MORGAN STATE UNIVERSITY
GROWING THE FUTURE • LEADING THE WORLD

Provost and Senior Vice President for Academic Affairs

May 10, 2021

The Honorable Dr. James D. Fielder, Jr.
Maryland Higher Education Commission
6 N. Liberty Street, 10th Floor
Baltimore, MD 21201

Dear Dr. Fielder,

On behalf of Morgan State University, please find attached a new academic program proposal to establish the *"Ph.D. in Architecture, Urbanism, and Built Environments with a pass-through (En Passant) Master of Science (M.S.) in Architecture, Urbanism, and Built Environments," which was approved by* the Board of Regents on May 4, 2021.

If additional information is required, please contact me at lesia.young@morgan.edu or (443)885-3350.

Sincerely,

Lesia L. Crumpton-Young

Dr. Lesia Crumpton-Young
Provost and Senior Vice President for Academic Affairs, Morgan State University

cc: Dr. David Wilson, President, Morgan State University
Dr. Farzad Moazzami, Interim Assistant Vice President for Academic Affairs, MSU
Dr. Mary Ann Alabanza Akers, Dean of School of Architecture and Planning, MSU
Dr. Emily Dow, Assistant Secretary for Academic Affairs, Maryland Higher Education Commission

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

Institution Submitting Proposal	Morgan State University

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: 5/5/21

Department Proposing Program	School of Architecture and Planning	
Degree Level and Degree Type	Ph.D. with En Passant M.S.	
Title of Proposed Program	Architecture, Urbanism, and Built Environments	
Total Number of Credits	60	
Suggested Codes	HEGIS: 20200.00	CIP: 40902.0000
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: www.catalog.morgn.edu	
Preferred Contact for this Proposal	Name: Farzad Moazzami	
	Title: Interim AVP for Academic Affairs	
	Phone: (443) 885-3350	
	Email: farzad.moazzami@morgan.edu	
President/Chief Executive	Type Name: Dr. Lesia Crumpton-Young	
	Signature: Lesia L Crumpton-Young	Date: 05/05/2021
	Date of Approval/Endorsement by Governing Board:	05/04/2021

Revised 1/2021

Morgan State University
School of Architecture and Planning (SA+P)

Proposed Doctor of Philosophy (Ph.D.) in Architecture, Urbanism, and Built Environments with a pass-through (En Passant) Master of Science (M.S.) in Architecture, Urbanism, and Built Environments (New M.S./Ph.D. Program)

A. Centrality to institutional mission statement and planning priorities

The proposed Doctor of Philosophy in Architecture, Urbanism, and Built Environments is an advanced degree that focuses on preparing the next generation of academics and professionals to create innovative and transformative evidence-based solutions to address the challenges of contemporary and future urban built environments. The low-residency program provides a strong research foundation for mid-career professionals interested in obtaining or enhancing their positions as professors, researchers, and policy analysts. The proposed program aligns well with Morgan State University's mission to serve 'the community, region, state, nation, and world as an intellectual and creative resource by supporting, empowering and preparing high-quality, diverse graduates to lead the world.' It will produce graduates who will substantially have impact on our urban environment by preparing them with solid research and policy-making skills to lead urban innovation across the state. It particularly addresses Morgan's 2011-2021 strategic Goal 1 (Enhance Student Success); Goal 2 (Enhancing Morgan's status as a Doctoral Research University); and Goal 5 (Engage with the Community). The Ph.D. in Architecture, Urbanism, and Built Environments will contribute similarly to the goals in the next strategic plan (2020-2030) by boosting the institution's doctoral offerings and expanding external research funding.

B. Critical and compelling regional or Statewide need as identified in the State Plan

The Maryland State Plan for Post-Secondary Education calls for equal educational opportunities for all Marylanders (Strategy 4), including supporting the unique missions of Historically Black Institutions.[1] The proposed Ph.D. program is designed to educate, train, and prepare diverse students to build research portfolios that address the complex nature of contemporary and future urban built environments. Such complexity requires a transdisciplinary mindset and approach that involves the engagement of multi-disciplines to create new, original, and relevant knowledge and methodologies. It will strengthen the research capacity of professionals who contribute to upgrading Maryland's built environment industries and economies (Strategy 10).

In addition, the State Plan fosters innovation in all aspects of Maryland higher education to improve access and student success. The new Ph.D. program will deliver its contents in a hybrid mode which consists of intensive classroom experiences and highly engaged online classes. This type of modality

[1] 2017-2021 Maryland State Plan for Postsecondary Education. https://mhec.maryland.gov/About/Pages/2017StatePlanforPostsecondaryEducation.aspx

will broaden access statewide, nationally, and internationally to an advanced degree in urban environments. The new program will particularly be an attractive program to working professionals.

The new Ph.D. program aligns with state laws such as the Maryland Smart and Sustainable Growth Act of 2009, which calls for consistency between local comprehensive plans and local land use ordinances, and the Sustainable Communities Act of 2010, strengthens reinvestment and revitalization in Maryland's older communities.[2] Students will be offered the opportunity to engage in research policy analyses to support state legislations.

Furthermore, the Maryland Department of Planning has prioritized 12 areas for sound growth and policy development. These 12 Visions include the following: quality of life and sustainability; public participation; growth areas; community design; infrastructure; transportation; housing; economic development; environmental protection; resource conservation; stewardship; and implementation approaches.[3] The proposed Ph.D. program addresses these state priority areas. To implement comprehensive plans with appropriate zoning ordinances and regulations, the graduates of the program will be able to serve as consultants to local jurisdictions.

C. Quantifiable & reliable evidence and documentation of market supply & demand in the region and State

In a recent report by the National Collegiate Schools of Architecture (NCSA), only one-third of full-time faculty in Schools of Architecture across the country have post-professional or Ph.D. degrees.[4] In the mid-Atlantic and Northeast regions, there are only 14 doctoral programs that offer degrees related to architecture and the built environment. Many of these programs require more than 50 credits to complete an advanced degree. Trends in graduate education show that reimagining doctoral programs is essential to producing academics and professionals who significantly contribute to the advancement of human society. Among some of these trends include focusing on the non-traditional student and broadening access to achieve diversity, equity, and inclusion goals.[5] Lessening the time to degree completion is a strategy to meet the needs of an atypical group of students. In addition, decreasing the time for required campus residency, creating innovative educational modalities for learning, and requiring tangible research outcomes, which will be expected of graduates as they progress in their respective careers, are several of the features offered by the proposed Ph.D. program.

Evidence-based research is needed to support the growth of certain built environment industries. For example, residential and commercial construction markets in the U.S. are still on a growth pattern. The Bureau of Labor Statistics projects that these markets will be among the fastest

[2] Plan Legislations. https://planning.maryland.gov/Pages/OurWork/Plan-Legislation.aspx#:~:text=Economic%20Growth%2C%20Resource%20Protection%2C%20and%20Planning%20Act&text=Under%20the%20Act%2C%20local%20governments,once%20every%20six%20years...&text=In%20rural%20areas%2C%20growth%20is,and%20resource%20areas%20are%20protected.

[3] https://planning.maryland.gov/Pages/OurWork/planningvisions.aspx

[4] National Collegiate Schools of Architecture. 2020. ACSA Institutional Data Report. P. 51.

[5] Kelly, Rhea. "15 trends shaping the future of higher education" in Campus Technology, 03/05/20. https://campustechnology.com/articles/2020/03/05/15-trends-shaping-the-future-of-higher-education.aspx

growing industries in 2020, with a real output to reach almost $1.2 trillion.[6] Specifically, increase in various construction types will likely occur (i.e., 12% for single-family residential, 6% for commercial building, 10% for institutional building).[7]

The State of Maryland has identified five key industries for investment (i.e., Aerospace and Defense, BioHealth and Life Sciences, Energy and Sustainability, IT and Cybersecurity, and Manufacturing). The Energy and Sustainability industry is very much tied to construction and design. In 2016, Maryland ranked 7th among states in square footage of LEED-certified commercial and institutional green buildings per capita.[8] There is a need for research-based practice in the built environment professions to evaluate the performance of these buildings. Furthermore, in line with the state's goal to reduce per capita electricity usage and peak demand by 15 percent, research on performance is needed to achieving energy efficiency in buildings.[9] Design research on material choice, technologies, and human behavior impact indoor air circulation and quality, energy consumption, and our carbon footprint.

D. Reasonableness of Program Duplication

Morgan State University's proposed Ph.D. program in Architecture, Urbanism, and Built Environments does not duplicate any program in Maryland. The University of Maryland College Park (UMCP) offers a Ph.D. program in Urban and Regional Planning and Design which has significantly different features from the proposed program as shown in the table below.

Table 1 Comparison of UMCP program with the proposed Ph.D. program

	University of Maryland program	Proposed Morgan State University program
Title	Urban and Regional Planning and Urban Design	Architecture, Urbanism, and Built Environments
Emphasis	Planning and Policy Land Use Planning; Urban Spatial Structure; Economic Development; International Planning; Urban Design; Urban	Transdisciplinary Research Sustainability/Resiliency; Design and Placemaking; the Built Environment; Design and Health; Theory, History,

[6] US Department of Labor Statistics. Construction Industry- Projected Fast Growth into 2020. http://constructionlabor.com/construction-growth-into-2020/

[7] Dodge Data Analytics. New Construction Starts in 2017 to Increase 5% to $713 Billion According to Dodge Data & Analytics. https://www.construction.com/news/new-construction-starts-2017-increase-5-percent-713-billion-dollars-dodge-data-analytics-oct-2016

[8] Maryland Department of Commerce. Energy and Sustainability Fact Sheet. http://commerce.maryland.gov/Documents/ResearchDocument/MarylandEnergyAndSustainabilityIndustryFactSheet.pdf

[9] The EmPOWER Maryland Energy Efficient Act of 2008, which set a goal of 15% energy reduction by 2015, has been extended by the Maryland Legislature in spring 2017.

	Community Social Development	Criticism
Student market	Open	Mid-career professionals with defined areas of interest
Program credits	39	36
Residency	At least 2 years	Low residency (short intensive in person courses/workshops combined with highly engaged web-based learning.)
Requirements	Coursework, comprehensive exam, dissertation	Coursework, comprehensive exam, dissertation, plus specific research outcomes (submitted peer-reviewed paper and submitted grant proposal)

E. Relevance to high-demand programs at Historically Black Institutions (HBIs)

Morgan State University, a Historically Black Institution, does not compete with other HBIs in the state. Furthermore, it is the only HBI in the United States that offers degrees in Architecture and other allied design disciplines (Landscape Architecture, City and Regional Planning, Interior Design). The other HBIs (Coppin State, Bowie State, and UM Eastern Shore) do not offer a Ph.D. in Architecture, Urbanism, and Urban Environments, or related fields.

Furthermore, the proposed Ph.D. program addresses the need for innovative academic offerings for working professionals. In a recent National Science Foundation survey, the results showed that Whites were far more likely than African Americans to earn a doctorate before the age of 30. Many Black Ph.D. graduates completed their degrees at an older age compared to their White counterparts. The survey results revealed that 34.4% of African Americans who earned doctorates were over the age of 40, while only 14.4% of Whites were in the same age category.[10] This age category is the market niche for the program.

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

The proposed Ph.D. program enhances the university's unique and important role in the state by increasing the number of qualified graduates from diverse backgrounds. Morgan State University is one of the top producers of Black and other minority Architecture, Landscape Architecture, City and

[10] "Racial Differences in the Age of Doctoral Degree recipients" in Journal of Blacks in Higher Education. January 11, 2021. https://www.jbhe.com/2021/01/racial-differences-in-the-age-of-doctoral-degree-recipients-in-the-united-states/

Regional Planning, Interior Design, and Construction Management graduates in the nation. The proposed advanced program only strengthens the university's relevance in the state of Maryland. As indicated, Morgan offers the most comprehensive offerings in built environment education amongst all HBI's in the United States and this Ph.D. degree offering reinforces our unique position.

G. Adequacy of curriculum design and delivery

In 2016, a faculty committee was formed in the School of Architecture and Planning (SA+P) to examine the possibility of a Ph.D. program. At that time, the implementation of such a program was not feasible because efforts and resources were focused on starting high demand programs such as the MS in Construction Management and the BS in Interior Design. However, with the increasing need for evidence-based design, planning, and construction practices, SA+P believes this moment is the best time to start an advanced research program.

The new Ph.D. in Architecture, Urbanism, and Built Environments will be housed in the Department of Graduate Built Environment Studies. It will be administered by a program director who will be hired to teach courses, administer, and grow the program. All faculty with Ph.D. degrees in SA+P will contribute to the proposed program through teaching, mentorship, and research advising. Faculty members across the multiple disciplines at Morgan State will be incentivized to enhance the transdisciplinary nature of the program.

Requirements for degree completion include coursework, comprehensive examination, dissertation research, as well as a submitted paper to a peer-reviewed journal and submitted research grant proposal to a funding agency.

The educational objectives for the Ph.D. in Architecture, Urbanism, and Built Environments are the following:

- To advance graduate research on ecologically sustainable, healthy and livable, as well as equitable and just urban environments.
- To prepare students who will provide relevant research applications and data analysis to local and state governments, nonprofit groups, as well as business and industry sectors.
- To equip built environment professionals with research skills to produce and communicate evidence-based solutions to everyday urban problems.
- To nurture an environment for students to engage in transdisciplinary learning through rigorous research processes.

There are two pathways to the Ph.D. in Architecture, Urbanism, and Built Environments. Figure 1 below shows that an applicant with a master's degree will require 36 credits to fulfill the Ph.D. requirements. For students with a bachelor's degree, they will take 24 additional foundational graduate courses to complete 60 credits for the Ph.D. degree. Students with only a bachelor's degree coming into the Ph.D. program earn a Master of Science in Architecture, Urbanism, and Built Environments along the way (*en passant*) after 30 course credits have been completed. Only applications straight into the Ph.D. program will be accepted.

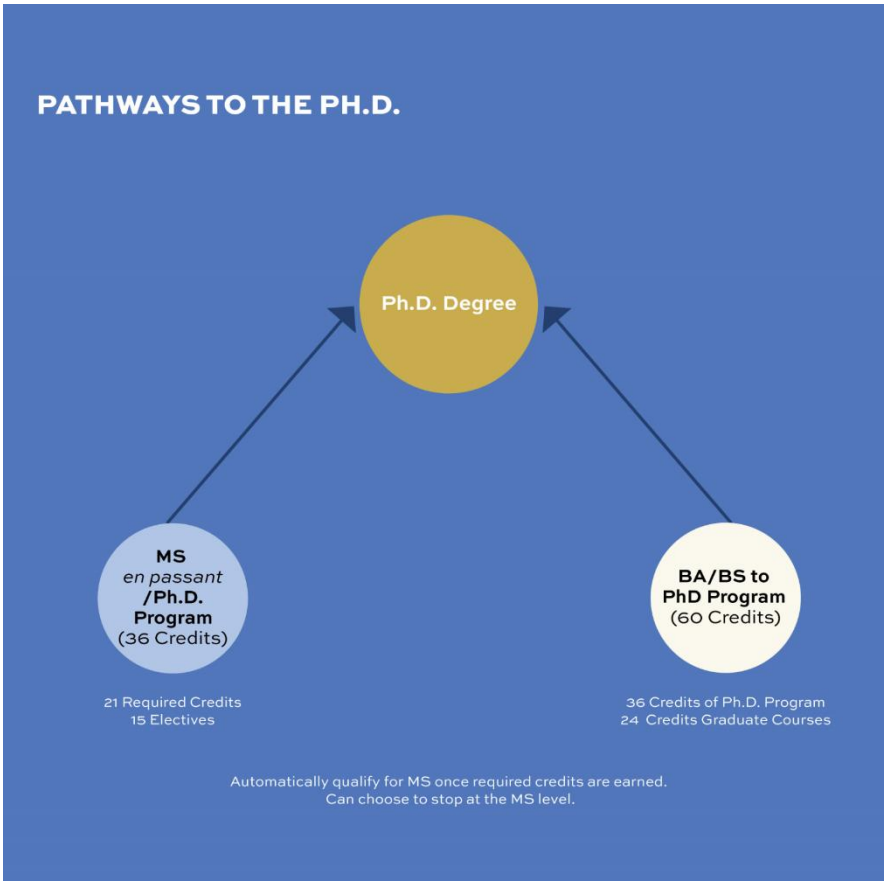

Figure 1: Pathways to the Ph.D. in Architecture, Urbanism, and Built Environments

Curriculum for the Ph.D. program

FOUNDATIONAL DOCTORAL STUDY (24 credits)[11]:

Graduate Foundational Electives (15 credits)

- ARCH 501 Transitions in Architecture: Theory and Research (3)
- ARCH 511 Built Environment History I (3)
- ARCH 521 Built Environment History II (3)
- CREP 501 Principles and Practices of City & Regional Planning (3)
- CREP 513 History of City and Regional Planning (3)
- CREP 510 City & Regional Planning Studio I (3)
- CREP 514 Seminar in Urban Design I
- CREP 515 Seminar in Urban Design II
- CSUC 501 Sustainable Urban Communities
- ENST 510 Environmental Design I (6)
- LAAR 511 History I: of Landscape Architecture (3)
- URBD 511 Urban Design (3)

Graduate Free Electives (sample electives listed below) (9 credits)

- ARCH 502 Visualization I: Graphics Workshop (3)
- ARCH 531 Built Environment History Ill (3)
- CREP 506 Urban Land Use for Planners (3)
- CREP 512 Urban Economics for Planning (3)
- CREP 520 City & Regional Planning Studio II (3)
- CREP 526 Urban Transportation Planning (3)
- CREP 538 Neighborhood and Community Development (3)
- CREP 542 Environmental Planning (3)
- CSUC 503 The Urban Village/Sustainable Neighborhoods (1)
- CSUC 504 Sustainable Urban Site Design (1)
- CSUC 505 The Natural and Built Environment (1)

ADVANCED DOCTORAL STUDY[12] [13]:

Research Core Requirements (21 credits)

- ARUE 710 Foundations in Transdisciplinary Studies (new) 3 credits
- ARUE 820 Building a Research Portfolio 1 (new) 3
- ARUE 822 Building a Research Portfolio 2(new) 1
- ARUE 712 Advanced Research in the Built Environment (new) 3

[11] 24 credits of Foundational Doctoral Study must be completed by students entering the Ph.D. program with only a bachelor's degree. These courses are not required for those already holding a qualifying master's degree.

[12] In order for students to receive the MS in Architecture, Urbanism, and Built Environments, they must complete the 24 credits of Foundational Doctoral Study along with ARUE 710 and ARUE 820 in the Advanced Doctoral Study area or complete 30 credits at the Advanced Doctoral level excluding the requirements of CREP 792 and ARUE 997/998.

[13] 36 credits of Advanced Doctoral Study must be completed by students entering the Ph.D. program already holding the master's degree.

- CREP 523 Quantitative Analysis and Methods for Planners 3
  - (or an approved Quantitative Methods course)
- ARUE 830 Transdisciplinary Seminar 1 (new) 1
- ARUE 831 Transdisciplinary Seminar 2 (new) 1
- CREP 792 Thesis Research and Project Report Preparation 3
  - (or an approved dissertation preparation course)
- ARUE 997/998 Dissertation Guidance / Dissertation Defense 3

Research Design and Methods Electives (sample electives listed below) (6 credits)

- ARUE 730 Methods for Assessing Urban Environmental Sustainability, Social Equity and Environmental Justice (new)
- BIOL 604 Ecosystem Analysis
- BUAD 701 Applied Statistics I
- BUAD 702 Foundations of Scientific Research
- BUAD 703 Measurement Theory and Method
- BUAD 704 Qualitative Research Methods
- BUAD 705 Applies Statistics II
- CREP 521 Computer and Data Applications for Planners
- CREP 523 Quantitative Analysis and Methods for Planners
- ENGL 501 Materials and Methods of Research in Literature and Writing
- HIST 598 Historiography and Historical Methods
- HIST 708 Oral History Approach to the Study of 20th Century United States History
- PUBH 708 Design and Implementation of Public Health Research
- PUBH 810 Contemporary Analytic Tools for Public Health
- PSYM 530 Principles and Foundations of Measurement.
- PSYM 550 Principles and Methods of Research
- PSYM 560 Principles and Foundations of Statistical Methods
- PSYM 570 Applied Statistical Inference
- PSYM 660- Categorical Data Analysis
- SOCI 510 Social Statistics
- SOCI 520 Techniques of Social Research

Area of Interest Electives (sample electives listed below) (9 credits)

Note: Students will develop their selection of electives based on their area of interest.

Urban Sustainability and Resilience

- ARUE 735 Environ Sustainability, Social Equity & Environ Justice (new) (3)
- BIOL 624 Environmental Biotechnology (3)
- BIOL 639 Fundamentals of Bioenvironmental Sciences (3)
- CEGR 514 Environmental Impact and Risk Assessment (3)
- CREP 542 Environmental Planning (3)
- CREP 601 Planning and Designing the New Urban Waterfront (3)
- CSUC 501 Sustainable Urban Communities (3)
- CSUC 503 The Urban Village/Sustainable Neighborhoods (1)
- CSUC 504 Sustainable Urban Site Design (1)

- CSUC 505 The Natural and Built Environment (1)

Urban Design and Placemaking

- URBD 511 Urban Design (3)
- CREP 510 City and Regional Planning Studio (3)
- CREP 538 Neighborhood and Community Development (3)
- PSYM 504 Social Psychology (3)
- PUBH 502 Social and Behavioral Health Sciences (3)
- PUBH 551 Application of Public Health Principles (3)
- SOCI 570 Seminar in Applied Sociology (3)

The Built Environment (STEM-oriented)

- ARCH 533 Architectural Technology V (Building Materials) (3)
- TRSP 617 Intelligent Transportation Systems (3)
- TRSP 889 Contemp Global Issues in Trans & Urban Infrastructure (3)

Health and Urban Environments

- PUBH 502 Social and Behavioral Health Sciences (3)
- PUBH 504 Public Health and Health Disparities (3)
- PUBH 551 Application of Public Health Principles (3)
- PUBH 720 Qualitative Research in Public Health (3)

History, Theory, and Criticism

- ARCH 501 Transitions in Architecture: Theory and Research (3)
- ARCH 511 Built Environment History I (3)
- CREP 513 History of City and Regional Planning (3)
- CREP 534 Public Policy Analysis (3)
- HIST 599 Historical Writing (3)
- SOCI 521 Contemporary Sociological Theory (3)
- SOCI 530 Black Americans in Sociological Thought (3)
- RDHE 745 Student Development Theory (3)
- RDHE 725 Contemporary College Student (3)
- PSYM 502 Learning and Cognition (3)
- PSYM 620 Principles and Methods of Program Evaluation (3)
- TRSP 625 Transportation Policy (3)
- TRSP 725 Advanced Policy Analysis (3)

Total program requirements (w/ previous master's degree): 36 credits
Total program requirements (w/o previous master's degree): 60 credits

En Passant (Pass Through) M.S. in Architecture, Urbanism, and Built Environments

For students who decide not to continue to the Advanced Doctoral curriculum may earn as En Passant (Pass Through) M.S. in Architecture, Urbanism, and Built Environments after completing 30 credits. In order for students to receive the MS in Architecture, Urbanism, and Built Environments, they must complete the 24 credits of Foundational Doctoral

Study along with ARUE 710 and ARUE 820 in the Advanced Doctoral Study area or complete 30 credits at the Advanced Doctoral level excluding the requirements of CREP 792 and ARUE 997/998.

Sample Plan of Study Sequence (for students with a master's degree)

Year 1 **Fall Semester (6)**

ARUE 710 Foundations in Transdisciplinary Studies (new) (3)

ARUE 712 Advanced Research in the Built Environment (new) (3)

Spring Semester (7)

CREP 523 Quantitative Methods for Planners (3)

ARUE 820 Building a Research Portfolio 1 (3)

ARUE 830 Transdisciplinary Seminar 1 (new) (1)

Summer Term (3)

Area of Interest Elective (3)

Year 2 **Fall Semester (7)**

Research Methods and Design Elective (3)

Area of Interest Elective (3)

ARUE 822 Building a Research Portfolio 2 (Submit Grant Proposal) (new) (1)

Spring Semester (4)

Research Methods and Design Elective (3)

ARUE 832 Transdisciplinary Seminar 2 (new) (1)

Comprehensive Exam

Summer Term (3)

Area of Interest Elective

Year 3 **Fall Semester (3)**

CREP 792 Thesis (Dissertation) Research and Professional Report Preparation (3)

Spring Semester (3)

Dissertation (3)

Program of Study Sequence (for students with a Bachelor's degree and pursuing the Ph.D.)

Year 1 **Fall Semester (9)**

Foundation Electives

Spring Semester (9)

Foundation and Free Electives

Summer (6)

Free Electives

Year 2 **Fall Semester (6)**

ARUE 710 Foundations in Transdisciplinary Studies (new) (3)

ARUE 820 Building a Research Portfolio 1 (3)

At this point in the curriculum, students are awarded the M.S. in Architecture, Urbanism, and Built Environments. Those continuing on to the Advanced Doctoral Degree will follow this curriculum:

Year 2 **Spring Semester (7)**

CREP 523 Quantitative Methods for Planners (3)

ARUE 830 Transdisciplinary Seminar 1 (new) (1)

Area of Interest Elective (3)

Year 3 **Fall Semester (7)**

ARUE 712 Advanced Research in the Built Environment (new) (3)

Research Methods and Design Elective (3)

ARUE 822 Building a Research Portfolio 2 (Submit Grant Proposal) (new) (1)

Spring Semester (4)

Research Methods and Design Elective (3)

ARUE 832 Transdisciplinary Seminar 2 (new) (1)

Comprehensive Exam

Summer Term (3)

Area of Interest Elective

Year 4 **Fall Semester (6)**

CREP 792 Thesis (Dissertation) Research and Professional Report Preparation (3)

Area of Interest Elective (3)

Spring Semester (3)

ARUE 997/998 Dissertation (3)

Total program requirements **60 credits**

Course Descriptions

ARCH 501 Transitions in Architecture: Theory and Research (3)

This hybrid gateway course introduces the philosophy behind architectural design. Students interactively study topics selected from the history of architecture, theory, context, urbanism, and concepts of design. Students are prepared for advanced design and research projects in the following semesters. Offered (FALL)

ARCH 502 - Visualization I: Graphics Workshop (3)

Graphics Workshop if an interdisciplinary course taken jointly by students within the School of Architecture and Planning. The purpose of this course is to develop students' skills and techniques in visual communications, thus allowing them to select and apply the most appropriate means of graphically presenting problems and/or solutions. Students are also exposed to techniques and skills that aid in perceiving the built environment in three dimensions– a necessary ingredient for design creativity. Offered (FALL)

ARCH 503 - Visualization II: Building Information Modeling (3)

This course focuses on the skills and information needed to create a Building Information Model (BIM) in service to the architectural design process. In particular, this course will introduce to students the use of Autodesk's Revit application. Special emphasis will be placed on practical applications in architectural design, design development, and document production. Offered (FALL)

ARCH 510 - Architectural Design Studio I (6)

The architecture students are introduced to design foundation. The intention of the course is to teach students basics of design process based on an understanding of the form and structure. Emphasis will be on developing design criteria through the analysis of conditions, needs, aspirations and resources of the environment.

ARCH 511 - Built Environment History I (3)

An introduction to the historic foundations of built form, including settlement patterns and indigenous building types. Beginning with Egyptian architecture and continuing to the philosophical start of the Renaissance, and concluding in 1750, this course is a foundation in the history and theory of architecture, that develops an understanding of the close relationship between social forces and the forms of architecture. **Prerequisite(s)** Admission to program. **Offered** (SPRING)

ARCH 521 - Built Environment History II (3)

Building on the concepts of ARCH 511 - Built Environment History I, this course is an introduction to architectural and urban design history from 1750 to contemporary times, with an emphasis on world architecture and the significance of multicultural architectural traditions. The development of specific built form topologies is studied, including patron residential, religious, civic structures, and urban space. Emphasis will be placed on two specific areas. The first is to identify significant architects, their theories and buildings; the second is to

look at how cities evolved, adapting to new uses and styles of habitation. Prerequisite(s) ARCH 511. Offered (FALL)

ARCH 520 - Architectural Design Studio II (6)

The architecture students are introduced to a familiar environmental package of the home and adjacent landscape. The intention of the course is to teach students to design residences and communities based on an understanding of the form and structures of urban home and community proto-types. Emphasis will be placed on developing design criteria through the analysis of conditions, needs, aspirations and resources of the resident's-environment. Attention Will be given to the role of the residential neighborhoods in the city by understanding the elements that produce the satisfying urban home and residential community. Prerequisite(s) ARCH 510. Offered (SPRING)

ARCH 531 - Built Environment History Ill (3)

This course covers the philosophy of modem architecture since 1910, the building styles and works by masters of modern architecture after World War II, and introduces the graduate student to divergent architectural theories that began with post-modem architecture. Emphasis is placed on individual research projects and presentations by students on a particular theory of architecture or by a particular architect during the contemporary era. Prerequisite(s) ARCH 521.

URBD 511 Urban Design (3)

This course provides several platforms for exploring aspects of urban design. This course attempts to recognize and embrace that our understanding of the city we have created may be incomplete, and it is therefore more important to approach the study and design of urban environments from a number of different directions at once. In addition to the traditional seminar format of readings, lectures, discussions, and assignments, students will use the urban environments around us actively, as laboratories, to further their understanding of the course material with direct observation, analysis, and interaction with Baltimore and other cities. **Prerequisite(s)** ARCH 530 and ARCH 540

ARUE 710 Foundations for Transdisciplinary Studies (new) (3)

The course integrates multiple disciplines through a team-taught delivery method to introduce students to their respective areas of study, ethics, and methodologies. An engaged process will be conducted to address a complex urban challenge with practical and tangible solutions through blended theoretical and analytical frameworks. This course lays the foundation for competency in transdisciplinary research and practice.

ARUE 712 Advanced Research in the Built Environment (new) (3)

The course will cover a broad range of methodologies, tools and techniques utilized for built environment research at various scales. Whether these tools are based in STEM, humanities, or social sciences, the student will learn how to blend them to achieve transdisciplinary approaches to solving urban problems.

ARUE 735 Environmental Sustainability, Social Equity and Environmental Justice (new) (3)

This course will equip students with skills and knowledge to achieve the goals of environmental sustainability, social equity and environmental justice. Students will learn about the design and

planning approaches used in cognate fields impacting city design, such as architecture, planning, landscape, engineering and transportation planning. Students will also learn about the purpose and process of crafting regulatory frameworks for policy development.

ARUE 730 Methods for assessing Urban Environmental Sustainability, Social Equity and Environmental Justice (new) (3)

This course will provide the students with a range of methods for assessing Urban Environmental Sustainability, Social Equity and Environmental Justice. The methods are a combination of qualitative research methods such as surveys, to field reconnaissance, such as visual assessment, quantitative research methods such as regression analysis and similar and triangulated impact analysis methods. The course will teach the skills necessary for quality assurance, monitoring, inspection and auditing of housing, neighborhoods, landscapes and urban environments at varied scales.

ARUE 820 Building a Research Portfolio 1 (3 credit courses) (new)

This course focuses on conducting an extensive literature review and using the results to frame research questions. It will also focus on the essentials of academic writing and publishing. An outcome is a quality paper that will be submitted to a peer-reviewed publication.

ARUE 822 Building a Research Portfolio 2 (1 credit course) (new)

This course focuses on the process of writing a research proposal for funding. The student is required to submit a proposal to a funding agency or organization.

ARUE 830 Transdisciplinary Seminar I (1 credit) (new)

This course is highly interactive and participatory for graduate students to discuss their peer-reviewed papers and grant proposals. Specific lectures and readings will be offered according to the students' areas of interest.

ARUE 832 Transdisciplinary Seminar II (1 credit) (new)

This course is highly interactive and participatory for graduate students to discuss their dissertation topics and methods. Specific lectures and readings will be offered according to the students' areas of interest.

BIOL 624 Environmental Biotechnology (3)

The course examines the use of biotechnology techniques and methods for the analysis and solution of environmental problems. Areas include the use of novel microorganisms for applications in the removal of pollutants, toxic chemicals, and hazardous wastes from the environment. **Offered** (SPRING)

BIOL 604 Ecosystem Analysis (3)

This course exposes students to ecosystem-level questions; demonstrates field-data collection and laboratory analysis; emphasizes data manipulation on microcomputers; and introduces professional data presentation techniques (graphing, transparencies, slides, multi-media, etc.). **Prerequisite(s)** Core courses.

BUAD 701 Applied Statistics I (3)

This course provides an overview of mathematical statistics with particular emphasis on regression analysis and statistical modeling. The basic focus is to introduce students to the use of regression analysis and other techniques as tools for conducting empirical research.

BUAD 702 Foundations of Scientific Research (3)

This course introduces a range of traditions from the social sciences to highlight different positions from a philosophy of science and epistemology perspective. It focuses on critical issues that guide contemporary research, including dominant conceptual paradigms in various disciplines, research design, hypothesis development, and the application of quantitative and qualitative techniques.

BUAD 703 Measurement Theory and Method (3)

This seminar provides a broad understanding of the theoretical and methodological issues in social science research. It includes an in-depth review of the basic principles of measurement (i.e., Classical Test Theory, reliability, and validity). It also emphasizes scale development and assessment procedures, with the aim of bringing together substantive and methodological issues in measurement.

BUAD 704 Qualitative Research Methods (3)

This course covers three broad areas: nature and underpinnings of qualitative research, including the politics and ethics of qualitative inquiry; major strategies used to perform qualitative research; methods and problems of gathering, analyzing and interpreting qualitative data.

BUAD 705 Applies Statistics II (3)

The course is the second of a two-semester sequence of statistics courses required of all doctoral students. It focuses on hypothesis testing, regression, multivariate analysis and other topics relevant to research in the various areas of business.

CEGR 514 Environmental Impact and Risk Assessment (3)

The course covers strategies and methodologies that have been used to assess the impact of engineering projects. These include technology to assess the impact on air, surface water, and ground water quality, and on land use of transportation facilities, water supply and pollution control facilities, and industrial and community development. **Offered** (FALL OR SPRING)

CREP 501 - Principles and Practices of City & Regional Planning (3)

This core course provides an introduction to the practices and principles of city and regional planning in the United States and beyond. It explores theory and practice from historic and contemporary perspectives and includes discourse on planning ethics and diversity. Offered (FALL)

CREP 506 - Urban Land Use for Planners (3)

This course surveys and examines urban land use planning practices across North America and the world at district, city and regional scales. Employing several critical lenses, its focus is oriented towards exploration and critique of planning and development processes and consideration of plan outcomes to serve public interests. Offered (SPRING)

CREP 510 - City & Regional Planning Studio I (3)

This core course introduces students to professional planning practice. Working with a client and multiple stakeholders, students create a plan for a neighborhood or city. Students engage with all aspects of the planning process including defining problems and opportunities, creating goals and objectives, designing and executing field study, gathering and analyzing data; soliciting and mediating among diverse interests; and developing recommendations and implementation strategies. Offered (SPRING)

CREP 512 - Urban Economics for Planning (3)

This core course exposes students to urban economics and enables them to observe, understand, analyze and communicate urban planning and policy issues and phenomena through an economic lens. The curriculum includes economic theory and its relationship to cities and regions, and how economics shapes the patterns of urban development within and beyond cities. Offered (SPRING)

CREP 513 History of City and Regional Planning (3)

This core course surveys the principal concepts that have guided the growth of cities and the development of the practice and profession of urban planning, from its earliest inceptions through the present day. Through lecture, discussion, projects and field study, students examine the history of the American city and determine how it has been impacted by various plans, movements and development initiatives. **Offered** (FALL)

CREP 514 - Seminar in Urban Design I (3)

This course explores the physical form of cities and how it evolves over time. Introducing students to urban design theories and practices, it includes strategies for interpreting and engaging city form and generating meaningful critique of urban development. Offered (FALL/SPRING)

CREP 515 - Seminar in Urban Design II (3)

The course takes a comparative approach to exploring contemporary and historic issues and theories of city and urban design. It examines the socio-political dimensions of urban design in public as well as private sector projects in the U.S. and internationally from colonial to modern times, and considers how these projects have influenced the quality of the built environment. Offered (FALL/SPRING)

CREP 520 - City & Regional Planning Studio II (3)

Building upon Planning Studio I, this core course asks students to undertake a complex planning project working with a client in team or individual formats. Typically, students develop a detailed comprehensive plan for an urban neighborhood, district or region. Prerequisite(s) CREP 510
Offered (FALL)

CREP 521 Computer and Data Applications for Planners (3)

This core course introduces computer and data analysis practices such as data management, interpretation and visualization. It includes several quantitative analysis techniques and students develop competencies working with standard planning computer applications and data sets, and creating population and economic projections. **Offered** (FALL)

CREP 523 Quantitative Analysis and Methods for Planners (3)

This core intermediate level quantitative course covers methods commonly used in planning practice. It includes statistics, projection methods, housing analysis, cohort survival models, impacts analysis, economic analysis and financial modeling. The emphasis is how to integrate quantitative analysis results, graphics, and narratives to prepare a strong professional planning report. **Prerequisite(s)** CREP 521

CREP 526 - Urban Transportation Planning (3)

The course introduces students to theories and practices of urban transportation planning and policy in city, regional, state and national contexts. Students discuss historic, contemporary and future directions of federal transportation policies, and examine topics including transportation finance, public transit, mobility, transportation demand management, pedestrian and bicycle network planning, and other sustainable and/or equitable transportation strategies. Offered (FALL)

CREP 538 Neighborhood and Community Development (3)

This course provides an overview of neighborhood and community development practices. It is designed to stimulate student thinking about the elements that comprise equitable, healthy, sustainable and prosperous neighborhoods. Topics discussed include community development, economic development, local engagement strategies, equity planning, transportation, food systems, commercial corridor revitalization and Main Street programs, and heritage planning. **Offered (SPRING)**

CREP 542 Environmental Planning (3)

This course focuses on understanding environmental issues and their impact on cities and urban development while creating sustainable and resilient planning strategies. Topics include topography, soil structure and land-based hazards, brownfields remediation and redevelopment, natural resource characteristics, pollution control and mitigation, assessing the impacts of land use and development, land conservation strategies, environmental disclosure practices and compliance with city, state and federal legislation and policy. **Offered** (FALL/SPRING)

CREP 601 Planning and Designing the New Urban Waterfront (3)

This seminar surveys and examines contemporary waterfront planning, design and development practices. It draws upon a mix of national and international best practices and exploits Baltimore's great and varied number of waterfronts for local field studies and student projects. **Offered** (FALL/SPRING)

CREP 792 Thesis (Dissertation) Research and Professional Report Preparation (3)

This core course that prepares students to write a thesis (Dissertation) or a professional capstone project (which are thesis alternates for the Program). The curriculum includes immersion into research methods and design strategies. Students should enroll in this course in the semester prior to the one in which they intend to graduate. (Graduate School will have to change the course title.)

CSUC 501 - Sustainable Urban Communities (3)

This course is an introduction to the subject of Sustainable Urban Communities. The student will be presented with the environmental, social, cultural, economic, planning, design, construction and policy aspects of sustainability in an urban context. Course topics include: concepts, issues, terminology and definitions; historical context and precedent; the multifaceted aspects and complexities of urban sustainability; sustainable design principles and best practices.

CSUC 503 - The Urban Village/Sustainable Neighborhoods (1)

This course is an introduction to the components and structure of sustainable urban communities. The historic village is presented as a foundation for interpreting a sustainable community from the perspective of providing the primary resources and amenities required by members of the community. Topics covered include: community structure, mixed use zoning, public open spaces, town planning process, policy and management, infrastructure planning, community institutions, interactions within the community, public transit, pedestrian oriented communities, social welfare and public health, and public safety.

CSUC 504 - Sustainable Urban Site Design (1)

This course is an introduction to the assessment, enhancement, restoration and creation of natural systems in urban communities. Topics include: natural systems and their functioning in the urban environment, the interrelationships between environmental processes and human needs, the connection and conflict between the built and natural systems in the city, the historical context of fundamental ecological concepts, environmental resource assessment, and the necessity for a viable and healthy natural environment for sustainable urban communities.

CSUC 505 - The Natural and Built Environment (1)

This course is an introduction to the assessment, enhancement, restoration and creation of natural systems in urban communities. Topics include: natural systems and their functioning in the urban environment, the interrelationships between environmental processes and human needs, the connection and conflict between the built and natural systems in the city, the historical context of fundamental ecological concepts, environmental resource assessment, and the necessity for a viable and healthy natural environment for sustainable urban communities.

ENGL 501 Materials and Methods of Research in Literature and Writing (3)

This course of lectures on and exercises in bibliographical research is intended to help the student to develop effective techniques of literary study and satisfactory skills in the organizing and writing of scholarly literary papers. **Offered** (FALL)

ENST 510 Environmental Design I (6)

This studio will introduce students to some fundamental principles of environmental, spatial, and architectural design. The studio begins with the premise that the conception, proposition, and design of new architectural environments must be accompanied by continuous attention to (and analysis of) other work, historical precedent, and one's own immediate physical

surroundings. This course is tailored for students in both the Master of Architecture and the Master of Landscape Architecture programs. Prerequisite(s) ARCH 501 Offered (FALL)

HIST 598 Historiography and Historical Methods (3)

In this course, students develop proficiency in the basics of research, examine the issues and controversies of history as an enduring discipline, and become familiar with a representative sampling of established historians and their work. A major emphasis will be on library usage and research techniques. **Offered** (FALL)

HIST 599 Historical Writing (3)

This course teaches graduate students in the Department of History and Geography the historical method through research and written exercises. **Offered** (SPRING)

HIST 708 Oral History Approach to the Study of 20th Century United States History

This is an introduction to methods and techniques of oral history. Supervised oral history research projects on selected topics are included. **Offered** (FALL/SPRING)

LAAR 511 - History I: of Landscape Architecture (3)

A survey of historic traditions in garden design and landscape architecture that covers cultural and aesthetic traditions from the Monastic Gardens to the American estate, parks and land planning works of Frederick Law Olmsted. Multiple texts and visual materials are utilized to study the spatial organization, local and regional landscape contextual relationships, and cultural traditions of all landscapes studied. Emphasis is placed on the social, cultural, artistic, political and technological forces that influenced the design of built landscapes in different time periods and geographic locations. This lecture course requires students to write critical papers, deliver in-class special reports, and produce other analytical special projects that analyze the structure and historical importance of built landscapes.

LAAR 547 Landscape Performance Assessment Methods & Systems (3)

This is an interdisciplinary course that orients students to methods and rating systems of assessing performance of built and proposed landscape architecture projects. Methods and rating systems that will be covered in this course are drawn from landscape as well as other disciplines such as architecture, urban planning, engineering and industrial ecology and will include: landscape focused-Sustainable SITES initiative, green building and site planning oriented LEEDS rating system, Life cycle assessment, ecological footprint, design for environment and Instructor developed-methods. **Contact Hours** 3

MUSE 600 Principles of Preventive Conservation (3)

Considering the enormity of the subject, this course will briefly address topics, i.e., but not limited to the recognized issues of climate control; facilities management; storage materials; building construction; pest management; storage and use of preservatives; and health and safety.

OMPH 501 Statistical Methods in Public Health (3)

This is the basic course in Biostatistics, which will cover rates and ratios, data graphs, measures of central tendency and dispersion, probability, probability distributions, sampling

distributions, estimations, confidence interval, sampling, odds ratios and relative risks, and an introduction to regression analyses. **Offered** (SUMMER)

PSYM 504 Social Psychology (3)

Overview of social psychology. Includes study of the major theories, research, and major figures in the field. **Offered** (FALL/SPRING)

PSYM 530 Principles and Foundations of Measurement. (3)

Exploration of the basic issues in psychological and educational measurement, including reliability, validity, fairness, item analysis, scores and score reporting and interpretation. Emphasis is on the construction, interpretation, use and evaluation of achievement, ability, attitude and personality measures. The history of testing and assessment will be discussed, including a critical analysis of the impact of testing on culture. **Offered** (FALL)

PSYM 550 Principles and Methods of Research (3)

This course is an introduction to educational research methodology and covers issues, concepts and various topics associated with research, research design and data analysis. Topics covered include probability and non-probability sampling, single- and multi-stage sampling, sampling errors, design effects, unit-of-analysis concerns, causal and correlational research, confidentiality/anonymity issues, questionnaire design, interview procedures, item development, and question format ethics. **Prerequisite(s)** PSYM 530 and PSYM 560. **Offered** (SPRING)

PSYM 560 Principles and Foundations of Statistical Methods (3)

This course covers statistical concepts and methods that can be applied in psychological research. The course is intended to provide a conceptual understanding of basic statistical procedures for quantitatively exploring and understanding data in applied research and includes data representation, descriptive statistics, estimation and hypothesis testing. It also helps students develop the computational skills needed to carry out statistical procedures in practical settings. The course will include reading journal articles and using statistical computer packages. **Offered** (FALL)

PSYM 570 Applied Statistical Inference (3)

This course covers advanced inferential statistics and techniques of data analysis commonly employed in psychological, educational and social science research with emphasis on hypothesis testing, design of experiments, regression analysis and analysis of variance and covariance. Application of statistical computer packages is emphasized as is statistical report writing. **Prerequisite(s)** PSYM 560 . **Offered** (SPRING)

PSYM 620 Principles and Methods of Program Evaluation (3)

This course provides an introduction to program evaluation, including planning an evaluation study, collecting and analyzing information, and reporting results. Topics covered include evaluation theory, methods, and practice; and evaluation strategies and designs. **Prerequisite(s)** PSYM 530 and PSYM 560. **Offered** (FALL/SPRING)

PSYM 660- Categorical Data Analysis (3)

Systematic study of analysis of categorical data, including generalized linear models and emphasizing log linear and logic models Topics discussed include assessing association in contingency tables and sets of tables, logistic regression and conditional logistic regression, weighted least squares modeling, repeated measurements analyses, and bioassay analysis. **Prerequisite(s)** PSYM 570 . **Offered** (FALL/SPRING)

PUBH 502 Social and Behavioral Health Sciences (3)

This course is designed to provide students with functional public health experience to engaging and applied introductions to the theoretical basis of health behavior science and the social determinants of health that affect public health. **Offered** (FALL)

PUBH 504 Public Health and Health Disparities (3)

This course introduces the history of public health and health disparities. Students learn about the role of social determinants, such as race, gender, and socioeconomic status, in shaping the quality of services, the distribution of risk factors, and health outcomes. This course must be taken in the first term. **Offered** (FALL)

PUBH 551 Application of Public Health Principles (3)

First in a series of three courses, which collectively fulfill the Public Health practicum requirement for the DrPH degree, this course examined the competencies deemed critical for DrPH trained professionals in the ethical application of public health principles to practice. **Prerequisite(s)** PUBH 801 and PUBH 812 **Offered** (FALL/SPRING/SUMMER)

PUBH 720 Qualitative Research in Public Health (3)

This course presents the basic principles of qualitative research and the designing of qualitative and mixed methods public health studies. The course covers data collection and data analysis as well as writing up findings. **Prerequisite(s)** PUBH 501 , or its equivalent, or permission of the instructor. **Offered** (SPRING)

PUBH 810 Contemporary Analytic Tools for Public Health (3)

This course introduces system science tools of modeling and simulation tools, geo spatial analysis of geographic information system (GIS data, and social network analysis to add to the use of quantitative and qualitative analytic tools applied in public health practice. **Prerequisite(s)** PUBH 501 or its equivalent course in statistics and PUBH 708 **Offered** (SPRING)

SOCI 510 Social Statistics (3)

This course introduces students to multivariate parametric and non-parametric statistical techniques including multiple and partial correlation, multiple regression, factor analysis and path analysis, as they are applied to socio-cultural phenomena. The major focus will be on the use of computer programs (including SPSS, and SAS) in performing these techniques. This is a required core course. **Prerequisite(s)** First Year Graduate Students in Sociology Only. **Co-Requisite(s)** SOCI 500 and SOCI 511. **Offered** (FALL)

SOCI 520 Techniques of Social Research (3)

This course is designed to enhance the students' knowledge and understanding of the basic research techniques and procedures used in sociological research. It focuses on the formulation of research problems, research designs, questionnaire construction, proposal

writing, data collection and data analysis. This is a required core course. **Prerequisite(s)** SOCI 511 . Students must pass SOCI 511 with a grade of C or better. **Co-Requisite(s)** SOCI 521 . **Offered** (SPRING)

SOCI 521 Contemporary Sociological Theory (3)

The paradigms which guide current sociological thought are examined and compared. Problems with theory and application (praxis) are studied through the use of recent sociology research. This is a required core course. **Prerequisite(s)** SOCI 511 or permission of Graduate Coordinator. Students must pass SOCI 511 with a grade of C or better. **Co-Requisite(s)** SOCI 510 and SOCI 511 . **Offered** (SPRING)

SOCI 530 Black Americans in Sociological Thought (3)

The treatment of African Americans in the literature and theories of sociology are studied as well as the contribution of African American sociologists to the development of the discipline. **Prerequisite(s)** SOCI 511 or SOCI 521 or Permission of Graduate Coordinator. Students must pass these courses with a grade of C or better. **Offered** (FALL OR SPRING)

SOCI 570 Seminar in Applied Sociology (3)

This course examines the present application of sociology to the resolution of social problems and focuses also on the role of the applied sociologist in the non-academic work setting. Required core course. **Prerequisite(s)** SOCI 510 , SOCI 511 , SOCI 520 , SOCI 521 . Students must pass these courses with a grade of C or better. **Offered** (FALL)

TRSP 605 Land Use and Transportation Planning (3)

This course discusses the basic concepts, principles, strategies, and tools of local-level urban transportation and land use planning. The focus is on the real-world planning process and implementation and its relationship with transportation planning. **Offered** (FALL)

TRSP 617 - Intelligent Transportation Systems (3)

This course examines the cross-cutting issues in intelligent transportation system (ITS) deployment in the U.S. Discussions include the overview of ITS evolutionary process, the original six program category areas, the new seven services, and intelligent transportation infrastructure and system architecture. **Offered** (FALL)

TRSP 623 Urban Infrastructure Planning and Management (3)

This multidisciplinary course will expose the student to the various components of critical urban infrastructure, with a primary focus in transportation infrastructure planning and management processes; and supplemental discussions in sewer, water, energy, and telecommunication distribution systems. **Offered** (FALL)

TRSP 725 Advanced Policy Analysis (3)

This course simulates a think-tank environment for analyzing complex issues, using landmark transportation and infrastructure policy decisions as case studies. Students will be exposed to quantitative tools for analyzing complex issues. **Prerequisite(s)** TRSP 603 or instructor approval **Offered** (SPRING)

URBD 511 Urban Design (3)

This course provides several platforms for exploring aspects of urban design. This course attempts to recognize and embrace that our understanding of the city we have created may be incomplete, and it is therefore more important to approach the study and design of urban environments from a number of different directions at once. In addition to the traditional seminar format of readings, lectures, discussions, and assignments, students will use the urban environments around us actively, as laboratories, to further their understanding of the course material with direct observation, analysis, and interaction with Baltimore and other cities. Prerequisite(s) ARCH 530 and ARCH 540.

Specialized accreditation

The Ph.D. program will neither be accredited by the National Architectural Accreditation Board, Planning Accreditation Board, nor the Landscape Architecture Accreditation Board.

H. Adequacy of Articulation

Not applicable

I. Adequacy of Faculty Resources

The School of Architecture and Planning and Morgan State University has adequate resources to start the Ph.D. program in Fall 2021. The institution has scholars with expertise in Sustainability/Resilience, Urban Design and Place-making, Technology and Construction Project Design/Delivery, Health and Urban Environments, Transportation and Urban Infrastructure. However, to ensure its quality delivery and stimulate a robust intellectual experience for the students, we will need additional faculty members (i.e., part-time contractual faculty). Eventually, a full-time professor of practice will be hired to administer the program.

Name of Faculty	Degrees	Area of expertise
Mary Anne Akers, Ph.D.	B.A., Sociology, University of Philippines M.A., Urban and Regional Planning, University of Philippines Ph.D., Urban Planning and Community Organization, Michigan State University	Urban Sustainability and Resiliency, Community Design, Design and Human Behavior, Health and Urban Environments, Community-based Economic Development
Daniel Campo, Ph.D.	BA, State University of New York at Binghamton MUP, Hunter College of the City University of New York	Urban Planning and Design, Public Space Studies, Downtown and Waterfront Planning, Placemaking, Arts and Cultural Planning, Historic Preservation, History of the Built Environment, Community and

	PhD, University of Pennsylvania, City and Regional Planning Postdoctoral Fellow, Institute for Urban Research, University of Pennsylvania	Economic Development, Cultural Geography, American Studies, Ethnography, International Development
Mohammad Gharipour, Ph.D.	M.Arch., University of Tehran Ph.D., Georgia Institute of Technology	Islamic Architecture and Urban Design, Garden and Landscape History, Japanese Contemporary Architecture, Synagogue Architecture, Design and Health
Samia Kirchner, Ph.D.	B.Arch., National College of Arts, Lahore, Pakistan S.M.Arch.S. Massachusetts Institute of Technology Ph.D., Georgia Institute of Technology	Architectural History & Theory, Urban History & Theory, Islamic Architecture & Urbanism, Port City Regeneration & Incumbent Upgrading
Kamalesh Panthi, Ph.D.	B.E., Karnataka Regional Engineering College, Civil Engineering M. Eng., Asian Institute of Technology, Construction Engineering & Management Ph.D., Florida International University, Civil Engineering (Construction Management)	Quantification of Construction Risks, Bayesian Analysis of Accident Risks, Building Energy Modeling, Sustainable Materials and Methods
Tonya Sanders, Ph.D.	B.A., Psychology, Truman State Univeristy M.A., Community Psychology and Social Change, The Pennsylvania State University Ph.D., Urban Planning and Policy, University of Illinois at Chicago	Faith-based Community Development, Faith-based Curriculum Development, Built Environment and Health, Community Development

Siddhartha Sen, Ph.D.	B.Arch, Calcutta M.Arch, Renssalear Polytechnic Institute M.C.P., Georgia Institute of Technology Ph.D., University of Illinois, Urbana-Champaign	International Planning; Urban and Environmental Design; Planning Theory and History; Diversity and Equity Issues in Planning; Transportation Planning; Housing and Community Development
Archana Sharma, Ph.D.	B.Arch., Maharaja Sayajirao University PhD., National University of Singapore	Innovation, assessment, methods for sustainability; social equity and environmental justice; landscape planning, green infrastructure, natural resources and biodiversity conservation
Hyeon-Shic Shin, Ph.D.	B.A., Dankook University, Seoul, Korea M.A, University of Akron Ph.D., University of Illinois at Chicago	Transportation economics, Transportation safety, freight transportation demand management, land use and transportation, social/environmental justice,
Lewis Waller, Ph.D.	B.S., North Carolina A&T State University M.S., North Carolina A&T State University Ph.D., Capella University	Impact of Green Building, Active Learning, Service-Learning Projects for Construction Management Courses, Sustainable Workforce Development, Employability Skills

J. Adequacy of Library Resources

The Earl S. Richardson Library is the main academic information resource center on the campus. It houses approximately 400,000 volumes and access to 1,900 periodical titles. The Library subscribes to over 100 online databases. Reading and study spaces provide wired and wireless access to databases for research. It is located in a highly prominent site along Hillen Road, towards the south end of Morgan's campus. The state-of-the-art building includes a multi-story lobby, lounges, private group study rooms, meeting rooms, a technology-enhanced instruction room, computer laboratory, and other computers in many locations.

Morgan's architecture collection consists of 5,235 volumes (covering 4,372 titles) under the NA designation. Related books include 6,476 volumes under N, NB, NC, ND, NE, NK, or NX (Fine and

Decorative Arts); 164 under GE (Environmental Sciences); and 285 under GF (Human Ecology, including Urban Settlements). The library also maintains 56 print and online journal titles and 16 online databases that cater to the needs of the built environment disciplines.

K. Adequacy of physical facilities, infrastructure and instructional equipment

Since Fall 2012, the School of Architecture and Planning (SA+P) has been housed in the relatively new LEED Gold 126,000sf Center for Built Environment and Infrastructure Studies (CBEIS) building. Design studios are located on the first floor of this building. We have adequate instructional classrooms for the proposed ARUE courses. Ph.D. students will be given access to office spaces on the second floor of the building. All classrooms in the CBEIS building are equipped with instructional equipment. We operate a print lab with large plotters, printers, and scanners. The BearLab, a fabrication lab, offers equipment and tools for students to use (i.e., 3-d printers, laser cutters, carpentry tool, sewing machines).

L. Adequacy of financial resources with documentation

Table 1: Resources

Resource Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Reallocated Funds	29,720	48,137	48,137	48,137	48,137
2. Tuition/Fee Revenue (c+g)	142,274	266,392	390,491	532,765	675,039
a. Number of F/T Students	8	16	21	29	37
b.1 Annual Tuition/Fee Rate In-State	8,129	8,129	8,129	8,129	8,129
b.2 Annual Tuition/Fee Rate Out-of-state	16,092	16,092	16,092	16,092	16,092
c. Total F/T Revenue (a x b)	96,884	193,768	254,321	351,205	448,089
d. Number of P/T Students	5	8	15	20	25
e.1 Credit Hour Rate In-state	537	537	537	537	537
e.2 Credit Hour Rate Out-of-state	976	976	976	976	976
f. Annual Credit Hour	12	12	12	12	12
g. Total P/T Revenue (d x e x f)	45,390	72,624	136,170	181,560	226,950
3. Grants, Contracts & Other Sources	20,000	20,000	50,000	75,000	100,000
4. Other Sources	20,000	20,000	30,000	50,000	70,000
TOTAL (Add 1 – 4)	**$211,994**	**$354,529**	**$518,628**	**$705,902**	**$893,176**

Reallocated Funds: We will use our current faculty resources for the first year (i.e., the Dean will teach 3 credits, a graduate Landscape Architecture faculty will teach 3 credits, and a Graduate Architecture faculty will teach 1 credit). In year 1, the SA+P Dean will teach and coordinate two transdisciplinary courses with faculty from other departments across the university.

Tuition and Fee Revenue: The M.S./Ph.D. in Architecture, Urbanism, and Built Environments will be offered on both full-time and part-time basis. However, we

anticipate that most students will opt to enroll full-time while they are working. Each semester requires between 4-7 credits, and 3 credits in the summer. This academic plan was designed to be for working students. Furthermore, the courses will be designed in hybrid mode (intensive face-to-face weekends at the beginning and end, and then highly engaged remote classes in the middle of the semester). Several of the course offerings will be online classes. Due to the academic delivery of the program, we expect a significant number of out-of-state students. The calculation is based on 50% in-state and 50% out-of-state students.

Grants and Contracts: We anticipate that the M.S./Ph.D. program will be supported by external grants or contract that faculty will procure.

Table 2: Expenses

Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Faculty (b + c below)	126,000	126,000	126,000	252,000	252,000
a. # FTE	1	1	1	2	2
b. Total Salary	90,000	90,000	90,000	90,000	90,000
c. Total Benefits	36,000	36,000	36,000	36,000	36,000
2. Admin. Staff (b + c below)	0	49,000	49,000	49,000	49,000
a. # FTE	0	1	1	1	1
b. Total Salary	0	35,000	35,000	35,000	35,000
c. Total Benefits	0	$14,000	$14,000	$14,000	$14,000
3. Support Staff (b + c below)	0	0	63,000	63,000	63,000
a. # FTE	0	0	1	1	1
b. Total Salary	0	0	45,000	45,000	45,000
c. Total Benefits	0	0	18,000	18,000	18,000
4. Equipment		15,000	15,000	15,000	15,000
5. Library	10,000	25,000	30,000	30,000	40,000
6. New or Renovated Space	0	0	0	0	0
7. Other Expenses	20,000	30,000	30,000	40,000	40,000
TOTAL (Add 1 – 7)	**$156,000**	**$245,000**	**$313,000**	**$449,000**	**$459,000**

Faculty [#FTE. Salary and Benefits]: Existing faculty will be used in Year 1 plus one full-time faculty who will manage and recruit for the program. Additional faculty will be needed in Years 4, and 5. Average salary with benefits for regular faculty will be $126,000.

Administrative Staff [#FTE. Salary and Benefits): An administrative staff member is needed in Year 2 with a salary and benefits costing $49,000.

Support Staff (#FTE. Salary and Benefits): The support staff includes a program assistant who will assist the program director in implementing a recruitment and internship strategy. The program assistant will be paid $45,000 salary, plus benefits of $18,000 for years 3, 4 and 5.

Equipment: Specialized software programs will be purchased for students working

on topics related to augmented reality, energy modeling, qualitative and qualitative analyses, and others.

Library: Additional subscriptions for discipline-specific journals will be acquired.

New or Renovated Space: No additional space is needed for the program.

Other Expenses: Funding for student and faculty travel to academic and professional conferences will be needed.

M. Adequacy of provisions for evaluation of program

The Morgan State University Office of Assessment conducts periodic reviews of its programs as part of its Comprehensive Assessment Plan. Through a review committee, programs are assessed using student learning outcomes as the basis for evaluation. In addition, the School of Architecture and Planning hires an external consultant who assists program directors in developing and implementing their academic assessment plans.

N. Consistency with the State's minority student achievement goals

As a Historically Black institution, Morgan State University's mission directly impacts the State's goal of increasing diversity and broadening access to minority students.

O. Relationship to low productivity programs identified by the Commission

Not applicable.

P. Adequacy of Distance Education Programs

Not applicable.