diversity:** Each individual brings value to our efforts and results.
- Integrity: Our principles and standards are never compromised.
- Excellence: Quality is the hallmark of our work.
- Innovation: We advance so others can benefit from our leadership.
- **Respect:** The rights and feelings of others are always considered.
- **People Always:** Our faculty and staff represent our differentiator and competitive advantage.

The following information is an update to the 2021–2022 UMGC catalog and represents changes and additions made after original publication. Refer to the 2021–2022 catalog for information on all other programs, services, and policies.

#### GRADUATE COURSE DESCRIPTIONS

Information Systems Management

Public Safety Administration

**Mathematics** 

Statistics

Community College Policy and Administration

# **SUMMARY OF CHANGES**

The following represent the policy and program changes made to the 2021–2022 catalog since its publication:

- The Associate of Arts degree program is now available to applicants with permanent and mailing addresses outside the state of Maryland, in addition to those populations listed on pp. 6 and 27 of the 2021–2022 catalog.
- Undergraduate students admitted in provisional status (described on p. 7 of the 2021–2022 catalog) are no longer limited to enrolling in no more than 7 credits per semester.
- DATA 200 now satisfies the undergraduate general education requirement (described on pp. 28 and 42 of the 2021–2022 catalog) in research and computing literacy for both the associate and bachelor's degrees.
- The computer studies curriculum for the Associate of Arts (described on p. 32 of the 2021–2022 catalog) no longer requires completion of CMIS 102 or a programming language course. Also, DATA courses apply to the requirement for 15 credits in computer-related coursework in addition to the options already listed for this program.
- The eligibility requirements for federal student aid and most UMGC assistance (listed on p. 308 of the 2021–2022 catalog) no longer include registering with Selective Service if required to do so or not being convicted for the possession or sale of illegal drugs during the time you were receiving any type of federal financial aid.
- For the UMGC Completion Scholarship (described on p. 309 of the 2021–2022 catalog), you must provide an official transcript showing a conferred associate degree from a Maryland community college before the end of the *second* semester of enrollment at UMGC.
- Additional annual maximum award limits and restrictions may apply to scholarships and grants (described on p. 309 of the 2021–2022 catalog). Contact the Financial Aid Office for details.
- An undergraduate major and minor in Data Science, an undergraduate certificate in Business Analytics, and a doctoral program in Community College Policy and Administration have been added; requirements for the undergraduate certificate in Public Safety Executive Leadership have changed. Admission procedures for the doctoral program, program details for all the aforementioned programs, and related course descriptions follow.

# **ABOUT STUDY AT UMGC**

### Admission

### **Admission Procedures**

#### Applicants to the Doctor of Management Program

If you are applying for admission to the DM program in community college policy and administration, you must submit the following documentation along with your completed application before the posted deadlines:

- An official transcript documenting a master's degree or more advanced credential
- An up-to-date résumé or curriculum vitae
- Two letters of recommendation from academic or professional references, using the doctorate recommendation form available at umgc.edu/dmccpa
- Responses to specific writing prompts (300–500 words per prompt)

All applications are prescreened by doctoral program faculty and staff based on the documentation submitted. If you pass the prescreen process, you are required to interview with the program admissions committee, comprising faculty members, a staff member, and the program director, who use a common interview guide. Final recommendations for admission are based on evaluation of written submissions and interview recommendations from faculty.

Maryland residents are excluded from admission to the program. The complete admission file must be reviewed and accepted by UMGC before you can enroll in program coursework.

# **BACHELOR'S DEGREE PROGRAMS** CURRICULA

### Data Science

#### **AVAILABLE SPRING 2022**

The following degree requirements and recommended curriculum apply to students who begin continuous study on or after January 1, 2022.

### **Major in Data Science**

The major in data science is designed to meet the growing need for highly skilled professionals who can transform increasing amounts of data into actionable insights. The program provides hands-on experience with a number of the most frequently used analytical tools and methods, offering opportunities to manage and manipulate data; create data visualizations; build predictive models using different machine learning techniques; apply artificial intelligence (AI) and natural language processing techniques to gain insights from free text, images, and videos; and make strategic data-driven recommendations that directly impact business outcomes. You'll acquire fundamental knowledge and skills in data science that will help you adapt to future changes in tools, technology, and the marketplace.

#### What You'll Learn

Through your coursework, you will learn how to

- Communicate effectively orally and in writing, meeting expectations for content, purpose, organization, audience, and format
- Implement all stages of data science methodology, including data extraction, data cleaning, data load, and transformation
- Execute best practices, using diverse technologies, in data science, business intelligence, machine learning, and artificial intelligence
- Analyze social, global, and ethical issues and their implications as they relate to the use of existing and emerging data science, machine learning, and AI technologies
- Evaluate a business problem or opportunity to determine the extent data science can provide a viable solution and translate the business problem into a viable project to meet organizational strategic and operational needs
- Incorporate data security, data privacy, and risk management best practices in the planning, development, and implementation of data science solutions
- Build and deploy the machine learning process throughout its life cycle in full compliance with best practices for tool evaluation, model selection, and model validation
- Leverage big data analytics and AI technology to create solutions for stream analytics, text processing, natural language understanding, AI, and cognitive applications

#### **INDUSTRY CERTIFICATION**

This program is designed to help prepare you for the following certification exams, listed in alphabetical order:

- · AWS Certified Machine Learning
- Microsoft Certified: Data Analyst Associate
- Tableau Desktop Certified Associate
- Tableau Desktop Specialist

#### **Degree Requirements**

#### **BS IN DATA SCIENCE**

|                            | Credits |
|----------------------------|---------|
| General Education Courses  | 41      |
| Required Major Courses     | 36      |
| Minor and Elective Courses | 43      |
|                            | 120     |

#### **REQUIRED MAJOR COURSES (36 CREDITS)**

| STAT 200 | Introduction to Statistics (3)               |
|----------|--|
| DATA 220 | Introduction to Data Analytics (3)           |
| DATA 300 | Foundations of Data Science (3)              |
| IFSM 330 | Business Intelligence and Data Analytics (3) |
| DATA 335 | Data Visualization (3)                       |
| CSIA 300 | Cybersecurity for Leaders and Managers (3)   |
| DATA 430 | Foundations of Machine Learning (3)          |
| DATA 440 | Advanced Machine Learning (3)                |
| DATA 445 | Advanced Data Science (3)                    |
| DATA 450 | Data Ethics (3)                              |
| DATA 460 | Artificial Intelligence Solutions (3)        |
| DATA 495 | Data Science Capstone (3)                    |
|          |  |

#### **RELATED REQUIRED COURSES**

**Note:** The following required courses may be applied to general education or elective requirements.

| CMIS 102 | Introduction to Problem Solving |
|----------|---------------------------------|
|          | and Algorithm Design            |
| MATH 140 | Calculus I                      |

# **BACHELOR'S DEGREE PROGRAMS** CURRICULA

#### **Course Sequencing**

The following table is designed to provide an optimal order for taking both required and recommended general education, major, and elective courses for this program. Your plan will be unique to you, based on your previous education. See pp. 41–43 of the 2021–2022 catalog for information on general education and overall requirements for completing a bachelor's degree. Contact an advisor or a success coach if you have any questions about your academic advisement report.

Major and related requirements are listed in **bold**.

| BS IN DATA SCIENCE   |  |
|--|--|
| Recommended and Required Courses   | Requirement(s) Fulfilled                             |
| LIBS 150 Introduction to Research (1)                                    | General education/computing and research             |
| PACE 111T Program and Career<br>Exploration in Technology (3)            | General education/computing and research             |
| WRTG 111 Academic Writing I (3)  | General education/communications                     |
| <b>CMIS 102</b> Introduction to Problem Solving and Algorithm Design (3) | Related and general education/ computing             |
| NUTR 100 Elements of Nutrition (3)                                       | General education/biological and physical sciences   |
| <b>STAT 200</b> Introduction to Statistics (3)                           | Major  |
| SPCH 100 Foundations of Oral<br>Communication (3)                        | General education/communications                     |
| MATH 140 Calculus I (4)  | <b>Related</b> and general education/<br>mathematics |
| WRTG 112 Academic Writing II (3)   | General education/communications                     |
| <b>DATA 220</b> Introduction to Data Analytics (3)                       | Major  |
| HIST 125 Technological<br>Transformations (3)                            | General education/arts and humanities                |
| BIOL 103 Introduction to Biology (4)                                     | General education/biological and physical sciences   |
| BEHS 103 Technology in<br>Contemporary Society (3)                       | General education/behavioral and social sciences     |
| ARTH 334 Understanding Movies (3)  | General education/arts and humanities                |
| Elective (3)   | Elective   |
| ECON 103 Economics in the<br>Information Age (3)                         | General education/behavioral and social sciences     |
| <b>DATA 300</b> Foundations of Data Science (3)                          | Major  |
| Elective (3)   | Elective   |
| <b>IFSM 330</b> Business Intelligence and Data Analytics (3)             | Major  |

| Elective                         |
|----------------------------------|
|                                  |
| Major                            |
| Elective                         |
| Major                            |
| General education/communications |
| Elective                         |
| Major                            |
| Elective                         |
| Elective                         |
| Major                            |
| Elective                         |
| Major                            |
| Elective                         |
| Elective                         |
| Major                            |
| Elective                         |
| Elective                         |
| Major                            |
| Elective                         |
| Major/capstone                   |
| Elective                         |
|                                  |

### **Minor in Data Science**

The data science minor complements the skills you gain in your major discipline by helping you develop specialized skills in in data science, business intelligence, machine learning, and artificial intelligence.

#### Courses in the Minor (15 Credits)

The minor in data science requires the completion of 15 credits of coursework. STAT 200, IFSM 330, CSIA 300, and all DATA courses apply.

Courses already applied toward other degree requirements (e.g., major or general education) may not be applied toward the minor. At least 9 credits must be earned in upper-level courses (numbered 300 or above). Prerequisites apply for all courses.

For a listing of all the requirements for the bachelor's degree, refer to your major in the 2021–2022 catalog.

# **DOCTORAL DEGREE PROGRAMS** DEGREE REQUIREMENTS AND CURRICULUM

### Doctor of Management in Community College Policy and Administration

#### **AVAILABLE SPRING 2022**

The following degree requirements and recommended curriculum apply to students who begin continuous study on or after January 1, 2022.

Designed for college faculty and administrators who aspire to lead effectively and advance in administrative careers, the unique concentration in community college policy and administration offers exceptional scholarship, intimate cohorts, online courses, short residencies, distinguished faculty, and dissertation support in a program that can be completed within three years

You'll work together in the same group of 15–20 students throughout the entire program and build a virtual community, developed and led by current and former community college presidents and senior executives.

With a highly respected credential, sophisticated knowledge, and an accomplished dissertation, you'll emerge from the program with the tools to transform student achievement and successfully guide community colleges into the essential role they will play in the future of higher education.

Note: Maryland residents are excluded from admission to the program.

### What You'll Learn

Through your coursework, you will learn how to

- Lead transformational change in a rapidly changing sector of higher education
- Advocate for the needs of community colleges and students at local, state, and federal levels
- Apply indicators of institutional effectiveness to all sectors of community college operations
- Apply theory and practice to continuously improve community college policy and student outcomes

### **Preparation Recommended for Success**

#### Recommendations

We recommend work and prior management experience in a community college or other higher education institution or in government or business. You need doctoral-level academic reading and writing skills before entering this writing-intensive doctoral program. You are encouraged to take USCP 605, a noncredit course, to improve your writing skills.

### **Degree Requirements**

#### DM IN COMMUNITY COLLEGE POLICY AND ADMINISTRATION

|                               | Credits |
|-------------------------------|---------|
| Required Core Courses         | 42      |
| Required Dissertation Courses | 12      |
| Total                         | 54      |

#### **Required Core Courses**

| CCPA 810A<br>CCPA 810B | Leadership and Change (3)<br>Leadership and Change (3)   |
|------------------------|--|
| CCPA 800A<br>CCPA 800B | Foundations of Management Theory (3)<br>Foundations of Management Theory (3)                       |
| CCPA 830A<br>CCPA 830B | Research Methods (3)<br>Research Methods (3)   |
| CCPA 821A<br>CCPA 821B | Higher Education Policy (3)<br>Higher Education Policy (3)   |
| CCPA 841A              | Institutional Assessment in the<br>Community College Environment (3)                               |
| CCPA 841B              | Institutional Assessment in the<br>Community College Environment (3)                               |
| CCPA 851A              | Community College Advocacy, Resource<br>Development, and Strategic Allocation (3)                  |
| CCPA 851B              | Community College Advocacy, Resource<br>Development, and Strategic Allocation (3)                  |
| CCPA 861A<br>CCPA 861B | Special Topics in Policy and Administration (3)<br>Special Topics in Policy and Administration (3) |
| CCPA 890               | Dissertation Part I (3)  |
| CCPA 891               | Dissertation Part II (3)   |
| CCPA 892               | Dissertation Part III (3)  |
| CCPA 893               | Dissertation Part IV (3)   |

#### **Course Sequencing**

You are expected to take 6 credits per term to progress with your cohort. Program advisors will provide guidance on course sequencing.

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# **CERTIFICATE PROGRAMS** UNDERGRADUATE

### **Business Analytics**

#### **AVAILABLE SPRING 2022**

The following degree requirements and recommended curriculum apply to students who begin continuous study on or after January 1, 2022.

Today, employers are looking to hire professionals who possess data analytics skills and can inform and enhance decision making within corporations, nonprofit organizations, government agencies, or the military. The certificate program in business analytics provides a valuable introduction to data science and can enhance your career opportunities, regardless of your major. In this program, you learn how to manage and manipulate data, create data visualizations, and use cutting-edge technology to gain insights from traditional and emerging data sources to make strategic data-driven recommendations that influence managerial decision making and organizational outcomes.

Overall certificate requirements are listed on p. 163 of the 2021–2022 catalog.

#### AN INTRODUCTORY COMPUTING COURSE CHOSEN FROM THE FOLLOWING (3):

| CMIS 102 | Introduction to Problem Solving and Algorithm Design   |
|----------|--|
| IFSM 201 | Concepts and Applications of<br>Information Technology |

DATA 200 Data Literacy Foundations

#### FOUR REQUIRED COURSES:

- STAT 200Introduction to Statistics (3)DATA 220Introduction to Data Analytics (3)
- IFSM 330 Business Intelligence and Data Analytics (3)
- DATA 335 Data Visualization (3)

### AN UPPER-LEVEL COURSE CHOSEN FROM THE FOLLOWING (3):

| CSIA 300 | Cybersecurity for Leaders and Managers |
|----------|--|
|----------|--|

DATA 300 Foundations of Data Science

Total credits for certificate in Business Analytics: 18

### Public Safety Executive Leadership

#### **REVISED SPRING 2022**

The following degree requirements and recommended curriculum apply to all students currently pursuing the certificate and those who begin continuous study on or after January 1, 2022.

Develop the executive leadership skills needed to succeed in the public safety professional environment. There is currently a high demand for leadership education for public safety officials at the federal, state, and local governmental levels, as well as throughout the private sector. This certificate should be of professional benefit to both current and future public safety officials employed in public safety planning, public safety legal issues, public policy, public safety research and technology, and public safety leadership.

Overall certificate requirements are listed on p. 163 of the 2021–2022 catalog.

#### **SIX REQUIRED COURSES:**

| PSAD 304 | Contemporary Public Safety Practices (3)         |
|----------|--|
| PSAD 306 | Public Safety Planning (3)                       |
| PSAD 408 | Public Safety Legal Issues and Public Policy (3) |
| PSAD 410 | Public Safety Research and Technology (3)        |
| PSAD 416 | Public Safety Leadership (3)                     |
| PSAD 414 | Public Safety Administration Ethics (3)          |
|          |  |

Total credits for certificate in Public Safety Executive Leadership: 18

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# **COURSE INFORMATION** UNDERGRADUATE COURSE DESCRIPTIONS

### Computer and Information Science

### CMIS 102 Introduction to Problem Solving and Algorithm Design (3)

A study of techniques for finding solutions to problems through structured programming and step-wise refinement. The objective is to design programs using pseudocode and implement them in an appropriate programming language. Hands-on practice in debugging, testing, and documenting is provided. Topics include principles of programming, the logic of constructing a computer program, and the practical aspects of integrating program modules into a cohesive application. Algorithms are used to demonstrate programming as an approach to problem solving.

# Cybersecurity

#### CSIA 300 Cybersecurity for Leaders and Managers (3)

(Designed in part to help prepare for the EC-Council Secure Computer User [CSCU] certification.) Prerequisite: Any CMIS, CMSC, CMIT, CMST, CSIA, DATA, IFSM, or SDEV course. Recommended: IFSM 201. A survey of the cybersecurity principles, practices, and strategies required by leaders and managers to become strategic partners in the establishment, management, and governance of an enterprise's cybersecurity program. The aim is to develop both an understanding of how cybersecurity supports key business goals and objectives and the essential skills necessary for success in a leadership or managerial role. Topics include the fundamentals of cybersecurity practices and principles; enterprise IT governance processes and security controls; data security; the information life cycle; intellectual property protections; privacy laws and regulations; security education, training, and awareness; and the need for cooperation and collaboration between business units and the organization's cybersecurity program.

### Data Science

#### DATA 220 Introduction to Data Analytics (3)

Prerequisite: STAT 200. A practical introduction to the methodology, practices, and requirements of data science to ensure that data is relevant and properly manipulated to solve problems and address a variety of real-world projects and business scenarios. Focus is on the foundational statistical concepts applied to describing data sets with summary statistics, simple data visualizations, statistical inference, and predictive analytics. The objective is to use data to draw conclusions about the underlying patterns that drive everyday problems through probability, hypothesis testing, and linear model building.

#### DATA 300 Foundations of Data Science (3)

Prerequisites: CMIS 102 and DATA 220. An examination of the role of data science within business and society. The goal is to identify a problem, collect and analyze data, select the most appropriate analytical methodology based on the context of the business problem, build a model, and understand the feedback after model deployment. Emphasis is on the process of acquiring, cleaning, exploring, analyzing, and communicating data obtained from variety of sources. Assignments require working with data in programming languages such as Python, wrangling data programmatically, and preparing data for analysis using libraries like NumPy and Pandas.

#### DATA 335 Data Visualization (3)

Prerequisites: DATA 220 and IFSM 330. An overview of data visualization principles in the context of business and data science. Focus is on visualization of different data types, including time-series, multidimensional data, dynamic tables, heatmaps, infographics, and dashboards. Hands-on projects require exploring data visually at multiple levels to find insights to create a compelling story and incorporating visual design best practices to better communicate insights to the intended audience, such as business stakeholders. Projects are selected from a wide range of content areas such as retail, marketing, healthcare, government, basic sciences, and technology.

#### DATA 430 Foundations of Machine Learning (3)

Prerequisite: DATA 300. A hands-on introduction to machine learning principles and methods that can be applied to solve practical problems. Topics include supervised and unsupervised learning, especially linear regression, logistic regression, decision tree, naïve Bayes, and clustering analysis. Focus is on using data from a wide range of domains, such as healthcare, finance, marketing, and government, to build predictive models for informed decision making. Discussion also covers handling missing data, performing cross-validation to avoid overtraining, evaluating classifiers, and measuring precision.

#### DATA 440 Advanced Machine Learning (3)

Prerequisites: DATA 430 and MATH 140. A project-based study of advanced concepts and applications in machine learning (ML), such as neural networks, support vector machines (SVM), ensemble models, deep learning, and reinforced learning. Emphasis is on building predictive models for practical business and social problems, developing complex and explainable predictive models, assessing classifiers, and comparing their performance. All stages of the machine learning life cycles are developed, following industry best practices for selecting methods and tools to build ML models, including AutoML.

# **COURSE INFORMATION** UNDERGRADUATE COURSE DESCRIPTIONS

#### DATA 445 Advanced Data Science (3)

Prerequisites: DATA 335 and DATA 430. A project-based introduction to the concepts, approaches, techniques, and technologies for managing and analyzing large data sets in support of improved decision making. Activities include using technologies such as Spark, Hive, Pig, Kafka, Hadoop, HBase, Flume, Cassandra, cloud analytics, container architectures, and streaming real-time platforms. Discussion covers how to identify the kinds of analyses to use with big data and how to interpret the results.

#### DATA 450 Data Ethics (3)

Prerequisite: DATA 430. Recommended: CSIA 300. A study of ethics within the context of data science, machine learning, and artificial intelligence. Emphasis is on examining data and model bias; building explainable, fair, trustable, and accurate predictive modeling systems; and reporting responsible results. Topics include the technology implications of human-centered machine learning and artificial intelligence on decision making in organizations and government and the broader impact on society, including multinational and global effects.

#### DATA 460 Artificial Intelligence Solutions (3)

(Designed to help prepare for the AWS Certified Machine Learning or Microsoft Designing and Implementing an Azure AI Solution exam.) Prerequisite: DATA 430. A hands-on, project-based study of artificial intelligence and machine learning solutions to complex problems. Topics include natural language processing, computer vision, and speech recognition.

#### DATA 495 Data Science Capstone (3)

Prerequisites: DATA 440, DATA 445, and DATA 450. A projectbased, practical application of the knowledge, technical skills, and critical thinking skills acquired during previous study designed to showcase the student's data science expertise. Individually selected projects include all phases of machine learning life cycles and a peer-reviewed final report and presentation. Topics are selected from student-affiliated organizations or employers, special government/private agency requests, or other facultyapproved sources in a wide range of domains, such as healthcare, financial services, marketing, sciences, and government.

### Information Systems Management

#### IFSM 330 Business Intelligence and Data Analytics (3)

Recommended: IFSM 201 or IFSM 300. A hands-on, project-based introduction to databases, business intelligence, and data analytics. The aim is to design secure industry-standard databases and utilize business intelligence and data analytics techniques and technologies to support decision making. Topics include data and relational databases, SQL queries, business intelligence tools and alignment with business strategy, data analytics, and visualization techniques.

# Mathematics

#### MATH 140 Calculus I (4)

Prerequisite: MATH 108 or MATH 115. An introduction to calculus. The goal is to demonstrate fluency in the language of calculus; discuss mathematical ideas appropriately; and solve problems by identifying, representing, and modeling functional relationships. Topics include functions, the sketching of graphs of functions, limits, continuity, derivatives and applications of the derivative, definite and indefinite integrals, and calculation of area.

### Public Safety Administration

#### PSAD 304 Contemporary Public Safety Practices (3)

Recommended: PSAD 302. An investigation of contemporary strategic public safety practices. The goal is to apply the concepts of hazard and risk identification and management, quality control methodology, customer service, integrated public safety services, and public and private partnerships to public service administration decision making. Discussion covers hazard and risk analysis, customer service awareness (including expectations and demands), quality control methodology (including industry standards and accreditation), integrated public services, best practices, and public/private partnerships.

# **COURSE INFORMATION** UNDERGRADUATE COURSE DESCRIPTIONS

#### PSAD 306 Public Safety Planning (3)

Recommended: PSAD 304. An examination of strategic and operational planning in public safety administration. The aim is to identify and analyze an existing organizational strategic plan that includes budgeting and resource allocation, identify and analyze an existing operational plan, and identify the process for implementation of operational plans. Topics include strategic plans, budgeting, resource allocation, operational plans, hazard mitigation plans, emergency operation plans, incident action plans, and implementation, including positive and negative forces.

#### PSAD 408 Public Safety Legal Issues and Public Policy (3)

Recommended: PSAD 304. A study of the legal and public policy issues faced by public safety administrators. The objective is to describe the legal system; the legal and political environment; administrative laws and regulations for the work environment; and the interrelationship among law, regulations, and public policy. Topics include the federal, state, and local legal systems; the legal and political environment; workplace administrative laws and regulations; public policy; liability; and risk reduction.

#### PSAD 410 Public Safety Research and Technology (3)

Recommended: PSAD 304. An examination of research and technology applications in public safety administration. The goal is to describe the principles of scientific research; evaluate existing research and technology; and apply the methods and resources of research, science, and technology to public safety administration. Topics include scientific research, research methodology, technology, and evaluating and utilizing research and technology in public safety administration.

#### PSAD 414 Public Safety Administration Ethics (3)

Recommended: PSAD 304. An in-depth examination of ethics and ethical issues in public safety administration. The aim is to formulate a personal ethics statement and develop an organizational code of ethics. Topics include the origin and history of ethics, ethical issues in public safety administration, ethical behavior, codes of conduct and codes of ethics, personal ethics statements, organizational culture, and political factors.

#### PSAD 416 Public Safety Leadership (3)

Recommended: PSAD 304. A study of leadership theories, skills, and techniques used in public safety administration. The objective is to define and explain basic concepts of leadership; analyze personal leadership knowledge, skills, and abilities; and evaluate leadership performance in the current public safety environment. Topics include leadership, leadership theories and styles, leadership roles, leadership performance, individual leadership skills and plans, effective leadership, and future trends.

### Statistics

#### STAT 200 Introduction to Statistics (3)

An introduction to statistics. The objective is to assess the validity of statistical conclusions; organize, summarize, interpret, and present data using graphical and tabular representations; and apply principles of inferential statistics. Focus is on selecting and applying appropriate statistical tests and determining reasonable inferences and predictions from a set of data. Topics include methods of sampling; percentiles; concepts of probability; probability distributions; normal, t-, and chi-square distributions; confidence intervals; hypothesis testing of one and two means; proportions; binomial experiments; sample size calculations; correlation; regression; and analysis of variance (ANOVA).

# **COURSE INFORMATION** GRADUATE COURSE DESCRIPTIONS

# Community College Policy and Administration

#### CCPA 800A Foundations of Management (3)

A comprehensive foundation in the history of management and the structure and function of organizations. The objective is to develop a new way of understanding and managing operational and strategic issues in public and private organizations in the face of accelerating social, economic, and technological changes. Topics include organizational theory, strategic thinking and strategic management, theories of decision making, leadership, organizational culture, and management in a postindustrial society. Emphasis is on using problem-solving, application, and evaluation skills to analyze the theories and practices of current and emerging organizational challenges and opportunities, critically assessing the ideas of others, and defend one's own ideas through the application of scholarship. Students may receive credit for only one of the following courses: CCPA 800A or DMCC 800.

#### CCPA 800B Foundations of Management (3)

A comprehensive foundation in the history of management and the structure and function of organizations. The objective is to develop a new way of understanding and managing operational and strategic issues in public and private organizations in the face of accelerating social, economic, and technological changes. Topics include organizational theory, strategic thinking and strategic management, theories of decision making, leadership, organizational culture, and management in a postindustrial society. Emphasis is on using problem-solving, application, and evaluation skills to analyze the theories and practices of current and emerging organizational challenges and opportunities, critically assessing the ideas of others, and defend one's own ideas through the application of scholarship. Students may receive credit for only one of the following courses: CCPA 800B or DMCC 800.

#### CCPA 810A Leadership and Change (3)

A study of leadership—not just for survival but for sustainability—in environments where external pressure for change is the dominant feature. The objective is to examine change and leadership issues in varied industries and one's own organization by identifying and analyzing theories and concepts, assessing the applicability of classic works and current perspectives, testing ideas using case studies, and developing various scenarios and strategies. Topics include the knowledge and abilities, such as improvisation and reinvention, needed for managing change; the roles and skills needed at all levels for leading in new organizational models involving virtual teams; and the impact of change (particularly frequent change) on individuals and organizations. Emphasis is on recognizing the link between leadership, change, and organizational resilience and applying the lessons. Students may receive credit for only one of the following courses: CCPA 810A and DMCC 810.

#### CCPA 810B Leadership and Change (3)

A study of leadership-not just for survival but for sustainability-in environments where external pressure for change is the dominant feature. The objective is to examine change and leadership issues in varied industries and one's own organization by identifying and analyzing theories and concepts, assessing the applicability of classic works and current perspectives, testing ideas using case studies, and developing various scenarios and strategies. Topics include the knowledge and abilities, such as improvisation and reinvention, needed for managing change; the roles and skills needed at all levels for leading in new organizational models involving virtual teams; and the impact of change (particularly frequent change) on individuals and organizations. Emphasis is on recognizing the link between leadership, change, and organizational resilience and applying the lessons. Students may receive credit for only one of the following courses: CCPA 810B and DMCC 810.

#### CCPA 821A Higher Education Policy (3)

An examination of national, state, and local education policy formation and an analysis of the educational policy process, including antecedents, the framing of problems and solutions within policies, policy implementation, and policy consequences in the context of the community college environment. Topics may include the education ecosystem, external stakeholder relationships, educational outcomes, labor market–driven innovation and change, workforce education, organizational development, student-centric culture, and technology leadership. The goal is to develop key leadership competencies, including strategic planning, decision making, resource management, communication, collaboration, and advocacy as they support effective policy development. Students may receive credit for only one of the following courses: CCPA 821A and DMCC 821.

#### CCPA 821B Higher Education Policy (3)

An examination of national, state, and local education policy formation and an analysis of the educational policy process, including antecedents, the framing of problems and solutions within policies, policy implementation, and policy consequences in the context of the community college environment. Topics may include the education ecosystem, external stakeholder relationships, educational outcomes, labor market–driven innovation and change, workforce education, organizational development, student-centric culture, and technology leadership. The goal is to develop key leadership competencies, including strategic planning, decision making, resource management, communication, collaboration, and advocacy as they support effective policy development. Students may receive credit for only one of the following courses: CCPA 821B and DMCC 821.

# **COURSE INFORMATION** GRADUATE COURSE DESCRIPTIONS

#### CCPA 830A Research Methods (3)

An applied study of how to design, interpret, and critique both quantitative and qualitative research. The application of methods grounded in the philosophy of science provides a solid foundation that supports the identification and analysis of researchable questions and includes one qualitative and one quantitative methodology. Assignments include short analyses representative of the different methodological traditions. Students may receive credit for only one of the following courses: CCPA 830A and DMCC 830.

#### CCPA 830B Research Methods (3)

Prerequisite: CCPA 830A. An applied study of how to design, interpret, and critique both quantitative and qualitative research. The application of methods grounded in the philosophy of science provides a solid foundation that supports the identification and analysis of researchable questions and includes one qualitative and one quantitative methodology. Assignments include short analyses representative of the different methodological traditions. Students may receive credit for only one of the following courses: CCPA 830B and DMCC 830.

### CCPA 841A Institutional Assessment in the Community College Environment (3)

An exploration of the criteria, indicators, and processes by which institutions define and evaluate their effectiveness and use data to improve the quality of programs and services. Emphasis is on the assessment of student learning outcomes, measurement of student success (e.g., progress through developmental courses, persistence, transfer, and graduation), program evaluations, and the role of regional accreditation. Topics include ways in which community college leaders can engage in a broad array of organizational and administrative activities to build cultures of evidence. Students may receive credit for only one of the following courses: CCPA 841A and DMCC 841.

### CCPA 841B Institutional Assessment in the Community College Environment (3)

An exploration of the criteria, indicators, and processes by which institutions define and evaluate their effectiveness and use data to improve the quality of programs and services. Emphasis is on the assessment of student learning outcomes, measurement of student success (e.g., progress through developmental courses, persistence, transfer, and graduation), program evaluations, and the role of regional accreditation. Topics include ways in which community college leaders can engage in a broad array of organizational and administrative activities to build cultures of evidence. Students may receive credit for only one of the following courses: CCPA 841B and DMCC 841.

### CCPA 851A Community College Advocacy, Resource Development, and Strategic Allocation (3)

An exploration of the process by which community college leaders advocate for their students and organization in the face of the challenges and opportunities in higher education today and the skills needed for successful advocacy. Topics include the use of argumentation, data, and presentation skills to develop and effectively present cases for support at local, state, and federal levels. Discussion covers the world of community college fundraising and the potential of entrepreneurial ventures to help close the funding gap. Both sides of the finance equation, including resource development and strategic allocation, are explored in depth. The goal is to develop an understanding of community college revenue sources (state funds, local funds, tuition, and other), define the role of entrepreneurship, philanthropy, and bonds in expanding college revenue, and apply financial analytics to define a healthy institution. Focus is on developing the skills to advocate and find support for equity and student success, building a capacity to allocate college resources to improve equitable student outcomes, and understanding that the budget is a moral document for the college. Students may receive credit for only one of the following courses: CCPA 851A and DMCC 851.

### CCPA 851B Community College Advocacy, Resource Development and Strategic Allocation (3)

An exploration of the process by which community college leaders advocate for their students and organization in the face of the challenges and opportunities in higher education today and the skills needed for successful advocacy. Topics include the use of argumentation, data, and presentation skills to develop and effectively present cases for support at local, state, and federal levels. Discussion covers the world of community college fundraising and the potential of entrepreneurial ventures to help close the funding gap. Both sides of the finance equation, including resource development and strategic allocation, are explored in depth. The goal is to develop an understanding of community college revenue sources (state funds, local funds, tuition, and other), define the role of entrepreneurship, philanthropy, and bonds in expanding college revenue, and apply financial analytics to define a healthy institution. Focus is on developing the skills to advocate and find support for equity and student success, building a capacity to allocate college resources to improve equitable student outcomes, and understanding that the budget is a moral document for the college. Students may receive credit for only one of the following courses: CCPA 851B and DMCC 851.

# **COURSE INFORMATION** GRADUATE COURSE DESCRIPTIONS

#### CCPA 861A Special Topics in Policy and Administration (3)

A survey of significant topics in community college policy and administration. The aim is to explore the history and modern mission of community colleges as engines of equity and economic mobility, the structure of community college systems across the United States, and key differences in governance, funding, and centralization of authority. Topics include the development of the student success movement, state and national issues, and the critical role of governance and governing boards in effective management. Emphasis is on developing an understanding of principles of good governance (e.g., policy governance, the board-CEO relationship, board stewardship and education, rogue board members, and other governance issues) and the ability to lead with board support.

#### CCPA 861B Special Topics in Policy and Administration (3)

A survey of significant topics in community college policy and administration. The aim is to explore the history and modern mission of community colleges as engines of equity and economic mobility, the structure of community college systems across the United States, and key differences in governance, funding, and centralization of authority. Topics include the development of the student success movement, state and national issues, and the critical role of governance and governing boards in effective management. Emphasis is on developing an understanding of principles of good governance (e.g., policy governance, the board-CEO relationship, board stewardship and education, rogue board members, and other governance issues) and the ability to lead with board support.

#### CCPA 890 Dissertation Part I (3)

The identification and refinement of the dissertation topic. The objective is to research questions relevant to the chosen topic, conduct a review of the literature on that topic, and develop a conceptual model and associated hypotheses. Students may receive credit for only one of the following courses: CCPA 890 and DMCC 890.

#### CCPA 891 Dissertation Part II (3)

The identification of an appropriate dissertation methodology. The goal is to select the dissertation's research methodology that will be utilized to evaluate the conceptual model and hypotheses and defend the dissertation proposal. Students may receive credit for only one of the following courses: CCPA 891 and DMCC 891.

#### CCPA 892 Dissertation Part III (3)

Development of dissertation content. The aim is to identify appropriate sources of data, collect and analyze the data in the context of the chosen methodology, and draw conclusions regarding the conceptual model and associated hypotheses. Students may receive credit for only one of the following courses: CCPA 892 and DMCC 892.

#### CCPA 893 Dissertation Part IV (3)

Finalization of dissertation content. The objective is to revise and complete the dissertation. Steps covered include developing all necessary supplemental materials, proofing and formatting the dissertation, and gaining faculty approval for final submission and final defense.

#### CCPA 880 Independent Doctoral Study (3)

Prerequisite: Permission of the department. Supervised study of policy and administration topics in doctoral studies. May be repeated to a maximum of 12 credits.

#### CCPA 899 Continuing Doctoral Matriculation (1)

Continued dissertation work.



#### ACCREDITATION

University of Maryland Global Campus is accredited by the Middle States Commission on Higher Education, 3624 Market Street, Philadelphia, PA 19104 (267-284-5000), an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation. UMGC is a constituent institution of the University System of Maryland and is governed by the USM Board of Regents. UMGC is certified to operate by the State Council of Higher Education for Virginia (SCHEV). University of Maryland Global Campus, 9625 Belvoir Road, Barden Education Center, Building 1017, Room 128, Fort Belvoir, VA 22060.

### **ABOUT UMGC**

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To speak with an advisor or success coach, call **800-888-8682** or send an email to studentsfirst@umgc.edu.



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