UNIVERSITY OF MARYLAND
OFFICE OF THE PRESIDENT

1101 Thomas V. Miller, Jr. Administration Building
College Park, Maryland 20742
301.405.5803 TEL
301.314.9560 FAX

September 23, 2021

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

Dear Secretary Fielder:

I am writing to request approval for a new Doctorate of Business Administration program. The proposal for the new program is attached. I am also submitting this proposal to the University System of Maryland for approval.

The proposal was endorsed by the appropriate faculty and administrative committees. I also endorse this proposal and am pleased to submit it for your approval.

Sincerely,

Darryll J. Pines
Glenn L. Martin Professor of Aerospace Engineering
President

DJP/mdc

cc: Antoinette Coleman, Associate Vice Chancellor for Academic Affairs
Jennifer King Rice, Senior Vice President and Provost
Prabhudev Konana, Dean, Robert H. Smith School of Business

Office Use Only: PP#

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

| | |
|---|---|
| Institution Submitting Proposal | University of Maryland, College Park |

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

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

Payment Submitted: (●) Yes ( ) No  Payment Type: (●) R*STARS # ( ) Check #  Payment Amount: 850  Date Submitted: 9/24/2021

| | | |
|---|---|---|
| Department Proposing Program | Robert H. Smith School of Business | |
| Degree Level and Degree Type | Doctoral; Doctor of Business Administration | |
| Title of Proposed Program | Business Administration | |
| Total Number of Credits | 54 | |
| Suggested Codes | HEGIS: 050101 | CIP: 52.0201 |
| Program Modality | (●) On-campus ( ) Distance Education (*fully online*) | |
| Program Resources | (●) Using Existing Resources ( ) Requiring New Resources | |
| Projected Implementation Date | (●) Fall ( ) Spring ( ) Summer | Year: 2022 |
| Provide Link to Most Recent Academic Catalog | URL: https://academiccatalog.umd.edu/ | |
| Preferred Contact for this Proposal | Name: Michael Colson | |
| | Title: Senior Coordinator for Academic Programs | |
| | Phone: (301) 405-5626 | |
| | Email: mcolson@umd.edu | |
| President/Chief Executive | Type Name: Darryll J. Pines | |
| | Signature: Darryll J. Pines | Date: 09/23/2021 |
| | Date of Approval/Endorsement by Governing Board: | |

Revised 1/2021

MARYLAND HIGHER EDUCATION COMMISSION
6 N. Liberty Street • 10th Floor • Baltimore, MD 21201
T 410.767.3300 • 800.974.0203 • F 410.332.0270 • TTY for the Deaf 800.735.2258 www.mhec.maryland.gov

**A. Centrality to the University's Mission and Planning Priorities**

*Description.* The Robert H. Smith School of Business at the University of Maryland, College Park (UMD), proposes to revive its program leading to the Doctorate of Business Administration (DBA), last offered in the mid-1980's. The DBA is a practitioner-oriented professional doctoral-level degree designed for senior executives and researchers in industry and government for whom advanced research skills in analyzing business problems are required. Rapid developments in technology, big data and artificial intelligence, and machine learning techniques, are all impacting traditional and digital marketplaces and leading to innovative business and financial models. There is a growing demand for senior executives who have a deeper understanding of these developments and the ability to apply them in the corporate world. In 2013, the Association of Collegiate Schools of Business (AACSB), the national accrediting body for schools of business, highlighted the need for programs that provide advanced skills, those refined through doctoral education, to the corporate economic sector. The proposed DBA is structured to provide more advanced skills in leadership and problem-solving than one would earn in a master's degree, while also providing a more practical application approach than would be part of a Doctor of Philosophy program such as that currently offered by the Smith School or at other Maryland institutions. The initial areas of focus for this cohort-based program will be in information systems, marketing, and finance. Cohorts are anticipated to include 5-10 students in each area and to draw primarily from corporate partners in the Washington, DC area.

*Relation to Strategic Goals.* The University's mission statement highlights the institution's role as the flagship campus and one of the country's first land-grant universities. As such, UMD's mission statement sets a goal to *"continue to build a strong, university-wide culture of graduate and professional education*" and to provide knowledge-based programs and services that are responsive to the needs of the citizens of the state and the nation. The Robert H. Smith School of Business houses one of the strongest academic faculties in the world and regularly places in the Top 15 in the Financial Times Rankings of "Top Professional Research Institutions in Business." The research and experience of the faculty are particularly suited to attract outstanding executives who are seeking a more thorough understanding of business analytics, marketing technology, finance technology and associated business, marketing and financial issues, and their global implications. Faculty and staff currently affiliated with the Robert H. Smith School of Business hold appropriate degrees in economics, statistics, marketing, finance, information systems, management, and public policy that are relevant and necessary for the DBA degree.

*Funding.* Resources for the new program will be drawn from the existing infrastructure for master's and Ph.D. programs within the Smith School and will be supported by the DBA program's tuition revenue. Because the cohort sizes in this program are expected to be small relative to, for example, the Smith School's MBA programs, these existing offices have the capacity to support the DBA.

*Institutional Commitment.* UMD's Provost and President fully support the development of this program as an important component of sharing the expertise of our faculty with the workforce of the surrounding community.

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

*Regional Need.* Students interested in this program will be working professionals who want to accelerate and solidify their careers as accomplished leaders in business organizations and in government agencies by using doctoral-level research skills in business, marketing analytics, operations, or finance. The purpose of such a program is not to remove executive level professionals from their organizations and launch them into academic careers but enhance their abilities to make effective change in their own specific organizations and industries. College Park serves the Washington metropolitan area, which has a large collection of organizations, including federal agencies, private businesses, non-governmental organizations, and consulting firms, that will benefit by having professionals who have both the research abilities and implementation skills to make their organizations stronger. Professionals looking to advance their careers in these sophisticated organizations will be more competitive with a DBA degree.

*State Plan.* The proposed program addresses the Maryland State Plan's Goals to foster innovation in Maryland higher education, and specifically Strategy 8, to partner with industry to develop long-term graduate educational opportunities[1]. As noted above, corporations are increasingly reliant on technology advances, large data, digital marketplaces and complex financial models to grow their organizations. As a result, senior executives increasingly require a deep understanding of these areas and apply them in practice. The DBA's focus on application-oriented projects that are relevant to the learner's organization is well matched to the goal of increased workforce development.

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

The Bureau of Labor Statistics[2] Occupational Outlook Handbook indicates that the "Washington-Arlington-Alexandria, DC-VA-MD-WV" is one of the top metropolitan areas for employing executive-level management level positions. This is further highlighted by a 2016 report "Trends in Workforce Demand" conducted by the Metropolitan Washington Council of Governments[3]. This report charts the job growth in the Metropolitan Washington DC area and makes national comparisons of job growth. The DC/MD/VA region has seen a 6% growth rate in both Professional and Business Services and Trade, Transportation, and Utilities. The Professional and Business Services industry cluster has experienced significant growth in the Management, Scientific and Technical Consulting Services. Some of the top corporations in the DC/MD/VA area are Accenture, Booz Allen Hamilton, and Deloitte, who are known to prefer individuals with doctoral-level credentials for their executive and top corporate research

[1] https://mhec.maryland.gov/About/Pages/2017StatePlanforPostsecondaryEducation.aspx

[2] https://bls.gov/ooh

[3] https://wtop.com/wp-content/uploads/2016/05/312455432-The-Trends-in-Workforce-Demand-Report-by-the-Metropolitan-Washington-COG.pdf

positions.

The DBA will focus on three areas of specialization that reflect these same job growth trends in the DC/MD/VA. The Finance specialization will provide the skill set required by not only the top companies identified above but also by the highly regarded employers at the International Monetary Fund, Cornerstone Research, the World Bank, and the Federal Reserve Board. The Information Systems area of specialization will provide individuals with business analytics expertise and expand on project management training. These skills are in demand by companies such as Booz Allen Hamilton. The Marketing area of specialization will also expand on marketing analytics and consumer behavior within an industry and management perspective. With the development of Amazon's H2Q in the Washington DC area metro, we anticipate that these skills in all three areas of specialization will be highly coveted.

**D. Reasonableness of Program Duplication**

The Maryland Higher Education Commission's Institution Program Inventory identifies only one other Doctor of Business Administration program, offered by the University of Maryland Global Campus. UGMC's 48-credit program is designed as an online curriculum to be completed through part-time enrollment, with a restriction of one course per term. The content is more broadly defined on business intelligence, ethics, and complex decision-making, but does not have the in-depth focus areas identified in UMD's program.

Three universities offer a Ph.D. program in a business field. Capitol Tech University offers a more narrowly focused Ph.D. program in business analytics and data science, in an online format.

Like UMD, Morgan State University (MSU) offers a research-based, 60-credit Ph.D. program in Business Administration, with specialty areas in Human Resource Management, Marketing, Entrepreneurship, and Hospitality Management, as well as Accounting and Finance. As noted on MSU's web site*: "The Ph.D. program prepares graduates for careers in research, teaching, and consulting in various functional areas of business. Graduates of the program are expected to make significant contributions to the advancement of knowledge of business practices through research and consulting, and to disseminate such knowledge through their teaching. The curriculum is designed to provide graduates with in-depth exposure to a specific business content area, sophisticated analytical methods, and education techniques. This last feature is unique to the program and is structured around different aspects of exposure to university-level teaching."* The program's enrollment is about 20-25 students, with 3-6 graduates per year. UMD's 54-credit Ph.D. program, formally titled "Business and Management", covers similar areas of scholarly study with a focus on preparing graduates for academic careers in research universities. UMD's program has typically 80 students enrolled across all areas of study, with 16-20 graduates per year. The two programs have co-existed for many years. Typically, about 75% of UMD's Ph.D. students in the Smith School are international. Over the past five years, 86% of graduates have continued into tenure-track positions in research-active universities.

Unlike Ph.D. programs, the DBA is a practitioner-based program for working professionals whose career goals are squarely within corporate or financial sectors. Rather than pursue a scholarly research topic with a dissertation, students will create a plan of study with an applied capstone project based on a practical problem they may face in their current employment. UMD's DBA program is designed to be

comparable to other existing successful programs, such as those at Washington University in St. Louis, Case Western Reserve University, the University of Florida, and Georgia State University.

More specific information regarding the differences between MSU's Ph.D. program and UMD's proposed DBA program, other than the credential itself, will be provided below.

**E. Relevance to Historically Black Institutions (HBIs)**

See below.

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

There are a number of major differences, between the program proposed here and Morgan State University's (MSU's) Ph.D. program in Business Administration. Foremost is the target audience: MSU's Ph.D. program has an advertised focus on preparing individuals for careers in academia, through its unique focus on university-level teaching, as noted in its promotional materials. MSU's Ph.D. curriculum is designed to provide a broad knowledge of business operations, an understanding of scientific inquiry, and a firm theoretical foundation of business fields, with an emphasis on teaching. Students are required to teach at least one course in their area of specialization. Alumni from the program have secured tenure-track faculty positions at a variety of institutions, with a high placement rate.

In contrast, DBA candidates in the program proposed here will remain as working professionals throughout the program, and upon graduation, will continue in corporate or government sectors, with the intent of moving to higher positions of leadership. The DBA program expressly does not prepare individuals for academia. There is no emphasis on teaching. The curriculum is practice-focused, with segments in research methodology, analytics, legal and ethical issues in big data management, and regulatory structure.

The target geographical region for this program is in the Washington, DC area, for which there is good access to College Park.

MSU's program has a clear identity in the academic sector. The proposed DBA program is a complementary pathway that does not interfere with this identity.

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

*Curricular Development.* The curriculum was developed by faculty within the Smith School of Business, drawing upon their expertise in the three identified areas of focus of Information Systems, Finance, and Marketing.

*Faculty Oversight.* Each of the three specialty areas will have a faculty coordinator from the tenured Smith School faculty. The faculty coordinators will be responsible for overseeing student progress as well as matching each student with a faculty mentor for their capstone projects. They also serve as the oversight committee for the program along with the Assistant Dean of Doctoral Programs. Currently, Rebecca Hann, Professor of Accounting and Information Assurance, serves as the Assistant Dean of Doctoral Program. P.K. Kannan, Dean's Chair in Marketing Science will serve as faculty coordinator for the Marketing area, Mark Loewenstein, Associate Professor of Finance will serve as faculty coordinator

for the Finance area, Siva Viswanathan, Professor of Information Systems, will serve as faculty coordinator for the Information Systems area. This responsibility will rotate among the tenured faculty, with an anticipated term length of two years.

Appendix A contains a list of the relevant faculty who will be actively engaged in teaching the core elements of the curriculum.

*Educational Objectives and Learning Outcomes*. The educational objectives of the program are as shown below and include a common set of objectives for the program along with specific objectives for each area of focus.

Students who complete the program are expected to have acquired the following skills and understanding:

a) Comprehensive knowledge of foundational concepts in the respective concentration areas – information systems, marketing, and finance;
b) Analytical skills in the respective concentration areas of information systems, marketing, and finance;
c) The competency necessary to take leadership roles in business and financial organizations with global reach;
d) Knowledge of the legal and ethical issues related to big data management, privacy preservation, marketing research, financial management and an understanding of the role of all stakeholders when capital allocation decisions are made.

Area-specific objectives include the following:

INFORMATION SYSTEMS

i. Comprehensive knowledge and analytical skills, including data mining and prediction models, decision analytics, big data and artificial intelligence, social media and web analytics, and market segmentation.
ii. The ability to leverage emerging technologies including artificial intelligence, Internet of Things, and novel sources of mobile and social data to develop agile businesses strategies and inform policy.
iii. Understanding of foundational theory and practical application of information systems topics.

MARKETING

i. Comprehensive knowledge and analytical skills including data mining and prediction models, decision analytics, social media and web analytics, market segmentation, marketing mix models, personalization and recommendations, attribution modeling, etc.
ii. Use of behavioral theories to understand users' as well as customers' motivation, attitudes and behaviors and make behavioral predictions.
iii. Understanding of foundational theory and practical application of marketing behavioral and quantitative topics.

FINANCE

I. Comprehensive knowledge and analytical skills including financial products and financial market structure, detailed financial modeling, the ability to design and empirically estimate financial relationships and creation of financial statements and forecasts.
II. An understanding of the regulatory structure of financial markets and the role that policymakers and regulators play in the efficient operation of financial markets.
III. Understanding of foundational theory and practical application of finance topics.

Learning outcomes to assess the success of the program in meeting these objectives are included in Appendix C.

*Institutional assessment and documentation of learning outcomes.* The UMD Graduate School is in the process of developing an outcomes assessment strategy for all master's and doctoral programs across the campus, like that which has been in place for undergraduate curricula for many years. The Graduate School tracks enrollments, retention, time-to-degree, and graduation rates for all programs, and has recently acquired tools to track career placements.

*Course requirements.* The program consists of 54 credits, including 42 credits in a course setting and a minimum of 12 credits of capstone project research. Students who enter the program with a master's degree can meet the requirements with 30 credits. Typically, however, students will take 42 credits in the following categories: Research Tools and Methodologies (10–12 credits), courses in the student's major field of study (22–24 credits), and practice-focused elective courses (10–12 credits). All students must complete 12 credits of the capstone project research in addition to the coursework for graduation eligibility.

Course listings for each of the categories and for each specialization are included in Appendix B. Students are not required to take all courses listed nor are they limited to only these courses. Some coursework is interdisciplinary, in that students may take a course in another area to fulfill their requirements. All course registration plans must be approved by the DBA faculty coordinator. Approximately 70% of the courses are related to existing courses in either the MBA or PhD programs. Sample plans to complete the program are shown below.

The most significant aspect of the DBA is the capstone project. In collaboration with a mentor, the student will develop a written proposal for a substantial original project that addresses a real-world application in business or government. The capstone project is designed to develop and build upon skills that the student will continue to use throughout their subsequent career. The student is expected to develop close working relationships with the mentor and advising committee to identify relevant data, develop research methodologies, and apply them to a practical problem. Committee selection, topic selection, data collection, design and conduct of research, highlighting implications of the research for industry are all critical aspects of the capstone project. Because this is a program of professional practice, necessary conditions for a successful project involve evidence of either actual implementation of the solution derived from the research or potential for near-term implementation

of the project, a written report outlining the project problem, research design and methodologies, findings/results, plan for implementation, and a highlight of implications of the research for the industry. The student will present their findings through an oral presentation to the committee at the end of the project.

**Information Systems Track**

| Course | Credits | Course | Credits |
|---|---|---|---|
| Semester 1 | | Semester 2 | |
| BDBA830 Applied Multivariate Analysis | 3 | BDBA801 Research Methods in Information Systems | 2 |
| BDBA820 Applied Microeconomics for Business | 3 | BDBA720 Data Mining and Predictive Analytics | 3 |
| BDBA601 Data Models and Decisions | 2 | BDBA804 Research in Strategy and Information Systems - I | 2 |
| BDBA600 Strategic and Transformational IT | 2 | BDBA805 Research in Strategy and Information Systems – II | 2 |
| Semester 3 | | Semester 4 | |
| BDBA821 Data Science Research Seminar | 2 | BDBA821 Data Science Research Seminar | 2 |
| BDBA802 Institutions, Firms, and Collectives | 2 | BDBA802 Institutions, Firms, and Collectives | 2 |
| BDBA803 Quality Transparency and the Value of Information | 2 | BDBA803 Quality Transparency and the Value of Information | 2 |
| BDBA708(A-Z) Special Topics in DBA in Information Systems | 1-4 | BDBA708(A-Z) Special Topics in DBA in Information Systems | 1-4 |
| BDBA808(A-Z) Special Topics in DBA in Information Systems | 1-4 | BDBA808(A-Z) Special Topics in DBA in Information Systems | 1-4 |
| Semester 5 | | Semester 6 | |
| BMGT829 Capstone Research | 6 | BMGT829 Capstone Research | 6 |

**Marketing Track**

| Course | Credits | Course | Credits |
|---|---|---|---|
| Semester 1 | | Semester 2 | |
| BDBA752 Market-Based Management | 3 | BDBA755 Marketing Research and Analysis | 3 |
| BDBA753 Customer Analysis | 3 | BDBA756 Advanced Marketing Analytics | 2 |
| BDBA754 Statistical Programming | 3 | BDBA758(A-Z) Special Topics in DBA in MKT | 1-4 |
| BDBA758(A-Z) Special Topics in DBA in MKT | 1-4 | BDBA821 Data Science | 3 |
| Semester 3 | | Semester 4 | |
| BDBA758(A-Z) Special Topics in DBA in MKT | 1-4 | BDBA758(A-Z) Special Topics in DBA in MKT | 1-4 |
| BDBA851 Seminar in Consumer Behavior | 3 | BDBA850 Seminar in Marketing Strategy | 3 |

| | | | |
|---|---|---|---|
| BDBA852 Seminar in Marketing Models | 3 | BDBA854 Seminar in Analytical Modeling | 2 |
| BDBA858(A-Z) Special Topics in DBA in MKT (Quant) | 1-4 | BDBA858(A-Z) Special Topics in DBA in MKT (Quant) | 1-4 |
| Semester 5 | | Semester 6 | |
| BMGT829 Capstone Research | 6 | BMGT829 Capstone Research | 6 |

**Finance Track**

| Course | Credits | Course | Credits |
|---|---|---|---|
| Semester 1 | | Semester 2 | |
| BDBA640 Financial Econometrics I | 2 | BDBA643 Financial Programming | 2 |
| BDBA641 Financial Econometrics II | 2 | BDBA646 Valuation in Corporate Finance | 2 |
| BDBA645 Advanced Capital Markets | | BDBA740 Applied Equity Analysis | 2 |
| BDBA747(A-Z) Special Topics: Asset Management | 1-4 | BDBA741 Fixed Income Analysis | 2 |
| BDBA748(A-Z) Special Topics: Corporate Finance | 1-4 | BDBA848(A-Z) Special Topics in DBA in FIN I | 1-4 |
| Semester 3 | | Semester 4 | |
| BDBA742 Portfolio Management | 2 | | |
| BDBA747(A-Z) Special Topics: Asset Management | 1-4 | BDBA747(A-Z) Special Topics: Asset Management II | 1-4 |
| BDBA840 Theory of Finance | 3 | BDBA843 Seminar in Asset Pricing | 3 |
| BDBA848(A-Z) Special Topics in DBA in FIN II | 1-4 | BDBA848(A-Z) Special Topics in DBA in FIN III | 1-4 |
| Semester 5 | | Semester 6 | |
| BMGT829 Capstone Research | 6 | BMGT829 Capstone Research | 6 |

*General Education.*

N/A

*Accreditation or Certification Requirements.*

All academic programs in the Robert H. Smith School of Business are accredited with the Association to Advance Collegiate Schools of Business (AACSB). The School's accreditation was reaffirmed in 2021, with the next review in 2025-2026. Once the DBA program has been launched, it will be submitted for inclusion in the School's accreditation. No additional certifications are required.

*Other Institutions or Organizations.* The department does not currently intend to contract with another institution or non-collegiate organization for this program.

*Student Support.* The DBA faculty coordinator will be responsible for the majority of advising. Other faculty involved with the courses and specialization may also advise and/or participate on capstone project committees. The Smith School of Business currently has a PhD Office staffed with a coordinator, assistant director, and assistant dean. Depending on the demands of the program, the

Smith School may allocate staff and resources from the Master's Program Office and Executive Education Office. These offices currently have staff who can assist with the demands of the DBA program.

*Marketing and Admissions Information.* The primary audience for the DBA is the working professional who is at the level of a senior manager, with an existing master's degree in a relevant field, such as business, economics, engineering or science. The Smith School has strong relationships with numerous corporations within the DC metropolitan area, from which candidate applicants are mostly likely to be identified. Post-master's students who are practicing senior managers may enroll in the DBA on either a full-time or a part-time basis; classes will be offered on weekday evenings and/or weekends to accommodate all students.

Admission is for the fall semester only. Applicants must have a four-year baccalaureate degree from a regionally accredited U.S. institution, or an equivalent non-U.S. university and a minimum GPA of 3.0 (on a 4.0 scale) in all prior undergraduate and graduate coursework. A master's degree and significant work experience are preferred, but exceptional candidates with only a bachelor's degree in a relevant field will be considered. International applicants must in addition provide evidence of English proficiency, financial certification, and appropriate visa documentation. The Smith School also requires three letters of recommendation, a statement of goals and interests, and a resume or CV. The DBA Admissions Committee will make a final determination of suitability for the program as well as any additional course requirements to succeed in the program.

**H. Adequacy of Articulation**

N/A

**I. Adequacy of Faculty Resources**

*Program faculty.* Appendix A contains a full list faculty who will be engaged in the core aspects of program, along with their credentials. The Robert H. Smith School of Business has 94 tenured/tenure-track faculty, of whom 52 have expertise in the three areas of focus of the DBA. Another 54 professional track instructional faculty support other aspects of the educational mission of the School.

*Faculty training.* Faculty teaching in this program will have access to instructional development opportunities available across the College Park campus, including those offered as part of the Teaching and Learning Transformation Center. For online elements of the coursework, instructors will work with the learning design specialists on campus to incorporate best practices when teaching in the online environment. The Smith School also supports its own Office of Transformational Learning that provides training and support for best practices in teaching and learning, including workshops, faculty coaching, and instructional design.

**J. Adequacy of Library Resources**

The University of Maryland Libraries has assessed library resources required for this program. The assessment concluded that the University Libraries can meet, with its current resources, the curricular and research needs of the program.

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

The Smith School has access to excellent resources and facilities for this program in Van Munching Hall. There are sufficient classrooms and conference rooms to accommodate the cohorts. The rooms are well-equipped with technology and software to support instruction. All students have access to the University's learning management system, ELMS and the additional embedded tools for communication and grading.

**L. Adequacy of Financial Resources**

Resources for the program will come primarily from the tuition revenue generated by the DBA program, along with supporting infrastructure within the Smith School of Business. See Tables 1 and 2 for anticipated resources and expenditures. A brief description of expenses and revenue is included here as well.

*Resources:*

1. Reallocated Funds: No University-level reallocated funds are required to launch the program.
2. Tuition revenue: Tuition revenue is based on a rate of $2500 per credit hour, with an initial cohort of 17 students, the majority of whom are part-time.
3. Grants, Contracts and External Sources: No additional sources of revenue are identified or required.

*Expenditures:*

1. Most courses have already been developed and are shared with the existing MBA and Ph.D. programs. The unique aspect of this program is the capstone research project. Each faculty mentor will expend a fraction of an FTE supervising a student as the student develops a capstone project. Thus while, in year 1, only 1 FTE is identified, it corresponds to a small portion of time for a number of individuals.
2. Approximately 1.0 FTE of administrative support will be assigned to assist with program management.
3. Approximately 1.0 FTE of additional support will be assigned for student advising, class coordination, and communication.
4. No equipment is required specifically for this program.
5. No new library resources are required for the program.
6. No new or renovations to existing space will be required.
7. Operational expenses include marketing, materials and supplies, and cost-sharing on instruction for the added course loads in the Ph.D. program. Approximately 1/3 of the courses are shared with the Ph.D. program.

**M. Adequacy of Program Evaluation**

Program evaluation is carried out through assessment of learning outcomes. The four primary outcomes for the DBA are identified in Appendix C. Formal program review is also carried out according to the University of Maryland's policy for Periodic Review of Academic Units, which includes a review of the academic programs offered by, and the research and administration of, the academic unit (http://www.president.umd.edu/policies/2014-i-600a.html). Program Review is also monitored following the guidelines of the campus-wide cycle of Learning Outcomes Assessment (https://www.irpa.umd.edu/Assessment/LOA.html). Faculty within the department are reviewed according to the University's Policy on Periodic Evaluation of Faculty Performance (http://www.president.umd.edu/policies/2014-ii-120a.html). Since 2005, the University has used an online course evaluation instrument that standardizes course evaluations across campus. The course evaluation has standard, university-wide questions and allows for supplemental, specialized questions from the academic unit offering the course.

**N. Consistency with Minority Student Achievement goals**

To attract a diverse population, Smith School recruiting staff will focus on identifying leaders from a variety of industries and geographic locations, employing many of the same strategies that have generated significant diversity in its MBA and Executive MBA programs. For example, Smith School faculty and students work with liaisons at companies such as Oracle, Security Exchange Commission, IMF, etc. to identify promising candidates. The Doctoral Program Office also participates in recruitment at The PhD Project[4], an organization founded by the KPMG Foundation, Citibank, AACSB, and the Graduate Management Admission Council (GMAC) to advance workplace diversity by increasing diversity of business schools specifically. While The PhD Project is focused on development of diverse faculty, similar strategies can be used to recruit and retain working professionals in the DBA. The program introduces underrepresented minorities to doctoral programs in business with focus on research, teaching, and executive DBA programs. Additionally, The PhD Project continues support and resources with individuals as they become students in doctoral programs and later as faculty or executives in industry.

**O. Relationship to Low Productivity Programs Identified by the Commission**

N/A

**P. Adequacy of Distance Education Programs**

N/A

[4] https://www.phdproject.org/

**Tables 1 and 2: Resources and Expenditures**

Tuition revenue is based on a proposed rate of $2500 per credit hour, consistent with national market rates for a professional doctoral program at a research university.

| Resources Categories | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|---|---|---|---|---|
| 1.Reallocated Funds | $0 | $0 | $0 | $0 | $0 |
| 2. Tuition/Fee Revenue (c+g below) | $850,000 | $1,700,000 | $2,325,000 | $2,325,000 | $2,325,000 |
| a. #FT Students | 2 | 4 | 6 | 6 | 6 |
| b. Annual Tuition/Fee Rate | $50,000 | $50,000 | $50,000 | $50,000 | $50,000 |
| c. Annual FT Revenue (a x b) | $100,000 | $200,000 | $300,000 | $300,000 | $300,000 |
| d. # PT Students | 15 | 30 | 45 | 45 | 45 |
| e. Credit Hour Rate | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 |
| f. Annual Credit Hours | 20 | 20 | 18 | 18 | 18 |
| g. Total Part Time Revenue (d x e x f) | $750,000 | $1,500,000 | $2,025,000 | $2,025,000 | $2,025,000 |
| 3. Grants, Contracts, & Other External Sources | $0 | $0 | $0 | $0 | $0 |
| 4. Other Sources | $0 | $0 | $0 | $0 | $0 |
| **TOTAL (Add 1 - 4)** | **$850,000** | **$1,700,000** | **$2,325,000** | **$2,325,000** | **$2,325,000** |

| Expenditure Categories | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|---|---|---|---|---|
| 1. Faculty (b+c below) | $252,700 | $520,562 | $1,072,358 | $1,104,528 | $1,137,664 |
| a. #FTE* | 1.0 | 2.0 | 4.0 | 4.0 | 4.0 |
| b. Total Salary | $190,000 | $391,400 | $806,284 | $830,473 | $855,387 |
| c. Total Benefits | $62,700 | $129,162 | $266,074 | $274,056 | $282,278 |
| 2. Admin. Staff (b+c below) | $93,100 | $95,893 | $197,540 | $203,466 | $209,570 |
| a. #FTE | 1.0 | 1.0 | 2.0 | 2.0 | 2.0 |
| b. Total Salary | $70,000 | $72,100 | $148,526 | $152,982 | $157,571 |
| c. Total Benefits | $23,100 | $23,793 | $49,014 | $50,484 | $51,999 |
| 3. Total Support Staff (b+c below) | $79,800 | $82,194 | $84,660 | $87,200 | $89,816 |
| a. #FTE | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| b. Total Salary | $60,000 | $61,800 | $63,654 | $65,564 | $67,531 |
| c. Total Benefits | $19,800 | $20,394 | $21,006 | $21,636 | $22,285 |
| 4. 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: Operational Expenses | $137,500 | $265,000 | $358,750 | $358,750 | $358,750 |
| 8. Cost sharing with PhD program** | $35,000 | $70,000 | $70,000 | $70,000 | $70,000 |
| **TOTAL (Add 1 - 8)** | **$598,100** | **$963,649** | **$1,713,307** | **$1,753,944** | **$1,795,800** |

**Appendix A: Faculty who will support the Doctor of Business Administration Program**

All faculty hold doctoral degrees in a field relevant to the discipline. Faculty biographies and research interests can be found on the department web site at https://www.rhsmith.umd.edu/faculty. All faculty listed below are full-time and tenured or tenure-track. The Robert H. Smith School of Business has 94 tenured/tenure-track faculty, of whom 52 have expertise in the three initial areas of focus for the DBA. Specific course assignments have not yet been made and change on a regular basis.

| Name | Highest Degree Earned, Field & Institution | Rank |
|---|---|---|
| | **MARKETING TRACK** | |
| Trusov, Michael | Ph.D., Marketing, UCLA | Professor |
| Ferraro, Rosellina | Ph.D., Marketing, Duke University | Associate Professor |
| Faraji-Rad, Ali | Ph.D., Economics (Marketing), BI Norwegian Business School | Assistant Professor |
| Zhang, Lingling | D.B.A., Marketing, Harvard Business School | Assistant Professor |
| Godes, David | Ph.D., Management Science (Marketing), Massachusetts Institute of Technology | Dean's Professor |
| Ma, Liye | Ph.D., Industrial Administration, Carnegie Mellon University | Associate Professor |
| Rust, Roland | Ph.D., Business Administration, University of North Carolina, Chapel Hill | Distinguished University Professor |
| Kannan, P.K. | Ph.D., Management Science & Marketing, Purdue University | Dean's Chair |
| | **INFORMATION SYSTEMS TRACK** | |
| Agarwal, Ritu | Ph.D., Management Information Systems, Syracuse University | Distinguished University Professor |
| Clark, Jessica | Ph.D., Information Systems, New York University | Assistant Professor |
| Gao, Guodong (Gordon) | Ph.D., Information Systems & Economics, University of Pennsylvania | Professor |
| Hann, Il-Horn | Ph.D., Information Systems, University of Pennsylvania | Professor |
| Huang, Peng | Ph.D., Information Technology Management, Georgia Institute of Technology | Associate Professor |

| | | |
|---|---|---|
| Ramaprasad, Jui | Ph.D., Information Systems, University of California, Irvine | Associate Professor |
| Rhue, Lauren | Ph.D., Information Systems, New York University | Assistant Professor |
| Raschid, Louiqa | Ph.D., Electrical Engineering, University of Florida | Dean's Professor |
| Viswanathan, Siva | Ph.D., Information Systems, New York University | Dean's Professor |
| Zhang, Kunpeng | Ph.D., Computer Science, Northwestern University | Assistant Professor |
| | **FINANCE TRACK** | |
| Pellegrino, Bruno | Ph.D., Business Economics, UCLA | Assistant Professor |
| Heston, Steve | Ph.D., Finance, Carnegie Mellon University | Professor |
| Senbet, Lemma | Ph.D., Finance, State University of Buffalo | Professor |
| Mathews, Richmond | Ph.D., Business Administration (Finance & Strategy), University of Rochester | Associate Professor |
| Maksimovic, Vojislav | Ph.D., Business Economics, Harvard University | William A. Longbrake Chair Professor |
| Yang, Liu | Ph.D., Business and Management (Finance), University of Maryland | Associate Professor |
| Tate, Geoff | Ph.D., Economics, Harvard University | Dean's Professor |
| Kozak, Serhiy | Ph.D., Financial Economics, University of Chicago | Assistant Professor |
| Wermers, Russell | Ph.D., Finance, University of California, Los Angeles | Bank of America Professor |
| Loewenstein, Mark | Ph.D., Columbia University | Associate Professor |
| Han, Brandon | Ph.D., Finance, London School of Economics | Assistant Professor |
| Ernst, Thomas | Ph.D., Finance, Massachusetts Institute of Technology | Assistant Professor |
| He, Alex | Ph.D., Economics, Massachusetts Institute of Technology | Assistant Professor |
| Kyle, Albert | Ph.D., Economics, University of Chicago | Distinguished University |
| Unal, Haluk | Ph.D., Finance, Ohio State University | Professor |
| Rossi, Clifford | Ph.D., Cornell University | Professor of the Practice/Executive in Residence |
| Faulkender, Michael | Ph.D., Finance, Northwestern University | Dean's Professor |

## Appendix B: Course Descriptions

All approved course descriptions can also be found in the University's Graduate Catalog (https://academiccatalog.umd.edu/graduate/courses/). Many courses are derivative of existing courses but will have special numbering for this cohort-based program. Those that are completely new will undergo our formal campus review process once the program is approved.

### INFORMATION SYSTEMS TRACK

**BDBA600, also offered as BUS621 Strategic and Transformational IT (2 credits)**

Introduces students to the strategic role of digital transformation within businesses and provides an overview for how major information technologies may be used to inform and transform the firm's strategic, operational, and tactical decisions. Topics discussed in the course include the strategic use of digital technologies to generate sustainable competitive value; the contributions of new forms of technology infrastructure; the evaluation of new technology investments and the resulting ROI; acquiring, managing, and governing technological capabilities within the firm; understanding the role of enterprise systems and social technologies within the firm; and the management of disruptive technologies within and outside the firm.

**BDBA601, also offered as BUSM622 Managing Digital Business Markets (2 credits)**

The objective is to understand the strategic and tactical issues involved in managing digital businesses and markets. Also, some of the characteristics of digital businesses and markets that make them unique and understand how companies can best manage them will be examined.

**BDBA 620, also offered as BUSI630 Data, Models and Decisions (2 credits)**

Analytical modeling of business decisions; uncertainty, risk and expected utility; regression modeling to infer relationships among variables.

**BDBA621, also offered as BUSI681 Managerial Economics and Public Policy (2 credits)**

Basic microeconomic principles used by firms, including supply and demand, elasticities, costs, productivity, pricing, market structure and competitive implications of alternative market structures. Market failures and government intervention. Public policy processes affecting business operations.

**BDBA608(A-Z) Special Topics in DBA Information Systems (1-4 credits)**

Courses designed to address trending topics that apply to the DBA in Information Systems track.

**BDBA701, also offered as BUSI785 Project Management in Dynamic Environments (2 credits)**

Addresses project management skills that are required by successful managers in increasingly competitive and faster-moving environments. Examines fundamental concepts of successful project management, and the technical and managerial issues, methods, and techniques.

**BDBA702, also offered as BUDT732 Decision Analytics (3 Credits)**

Analytical modeling for managerial decisions using a spreadsheet environment. Includes linear and nonlinear optimization models, decision making under uncertainty and simulation models.

**BDBA720, also offered as BUDT733 Data Mining and Predictive Analytics (2 credits)**

Data mining techniques and their use in business decision making. A hands-on course that provides an understanding of the key methods of data visualization, exploration, classification, prediction, time series forecasting, and clustering.

**BDBA708(A-Z) Special Topics in DBA Information Systems (1-4 credits)**

Courses designed to address trending topics that apply to the practice focused elective course requirement for the DBA in Information Systems track.

**BDBA801, also offered as BMGT808O Research Methods in Information Systems (2 credits)**

Examine different research methodologies in the Information Systems field. The primary focus is on identifying and understanding the research methodology used in current IS literature.

**BDBA802, also offered as BMGT808J Institutions, Firms, and Collectives (2 credits**

This course will focus on the role of institutions and firms in behavioral information systems research. This course seeks to expand the student from an Information Systems scholar to a business scholar by incorporating papers from top field journals not just in the Information Systems field. This course covers the topics of organizational control, coordination theory, institutional theory, institutional logics, information processing/contingency theory, and simulations and organizational/behavioral theory.

**BDBA803, also offered as BMGT808K Quality, Transparency, and the Value of Information (2 credits)**

This course seeks to understand the current research literature in quality information and consumer/patent behavioral change. The course will highlight theoretical foundations and empirical research on the economics of quality information, impact of quality information in healthcare and behavioral economics in healthcare.

**BDBA804, also offered as BMGT808V Research in Strategy and IS I (2 credits)**

This course offers a survey of current research on the strategic management of Information Technology (IT), and the role of IT in shaping firms' strategy. The topics of the course include the theoretical foundations of IS strategy, how IT enable firm competitive advantages, and the impact of IT on inter-organizational relationships, etc.

**BDBA805, also offered as BMGT808J Behavioral Research in Information Systems (2 credits)**

The course will focus on behavioral research in information systems, specifically touching on drivers and impacts of decisions in digital contexts at the individual level. The themes and topics covered in this seminar include prospect theory, heuristics and cognitive biases, motivation, influence and persuasive techniques, and consumer behavior experiments.

**BDBA806, also offered as BMGT808D Information Systems Economics I (2 credits)**

This course focuses on the applications of microeconomic theories and techniques to Information System research problems. The seminar is intended to motivate participants to explore the use of economics-based approaches to analyze a research question in their domain of interest.

**BDBA807, also offered as BMGT808E Information Systems Economics II (2 credits)**

This course focuses on current research on the economics platform, their business models, and strategies. The course will cover the topics of platforms network effects and products as well as user generated content.

**BDBA820, also offered as BMGT808G Applied Microeconomics for Business (3 credits)**

This course covers research methods from economics that have proved to be useful in business disciplines. Students will develop an understanding of how equilibrium models are constructed, how they are used to make predictions about causal relationships, and how this forms the basis for empirical estimation strategies.

**BDBA821, also offered as BMGT808Q Data Science Research Seminar (2 credits)**

The design of this course is to work towards a deeper understanding of data science. The first component of the course will focus on the underlying fundamentals and contributions of data science papers, specifically highlighting papers authored by those using machine learning in their research. The second component of the course will be more practical and cover learning essential tools that data science researcher uses to conduct their research.

**BDBA830, also offered as BMGT837 Applied Multivariate Analysis (3 credits)**

Assumes working knowledge of matrices and elementary linear algebra and a sound understanding of univariate statistics, including random variables, statistical inference, ANOVA, and ordinary least squares regression. Multivariate statistical methods and their use in empirical research. Topics include summarization and visualization of multivariate data, the multivariate normal distribution, tests on mean vectors, multivariate paired comparisons, multivariate analysis of variance, repeated measures designs, test on covariance matrices, discriminant analysis and classification, canonical correlation, principal components, factor analysis and cluster analysis. Maximum likelihood estimation and the likelihood ratio method of test construction.

**BDBA808(A-Z) Special Topics in DBA Information Systems (1-4 credits)**

Courses designed to address trending topics that apply to the major requirement for the DBA in Information Systems track.

**BDBA829 Capstone Project (6 credits)**

## FINANCE TRACK

**BDBA640, also offered as BUFN640 Financial Econometrics I (2 credits)**

The course adopts a machine learning mindset to study standard techniques of econometric analysis of financial data. The focus is on understanding, interpretation, and practical applications in Python and Google Collab.

**BDBA641, also offered as BUFN650 Machine Learning in. Finance (2 credits)**

A hands-on course on applications of cutting-edge machine learning methods to financial modeling. It introduces students to a wide variety of machine learning techniques ranging from lasso regression to deep learning and TensorFlow.

**BDBA642, also offered as BUFN670 Financial Mathematics (2 credits)**

Introduction to the mathematical models used in finance and economics with emphasis on pricing derivative instruments. Topics include elements from basic probability theory, distributions of stock returns, elementary stochastic calculus, Ito's Lemma, arbitrage pricing theory, and continuous time portfolio theory. Particular focus is on the financial applications of these mathematical concepts.

**BDBA643, also offered as BUFN758E Financial Programming (2 credits)**

This course introduces basic and innovative statistical modelling methods for financial markets and equips students with analytical and programming tools for modelling and analyzing financial data. Examples of applications include portfolio management and risk management.

**BDBA644, also offered as BUFN610 Financial Management (2 Credits)**

Focuses on the valuation of the real assets of firms as well as the valuation of stocks and bonds, the primary financial assets in an economy. While details vary, the conceptual foundations of valuation boil down to three themes: time value of money, no-arbitrage, and systematic risk.

**BDBA645, also offered as BUFN741 Advanced Capital Markets (2 credits)**

This course covers modern theories and techniques for investments and asset pricing. The main topics covered are portfolio theory, pricing models, market efficiency, fixed income investment, forwards and futures, and options.

**BDBA646, also offered as BUFN750 Valuation in Corporate Finance (2 credits)**

An advanced topics course in Corporate Finance dealing with valuation. Main topics will be, building pro forma statements, cost of capital, using ratios and comparable value projects and firms, discounted cash flow valuations, WACC and APV methods of valuation and Real Option Valuations.

**BDBA647, also offered as BUFN660 Derivative Securities (2 credits)**

Standard types of derivatives contracts are presented and illustrated as to how they are used in practice. The theory of pricing these contracts is then presented in detail. The use of static and dynamic replication strategies, and the concept of no-arbitrage strategies is illustrated in numerous ways. Standard valuation techniques are covered, and standard formulas are presented. The theory is

then applied to develop specific pricing and hedging strategies for various types of derivatives on different underlying assets. The management of the exposure of various risks is covered in detail as well.

**BDBA740, also offered as BUFN760 Applied Equity Analysis (2 credits)**

Students will learn to analyze equity securities using the basic EIC (Economy/Industry/Company) framework used in the financial industry, paying special attention to financial statement analysis. Students also will learn the primary valuation techniques used to estimate market values for equity securities.

**BDBA741, also offered as BUFN762 Fixed Income Analysis (2 credits)**

Describes important financial instruments which have market values that are sensitive to interest rate movements. Develops tools to analyze interest rate sensitivity and value fixed income securities. Defines and explains the vocabulary of the bond management business.

**BDBA742, also offered as BUFN763 Portfolio Management (2 credits)**

Provides training that is important in understanding the investment process - the buy side of the financial world. Specifically, the objective is to provide graduate-level instruction in the following topics, both in theory and in using financial markets data to test the basic theory and practice of portfolio choice and equilibrium pricing models and their implications for efficient portfolios.

**BDBA743, also offered as BUFN770 International Investment (2 credits)**

Addresses international stock markets, portfolio theory, international interest rates, exchange rates and exchange rate derivatives (options, forwards, and futures), exchange rate swaps and exchange rate exposure (operating, translation, and transaction), foreign investment strategy.

**BDBA744, also offered as BUFN710 Financial Strategy for Corporations (2 Credits)**

An advanced course in corporate finance, focusing on the issues that firms face when they plan to raise external capital from financial markets. The focus is on the financing problems faced by mid-market to large firms and on capital raised from public markets. The forms of external finance vary from simple debt or equity to more complex securities that bundle with an element of risk management.

**BDBA745, also offered as BUFN714. Corporate Governance and Performance (2 credits)**

Deals with corporate governance and its impact on shareholder value. Divergence of interests between corporate insiders and providers of funds leads to agency problems which can impair corporate performance and shareholder value. Various instruments of corporate governance - internal as well as external mechanisms - that can help align managerial incentives with those of outside investors, and hence help restore shareholder value will be studied.

**BDBA746, also offered as BUFN771 International corporate and Project Finance (2 credits)**

Issues addressed will include capital budgeting, project financing, exchange rate exposure (operating, translation, and transaction), foreign investment strategy, and risk management.

**BDBA747 (A-Z) Special Topics in DBA In Finance (1-4 credits)**

Courses designed to address trending topics that apply to the major requirement for the DBA in Finance track.

**BDBA748 (A-Z) Special Topics in DBA In Finance (1-4 credits)**

Courses designed to address trending topics that apply to the practice focused elective course requirement for the DBA in Finance Asset Management track.

**BDBA840, also offered as BMGT840 Seminar in Financial Theory (2 credits)**

This course is an introduction to the foundations of modern financial economics. The focus throughout the course will be on the development and interpretation of discrete-time models of asset pricing, capital markets, and corporate financial. This course is primarily theoretical.

**BDBA841, also offered as BMGT841 Seminar in Corporate Finance (3 credits)**

This course is meant to introduce theoretical research in corporate finance. The course will take the approach of surveying (to varying levels of depth) seminal and more recent articles in the different areas of corporate finance research. This is a topical and applied course covering the topics of theory of the firm and agency issues, corporate control and corporate governance, capital structure and bankruptcy, continuous time models in corporate finance, financial intermediation, corporate finance and industrial organization, optimal contracting and security design, and incentives and innovation.

**BDBA842, also offered as BMGT848C Topics in Empirical Corporate Finance (3 credits)**

This seminar will provide an overview of recent applied theory papers on the overlay between individual organization and financial economics. This course will cover the topics of product markets and asset prices, knowledge, innovation, investment and Q, strategic interactions and peer effects, trade credit, external financing, and industry structure and production networks in finance.

**BDBA843, also offered as BMGT843 Seminar in Asset Pricing (3 credits)**

This course will cover modern asset pricing theory for dynamic markets. The goal of the course is to develop a set of tools and explore how these tools have been applied in the asset pricing literature. Topics covered in this course include generalized asset pricing theories, intertemporal models, consumption-based and equilibrium arbitrage models, and stochastic discount factor models.

**BDBA848 (A-Z) Special Topics in DBA In Finance (1-4 credits)**

Courses designed to address trending topics that apply to the practice focused elective course requirement for the DBA in Finance Corporate Finance track.

**BDBA829 Capstone Project (6 credits)**

## MARKETING TRACK

**BDBA750, also offered as BUSM706 Innovation and Product Management (2 credits)**

Focuses on the development of innovations - new products or new services - from the perspective of a marketer. For an innovation to be successful in the market, it has to be customer-centric: hence, in this course, we study how to develop and bring to market elegant and efficient solutions to strong customer needs. This is a fundamental business challenge, faced while working in a startup or in an established company; when developing a new product or a new service; and when serving customers who are individuals or large corporations.

**BDBA751, also offered as BUSM714 Integrated Brand Management (2 credits)**

Marketing communications are a complex but critical component of marketing strategy. Topics include communication tools: advertising, sales promotions, corporation communications, one-on-one or direct marketing, public relations, internet communications, sponsorship/events marketing, and marketing communication plans: defining objectives, implementing the plan, and measuring communications effectiveness. Achieving integration in the content, look, and feel of all marketing communications is stressed.

**BDBA752, also offered as BUMK758B Market-Based Management or BUMK750 Marketing Strategy (3 credits)**

Introduces students to the fundamentals of marketing. This course combines lectures, readings, case analyses and a competitive simulation. A significant part of the course involves a competitive computer-based simulation in which student teams leverage marketing data and metrics to make marketing decisions for an organization that is competing in a market against other student teams in the class.

**BDBA753, also offered as BUMK758D Consumer Analysis or BUMK724 Customer Analysis (3 credits)**

Focuses on the analysis of customer decision-making and how marketing strategy can be used to influence those decisions. The framework used is the buyer behavior model, in which concepts from psychology, sociology, and economics are applied to individual and organizational purchase decisions. Marketing strategies of leading firms in consumer products, technology, and services (including internet services) are analyzed using a variety of case study formats.

**BDBA754, also offered as BUMK758E Statistical Programming or BUMK726 Statistical Programming for Customer Analytics (3 credits)**

Provides students with a foundation in probability and statistics with a focus on business applications. It also gives students a foundation for thinking in both likelihood and Bayesian frameworks. The course teaches students the basics of SAS, as well as its use in statistical analysis and statistical programming. Also addressed are basic SAS language structure, data management, OLAP, enterprise miner, statistical analysis, writing procedures.

**BDBA755, also offered as BUMK758L or BUMK744 Marketing Research & Analysis (3 credits)**

Provides a review of primary data collection methods for marketing data. Students will learn how to design and implement effective confirmatory research. Both direct methods such as surveys and indirect methods such as experiments will be covered. In this hands-on course, students will design and conduct research with target customers, analyze the data, and then present their results to decision makers.

**BDAB756, also offered as BUMK758K Advanced Marketing Analytics (3 credits)**

The analysis of marketing data needed for profitable marketing decisions. Advanced methods of marketing analysis for marketing decisions, including choice and count data models, joint analysis of consumers choice, quantity and timing decisions, mixture and mixture regression models, and conjoint analysis, all using data-based cases and SAS software. Applications are in the areas of strategic marketing, marketing segmentation, eye tracking for advertising effectiveness, new product development, sales promotion analysis, pricing, design of marketing mix, and direct marketing.

**BDBA757, also offered as BUMK758W Data Science (3 credits)**

An introduction to data science and the basic concepts of database management. The course also provides an overview of the various sources of in-house data that are available to many organizations. Students will learn how to work with click stream, scanner panel and social media data. Geo-demographic datasets will be discussed and explored, and techniques for data-fusion will receive ample attention.

**BDBA758(A-Z) Special Topics in DBA in Marketing (1-4 credits)**

Courses designed to address trending topics that apply to practice focused elective course requirement for the DBA in Marketing track.

**BDBA850, also offered as BMGT858L Seminar in Marketing Strategy (2 credits)**

This course will address marketing problems of practical importance. The course will cover the topics of branding, advertising, societal issues, strategic emphasis, return on investment, customer lifetime value, personalization, word-of-mouth, robots and chatbots, and artificial intelligence.

**BDAB851, also offered as BMGT858C Seminar in Consumer Behavior (3 credits)**

This objective of this course is to expose students to doctoral level research that has emerged from (largely) psychological approaches to consumer behavior. Among the issues discussed are how people attend to information, how such information is related to prior knowledge, how knowledge guides judgements, how people form attitudes, how people respond to persuasion, how they make decision, and how emotions effect consumer behavior.

**BDBA852, also offered as BMGT858P Seminar in Marketing Models (3 credits)**

This course will cover basic concepts of marketing modeling, state-of-art techniques of analyzing marketing data, analytic modeling techniques, and incorporate current literature and substantiative marketing problems with the basic concepts and state-of-art techniques of analyzing marketing data with marketing and analytical modeling. Students will have a broad exposure to literature in the

marketing modeling covering many areas such as consumer choice, pricing models, channels, dynamic models, service models, new product, and diffusion models, etc.

**BDAB853, also offered as BMGT858J Seminar in Structural Models (2 credits)**

Introduction to structural models in marketing and economics. This seminar will train students to identify and frame empirical analysis using structural models and further the understanding of basic frameworks and estimation techniques in structural analysis.

**BDAB854, also offered as BMGT858G Seminar in Analytical Models (2 credits)**

Provides a broader perspective on the use of analytical models to address marketing models and their contribution in the literature. Topics include pricing, advertising and promotion, communications, product line design, competition, search, models of cognitive aspects of game theory, and models of the organization. This course presumes knowledge of microeconomics, especially game theory and industrial organization.

**BDAB855, also offered as BMGT858W Seminar in MCMC Estimation (2 credits)**

Bayesian data analysis is an indispensable tool in the toolbox of empirical quantitative research and lend itself particularly well for market application. This seminar covers the foundations of Bayesian statistic that are needed to perform Bayesian analyses, which is a blend of theory and applications. Introduction to Bayes' theorem with prior and posterior distributions, forecasting and testing in the Bayesian framework, parameter inference in the Bayesian setting, Markov Chain Monte Carlo (MCMC) methods including Gibb's sampling and Metropolis-Hastings algorithm as well as the recent advances in inference such as Hamiltonian Monte Carlo (HMC) and Variational Inference (VI).

**BDBA856, also offered as BMGT858E Experimental Design (2 credits)**

This course is meant to familiarize students with the techniques used to conduct and to evaluate experimental research in the consumer behavior domain. The course will cover the topics of experimental manipulations, measurement of outcome variables, moderation, and mediation, how to rule out alternative explanations, external validity, and data collection.

**BDBA857 (A-Z) Special Topics in DBA in Marketing (1-4 credits)**

Courses designed to address trending topics that apply to major course requirement for the DBA in Marketing Consumer Behavior track

**BDBA858(A-Z) Special Topics in DBA in Marketing (1-4 credits)**

Courses designed to address trending topics that apply to major course requirement for the DBA in Marketing Quantitative track.

**BDBA829 Capstone Project (6 credits)**

## APPENDIX C: LEARNING OUTCOMES AND ASSESSMENT MEASURES

### LEARNING OUTCOME 1

Students will demonstrate a clear understanding of the research tools and methodologies for research investigation and analysis.

MEASURE: Students will be required to successfully pass the methodology courses for their program. Students will be assessed on their clear understanding of the application of statistical methods to quantitative data. Each course will assess students on their discussion of articles and case studies as well as their investigation and analysis on course projects.

CRITERION: At least 90% of students will receive a rating of "Satisfactory" or better from the Academic Director, who will review their performance in the classes. The Academic Director will meet with students rated below "Satisfactory" to help improve their performance or determine their continued participation in the program. A general rubric has been constructed to evaluate the following categories: 1) comprehensive knowledge and understanding of the related content area, 2) integrative understanding across content areas, 3) clear, logical, and convincing arguments with coherent flow and organization, and 4) proposed proper research methods (e.g. research design, setting, sample, measures, etc.). The DBA Faculty Coordinator will review main assignments and consult instructors to complete the rubric.

ASSESSMENT: Every Year, starting in the 2022-2023 academic year.

### LEARNING OUTCOME 2

Students will demonstrate a clear understanding of foundational topics and analysis techniques.

MEASURE: Students will be required to successfully pass the major courses for their program. They will be assessed on their understanding of theoretical framework and perspective and encouraged to apply the theoretical frameworks to their own research ideas. Each course will assess students on their exams, discussion of articles and case studies as well as their projects (i.e., literature reviews and papers conceptualizing research ideas).

CRITERION: At least 90% of students will receive a rating of "Satisfactory" or better from the Academic Director, who will review their performance in the classes. The Academic Director will meet with students rated below "Satisfactory" to help improve their performance or determine their continued participation in the program. A general rubric has been constructed to evaluate the following categories: 1) comprehensive knowledge and understanding of the related content area, 2) integrative understanding across content areas, and 3) clear, logical, and convincing arguments with coherent flow and organization. The DBA Faculty Coordinator will review main assignments and consult instructors to complete the rubric.

ASSESSMENT: Every Year, starting in the 2022-2023 academic year.

**LEARNING OUTCOME 3**

Students will demonstrate a clear understanding of practice-focused analytical skills applied to business problems.

MEASURE: Students will demonstrate their comprehension of analyzing real-world topics and issues to present quality practical implications. Additionally, students will demonstrate appropriate knowledge of the legal and ethical issues related to big data management, privacy preservation, marketing research, financial management and an understanding of the role of all stakeholders when capital allocation decisions are made. Students will complete case studies and oral and written projects that specifically investigate real-world application.

CRITERION: At least 90% of students will receive a rating of "Satisfactory" or better from the Academic Director, who will review their performance in the classes. The Academic Director will meet with students rated below "Satisfactory" to help improve their performance or determine their continued participation in the program. A general rubric has been constructed to evaluate the following categories: 1) comprehensive knowledge and understanding of the related content area, 2) integrative understanding across content areas, 3) clear, logical, and convincing arguments with coherent flow and organization, and 4) present clearly the theoretical and practical implications. The DBA Faculty Coordinator will review main assignments and consult instructors to complete the rubric.

ASSESSMENT: Every Year, starting in the 2022-2023 academic year.

**LEARNING OUTCOME 4**

Students will demonstrate their ability to apply foundational theories and quantitative research methods and practice-oriented skills to a business research problem.

MEASURE: Students will be required to pass their Capstone Research Project Proposal and Final Presentation of their Project.

CRITERION: The Capstone Doctoral Research Project committee will evaluate the student's proposal and project. Students must obtain a "pass" in the Capstone Doctoral Research Proposal and Final Project Presentation. A rubric has been constructed for the committee to evaluate the student's proposal and final project. The rubric will assess defining the problem, literature review, methodology, results and their implications, with a specific focus on solving the managerial problems. For the final project, there will be an additional assessment that will determine if the student addressed the committee's recommendations from the proposal stage.

ASSESSMENT: Once course work has been completed, which is typically, the student's second or third year of the program.