BEGINNING DESIGN: The HBCU Experience

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Morgan State University
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ACSA Diversity Achievement Award Submission
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Undergraduate Architecture and Environmental Design, Morgan State University
Beginning Design: The HBCU Experience

This entry reflects on a range of curricular strategies that have been developed at Morgan State University to take on the challenges of first year design education in an open enrollment, minority serving public institution. The freshman cohort of the Undergraduate Architecture and Environmental Design Program at the School of Architecture and Planning is admitted without portfolio, based on 2.0 GPA and 850 SAT score (35% percentile) minimum requirements. 90% of first year students entering the program are Black or African American (70% program-wide) and 60% of freshmen receive Federal Pell Grants (54% program-wide). While some students have taken drafting courses in high school, incoming surveys reveal that other factors that commonly lead a student to Architecture school, such as travel, architect role models, knowledge about the field, familiarity with architects other than Frank Lloyd Wright, play a limited role in their decision to enroll in the design program at Morgan.

How do we move beyond issues of cultural difference, college readiness and socio-economic background to forge a set of share values? How do we build a cohort that has both the design communication skills to advance in the curriculum and the support network and vision to pursue professional goals that lay many years in the future?

The Beginning Design curriculum is a collaborative framework developed by a team of educators and administrators in the Undergraduate Architecture and Environmental Design Program of the School of Architecture and Planning at Morgan. Created to reflect the HBCU experience and leverage diverse body of students representing various minority communities, the Beginning Design curriculum reconsiders the role of design education and makes a value proposition that actively seeks to develop design leadership from a diverse talent base for the diverse challenges we face today. Since Fall 2010, the curriculum has evolved into key trajectories aimed at developing the skills necessary to observe, record, analyze, vision and act on the built environment by challenging students to source knowledge from their immediate environment and from an inclusive field of practitioners, thinkers and activist. Applied across three first-year courses – Concepts and Theories of the Built Environment and Communication Skills I & II, these immersive strategies complement the formal introduction to the field as students develop confidence in their skills and a culture of making that takes pride in agency and craftsmanship. The newly established Pre-Design Workshop introduces first-time freshmen in the first weeks of the semester to a design ethos and the skills needed to sustain one's growth through the program.

By the Second Year, the primary outcome is the sense of community and resilience gained by the student cohort. Students emerge intellectually and emotionally prepared to meet the rigors of the full design studio and lecture curriculum. In the upper years, as issues of attrition wane, the Program's curricular focus shifts towards real design challenges facing Baltimore (Housing, Urban Design and 21st Century Learning Environments), Seminars in African Americans and The Built Environment, Events like Architecture of the HBCU's Conference and Conversations on Race and Equity in Design as well as a Professional Development curriculum geared towards internships and advanced education that continue to prepare a multicultural cohort to pursue their careers in a multicultural world. Since the start of the Beginning Design curriculum, the average retention of the first-time-freshman cohort in the Undergraduate Architecture and Environmental Design Program has increased from 63% to 75% and the respective graduation rate from 24% to 47% (first-time-freshmen only). The students of the Undergraduate Architecture and Environmental Design Program at Morgan consistently win AIA Student Design Awards on local and regional level, engage actively in the professional field, gain admission and receive substantial scholarships at top Graduate Programs (increased by 30% since 2010) and rank #3 in the number of undergraduate Black or African American degrees completed in the US.

1 MSU Fall 2015 Institutional Data.
2 Pre-Design Workshop Fall 2016 General Survey.
3 Spring 2016 IPEDS Graduation Statistics.
Undergraduate Architecture and Environmental Design Program Info

The Undergraduate Architecture and Environmental Design (AREN) is a four-year pre-professional degree program that prepares students for careers in Architecture, Landscape Architecture, Urban Design and Planning, and other Environmental Design professions. The program focuses on the developing skills and understanding needed for the design of the built environment and we challenge students to become Thinkers, Communicators, and Agents of Change through social and environmental stewardship.

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<tr>
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<th>AREN</th>
<th>1st Year</th>
<th>Demographics</th>
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<tr>
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<td>234</td>
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<td># Students</td>
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<td>32%</td>
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<td>Students with Federal Pell Grants</td>
<td>54%</td>
<td>60%</td>
<td>Students with Federal Pell Grants</td>
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Undergraduate Architecture and Environmental Design Curriculum

The AREN Curriculum offers a balanced course of study that includes graphic skills, technology, history, and theory of the built environment in addition to a general liberal arts education. The First Year of study provides Beginning Design training followed by Second Year Foundation of design & communication skills, techniques, and concepts applicable to the built environment. In Third Year, students explore the city through the lens of Housing and Urban Design in collaboration with Baltimore City agencies as Fourth Year provides focus on specific design disciplines and topics through research and active community engagement.

First Year
ARCH 101 Concepts & Theories of the Built Env
ARCH 103 & 104 Communication Skills I & II
ARCH 207 Site Design

Second Year
ARCH 201 & 202 Design Studio I & II
ARCH 205 & 206 History of the Built Env I & II
ARCH 208 & 209 Building Systems I & II

Third Year
ARCH 301 & 302 Design Studio III & IV

Fourth Year
ARCH 401 & 402 Design Studio V & VI
ARCH 403 & 404 Urban Design I & II
ARCH 410 Design Build Studio

Electives:
Sustainability, Urban Development of Baltimore, Design & Human Behavior
Statics & Strength of Materials, Structural Systems
Historic Preservation, Historic Resource Documentation
Historic Periods, Styles & Movements, Interior Materials & Finishes
History & Theory Seminars – Modern Architecture, Black Architects
Office Practice and Management, Regional Design Practice Survey
Design Build Studio, Technology Seminar I – Digital Fabrication
Digital Communication Skills, Portfolio & Grad School Prep, Urban Sketching
ARCH 101 Concepts and Theories of the Built Environment seeks to provide students with an introduction to basic foundations for studying Architecture and the Built Environment using two thematic aspects, ‘Place Matters’ and ‘Place Makers’. ‘Place Matters’ explores the concepts and theories as applied to the practice of ‘Placemaking’. ‘Place Makers’ studies specific disciplines and individuals involved in the production of the ‘places’ that we inhabit. Throughout the semester, students are encouraged to develop a critical voice and communicate an understanding of fundamental concepts through: Research and Analysis; Writing and Drawing; Visual and Verbal Presentation.

Place_Written Report
ARCH 101 Concepts and Theories of the Built Environment

After a walk through Morgan's Campus, students identify two places - 'a place worth caring' and 'place not worth caring about'. Using the concepts from assigned readings, students select three criteria for evaluating these places. The criteria consists of measurable qualities and relate each of the following: a) People, Use and Activity; b) Landscape and Site Features; Architecture or Buildings. Final report includes diagrams illustrating the criteria as applied to each space and write a summary of observations and lessons learned.
Place Making Field Sketches
ARCH 101 Concepts and Theories of the Built Environment

Students examine a public space and seek to understand the different layers of design decisions that have made it a successful place for human interaction. Through words, diagrams and proportional drawings students document the physical conditions, use patterns and the relationship between exterior (landscape) and interior (architecture) public space. Each week focuses on a different aspect of the neighborhood’s composition through class discussion and formatted visual summary of your findings.
Using the city of Baltimore as its subject, students create a short film capturing the tangible and intangible elements that contribute to a neighborhood’s sense of place. Using collage, students document the materials, architectural elements (entries, doors, windows) and ephemera (signs, people) of their designated place. Qualities of composition, light and space are considered. Use of embedded text, narration and background audio are included in the final presentation. Be creative. Be inspired. Be compelling.
PRESENT AN INCLUSIVE CANON - introduce a field that includes men and women of color working in different capacities including architects, planners, developers, and activists.

Place Makers Posters
ARCH 101 Concepts and Theories of the Built Environment

Each student is assigned a ‘Place Maker’ as the subject of their research. The research is biographical in nature and students are expected to gain insight both on the circumstances and character of the individual, as well as the formative events and experiences as they advanced in their field. Research includes an Annotated Bibliography, Resume, Biography and Summary Poster. ‘Place Makers’ studied represent a broad range of professions that impact the environment - architects, landscape architects, planners, builders, activists and politicians.
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LEGACY

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PROJECTS

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THE WORK OF CASSELL Brought
HEALING TO THE WHOLE & STRENGTH TO COMMUNITIES.

TO REACH THE GOAL & OPPORTUNITY.

NATIONAL STATE COLLEGE BUIDINGS

NATIONAL STATE COLLEGE BUIDINGS

THE MASON RANGERS APARTMENT BUILDING

NATIONAL STATE COLLEGE BUIDINGS

JOHN WASHINGTON, IMPERIAL CHIEF, BUILT FOR STANDER CASSELL'S GRAND CHILD.

BLACK FREEMASONIC INDIAN, WASHINGTON, HOSPITAL IN 1923.

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IMAGINE AN ENGAGED FUTURE, not only as working professionals but as stakeholders and agents of change in their community.

The Great Baltimore Opportunity - The 100K House
ARCH 101 Concepts and Theories of the Built Environment

Through the identification of undervalued Baltimore neighborhoods and homes students test their ability to positively impact the built environment. In a three-part process, student identify a site, document challenges and opportunities and propose targeted improvements. In additional to honing analytical skills and highlighting the potential impact of the chosen field, final deliverable seeks to put forward a convincing argument for the future outlook of the selected site and neighborhood. Emphasis falls on identifying local amenities (businesses, stores, etc.), access to transit and outlining the relationship of the property to other more stable (homes $250K and above) neighborhoods. Properties must be available for purchase for $100,000 or less. Proposals target a limited intervention that either leverages an opportunity or neutralizes a threat.
ENGAGE IN ITERATIVE AND TACTILE EXPERIENCES that develop both the skills and attitudes of a designer.

ARCH 103 Communication Skills I includes a series of hands-on exercises that introduce basic skills for visual communication. Students apply conventions of two and three-dimensional representation through hand drafting, observe and record the environment through various freehand drawing techniques and construct physical models distinguishing appropriate materials and techniques. Projects introduce a series of tectonic and spatial strategies alongside basic wood working and digital fabrication skills. Semester ends with a public performance event showcasing students’ abilities to conceptualize, plan, execute and present their design work.

Grid & Layers, Addition & Subtraction, Module Aggregation
ARCH 103 Communication Skills I

Consecutive spatial exercises introduce basic drafting and model building techniques alongside key design methods for organizing and generating form and space. Perspectival grids are transformed into three-dimensional constructs using layers and emergent forms. Subtraction from solid volume and module aggregation is used to generate forms based on a regulating grid and parametric rules transforming sheets of cardboard and plywood into generative form. These design exercises are aimed at improving hand-eye coordination and introducing basic design methods and spatial strategies.
PROJECT #4: FINAL PROJECT: WEARABLE

This project involved creating a wearable structure that connected your head to either your wrist or ankle. Creating a continuous structure, the requirements were to present a "skin" from a laser-cut surface and assemble using techniques/concepts that were studied this semester (Solid/Void & Repetition). This project also included sketches and a collage.
ARCH 104 Communication Skills II continues the development of hand drawing and model building skills and introduces computer-aided design and fabrication. Students explore drawing types and construct physical models at scales common to the design professions (site, building, detail) and develop proficiency in industry standard image editing, CAD, and 3D-modeling software. Projects introduce elements of basic site and program analysis, site design, massing, building enclosure, and vertical circulation. At the end of the semester, students fabricate full-scale plywood chair prototypes and prepare graphic posters and semester portfolio of work.

Wine vs Water
ARCH 104 Communication Skills II

Using an imaginary site of two valleys, students design, draw, and build models of a Winery or a Boathouse. Individual design solutions are assembled into a class model along the river or winery valleys as each student organizes a small residence tower structure, a winery/boathouse structure, vineyard/docks, and a road that connects these elements to their neighboring sites. Using a variety of scales and corresponding drawing and model types, students explore an iterative design process and develop a digital design workflow as they tackle basic site design, vertical and horizontal organization, and circulation and basic material strategies.
Chair Prototype
ARCH 104 Communication Skills II

Project introduces iterative design process as students generate a family of chair concept designs using folding, no waste or cut-off pieces. Select ideas are further developed at a larger scale and modeled digitally to produce shop drawings. Using a single sheet of plywood and no waste, students fabricate a prototype of their design, present the design process in poster format and exhibit their work at the End of Year Award Show. As the milestone project at the end of the First year in the Beginning Design Curriculum, students are able to experience all stages of the design and production process - from conceptualization, to production and final utilization.
CELEBRATE NEWFOUND SKILLS AND CRAFT through public performance and display.

Wearable Architecture Runway Show
ARCH 103 Communication Skills I

Students design, construct and wear a piece of architecture that connects one part of your body to another and seeks to change the proportions of the body and enhance or restrict its movement or position. Using basic concepts of structure and skin, solutions involve tectonic strategies and production processes introduced during the course of the semester. Concept generation begins with collage and sketches followed by study models and test assemblies. Students wear the final pieces down the runway at the annual Wearable Architecture Runway Show as a means of introducing the young design talent to the Morgan community.
BUILD A STRONG PEER NETWORK and sense of belonging within the major.

Pre-Design Workshop

The Morgan Pre-Design Workshop is an immersive and intensive three-week program for first-time freshmen. The workshop seeks to motivate, stimulate and guide the beginning design students by introducing the basic skillset and key subject matter relevant to the beginning design curriculum. Through field trips, discussions and hands-on activities, students gain introductory-level communication skills, develop understanding of an investigative, rigorous and iterative design process and build collaborative relationship with faculty and peers.
Day 1: Design and The City

Field Trip 1: Waverly and Better Waverly: Edge and Hierarchy

Overview
Document with sketches and photographs three different street conditions in Baltimore's Waverly/Better Waverly neighborhood, include verbal notes and diagrams to further communicate your observations. Discuss how architecture, landscape and urban edges create hierarchy, connection and division in the city.

Steps: Repeat for each of the six boundary examples

1. DOCUMENT
   a. Sketch each street condition and record the name of each street on a sketch page.
   b. MEASURE
      - Quantify the physical differences of each street. Place off the width of sidewalks, medians, planting strip areas and tree spacing. Estimate the heights of buildings.

2. PLAN
   a. Create plan and section sketches proportional to your measurements. See example.

At Morgan:
1. DOCUMENT
   a. Create a plan diagram of the neighborhood street network, bold your selected streets.

2. ANALYZE
   a. How does each street create connection? Division? Provide 3 bullet points of YOUR assessment.

3. LISTEN AND REFLECT: General Reflection and 1000 Degrees
   a. What have you learned from your observations?
   b. How is your thinking transformed after listening to the residents and history of this area?

Day 2: Design and Space

Field Trip 2: Baltimore Museum of Art Boundary Survey

Overview:
Visit three areas of the Baltimore Museum of Art (BMA): Sculpture Garden, Memorial Historic Entrance, Contemporary Wing. Identify and analyze two examples of boundary in each area and produce a survey that records and documents the examples. Work product: six examples, one page.

Steps: Repeat for each of the six boundary examples

1. DOCUMENT
   a. Sketch a sketchbook page with name and location of boundary example (e.g. Stone Fountain, BMA Sculpture Garden).
   b. MEASURE
      - Analyze the following questions:
         a. What are the two realities that are mediated by the boundary?
         b. How is the boundary characterized? Terms of form, material, character, size, scale and other describable features?
         c. How does the boundary perform the function of separating or connecting the two realities, physically, visually, acoustically, etc.?
   c. RECORD the examples with drawings, diagrams, and photographs.

At Morgan:
1. DOCUMENT
   a. Write and complete drawings and diagrams, add notes and captions.
   b. Provide 3x4 bullet points of your BMA1000 and answers to questions above.
   c. Reflect on the insight or lesson of the example.
PROVIDE ACCESS to the unfamiliar individuals and environments of the professional design world.

**Student Design Awards**

AIA Baltimore Future Architects Resources Undergraduate Scholarship Award

2014 Winner - Pauline Sipin  
Christian Cueva (Honorable Mention)  
Christine Doherty (Honorable Mention)

2015 Winner - Bryan Asson  
Brian Baksa (Honorable Mention)

AIA Maryland – Top Prize for Undergraduate Statewide

2014 Winner - Pauline Sipin (Upper Level)  
2014 Winner - Francis Ikhaelea (Lower Level)

2015 Winner – Prince Langley (Upper Level)  
2015 Winner – Alaina Gentes (Lower Level)  
Bryan Asson (Honorable Mention)