

## APPENDIX G

### **Request for Authorization to Establish a Master of Science in Architecture (M.S., CIP 04.0902) at University of North Carolina at Charlotte**

#### **I. Program Highlights**

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- The proposed Master of Science (M.S.) in Architecture focuses on emerging research critical to the architectural profession, which requires expertise that exceeds current criteria for accredited professional degrees. Thus, the M.S. in Architecture is distinct from the nationally-accredited Master of Architecture (M.Arch.) currently offered at UNC Charlotte.
- According to DesignIntelligence's Best Architecture Schools 2015 report, which polled 78 deans and chairs and over 1,000 architectural offices (respondents were allowed to provide multiple answers), the most significant concerns facing the profession include sustainability (49%), technological change (42%), and integrated design (47%). Similarly, the research priorities of the American Institute of Architects focus on building performance and diagnostics and new technological methods such as design computation.
- In each case, these research areas represent educational needs that are not fully met by professionally accredited degree programs. While the School of Architecture's professional Master of Architecture (M.Arch.) degree prepares students for general practice, a research-based M.S. in Architecture degree will offer non-professional opportunities for deeper exploration of these critical issues facing the profession and society.
- The M.S. in Architecture is an on-campus (full-time, 30 credit hour) curriculum made up of core requirements (21 credit hours) and elective coursework that allow students to concentrate their research interests in areas that address emerging research needs within the architectural profession (9 credit hours). One unique aspect of the proposed M.S. in Architecture is that it does not require applicants to hold a professional degree in architecture in order to apply. Students with backgrounds in related fields can also enroll in the program. In addition to broadening the pool of eligible students for the SoA, the M.S. in Architecture can serve as a feeder to PhD programs in the College of Computing and Informatics (CCI) and inter-disciplinary doctoral programs such as Infrastructure and Environmental Systems (INES) offered at UNC Charlotte.
- By establishing an entry point for students with novel backgrounds and diverse knowledge domains, the M.S. in Architecture will provide access to students interested in a career within the broader fields involving the built environment without having to overcome the barrier of prior training in an accredited degree program. By reducing barriers to graduate education in areas of specialization that support architectural practices, the M.S. in Architecture will help diversify both the student population and the future workforce at large.

#### **II. BOG Academic Program Planning Criteria (UNC Policy 400.1)**

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1. **Existing Programs (Number, Location, Mode of Delivery).** No programs or universities in the state of North Carolina offer a non-professional Master of Science in Architecture degree. NC State offers a 15 credit-hour certificate in Energy and Technology in Architecture to its students enrolled in the graduate architecture program and also offers certificates in City Design, Housing, and a soon-to-be launched certificate in Architecture in the Public Interest. NC State also offers a 30 credit-hour post-professional Master of Architecture with concentrations in the same areas as

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their certificates. According to NC State's website, these programs are intended as preparation for individuals to "assume responsible roles in the profession of architecture." However, their program requires an undergraduate Bachelor of Architecture (professional) degree for admission. Therefore, UNC Charlotte's proposed M.S. in Architecture will not be duplicative. Of the schools in the region offering the M.S. in Architecture degree, none offer nonprofessional degrees with concentrations specifically focused in Design, Computation and/or Material Studies. Therefore, UNC Charlotte has the opportunity to become a leader within the Southeastern region in architectural research. The creation of a M.S. in Architecture will allow the School of Architecture (SoA) to clearly distinguish a new non-professional research degree from its nationally-accredited professional Master of Architecture degree and will enable the SoA to expand and diversify its current degree portfolio.

- 2. Relation to Campus Distinctiveness and Mission.** This proposed Master of Science (M.S.) in Architecture aligns with the UNC's mission to "discover, create, transmit, and apply knowledge to address the needs of individuals and society" through "research, scholarship, and creative activities, which advance knowledge and enhance the educational process" (<http://northcarolina.edu/About-Our-System/Our-Mission>). As a research-focused degree centered on the design of the built environment, the M.S. in Architecture contributes to UNC Charlotte's mission of being "North Carolina's urban research university." This mission is outlined in the UNC Charlotte Institutional Plan 2016-2021. In addition, with its objectives to produce and disseminate research, the proposed M.S. in Architecture will contribute to the following university goals: "Goal 1: Deliver a high-quality, accessible, affordable, and integrated academic experience that produces responsible global citizens and a competitive workforce." This proposal will help UNC Charlotte address this goal through a research-focused integrated academic degree program. "Goal 2: Stimulate increased research, creative activities, and community engagement with a focus on programs and partnerships that address the major needs of the Charlotte region." The proposal will help the university address this goal through a research-focused non-professional degree program that addresses marketplace needs within architectural and design related fields.
- 3. Demand (local, regional, state).** According to the Occupational Analysis for Architects on NCWorks, "Employment of architects is projected to grow 17% from 2012 to 2022, faster than the average for all occupations. Competition for jobs will be strong as the number of applicants continues to outnumber available positions." The Occupational Outlook Handbook of the US Bureau of Labor Statistics corroborates the growth projections of NCWorks cited above: Employment in architectural (and related) occupations is projected to increase by 3% and by approximately 67,200 new jobs between the years of 2014 and 2024 (<http://www.bls.gov/ooh/architecture-andengineering/home.htm>).
- 4. Potential for Unnecessary Duplication.** Please see response to #1.
- 5. Employment Opportunities for Graduates.** Charlotte is the largest architectural market in North Carolina and the Charlotte chapter of the American Institute of Architects (AIA) has over 800 members, the largest chapter in the State. Charlotte's 130 architectural design firms comprise the second largest concentration of architectural professionals in the South Atlantic region (after Atlanta) and include large branch offices for many of the country's largest design firms. This includes firms such as Gensler, Perkins + Will, HDR, and Perkins Eastman, all of which are listed in the top 12 of the 2015 Top 300 Architecture Firms in the U.S., ranked by revenue (as reported by Architectural Record in 2016). Several of these firms have provided letters of support for this

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proposal. Many of the largest firms in the country have in recent years added departments or divisions dedicated specifically to research, including Gensler, SOM, Perkins + Will, Perkins Eastman, and HDR. All of these national firms (except SOM) have offices in Charlotte.

- 6. Faculty Quality and Number.** The School of Architecture has nine faculty members who will be directly involved in the proposed program and is in the process of hiring one additional faculty member. These faculty already teach the courses for the Track III of the M.Arch that will be spun out into this new degree. The faculty have extensive publications and a strong record of external funding.
- 7. Availability of Campus Resources (library, space, etc.).** Current library holdings and information technology services are adequate to support the program. In addition to the School of Architecture's (SoA) Charles C. Hight Branch Architectural Library, the School has a range of lab spaces that will support the proposed nonprofessional Master of Science in Architecture program (these labs currently support the professional Master of Architecture degree program). These labs include woods, metal and digital fabrication labs, and a daylighting lab that supports student and faculty teaching and research. These labs overlap with two college-based research centers, which are also central to student learning and faculty research and teaching: Digital Arts (D-Arts), and the Integrated Design Research Laboratory (IDRL).
- 8. Relevant Lower-level and Cognate Programs.** The UNC Charlotte School of Architecture offers the following degrees: Bachelor of Arts in Architecture (B.A.) pre-professional, non-accredited; Bachelor of Architecture (B.Arch.) professional, accredited; Master of Architecture (M.Arch.) professional, accredited; Master of Urban Design (M.U.D.) non-professional, non-accredited; Master of Science in Architecture (proposed) non-professional, non-accredited.
- 9. Impact on Access and Affordability.** A differential tuition supplement will be requested that is consistent with all other School of Architecture graduate programs: \$875 per semester. Regular tuition and fees for a resident graduate student at UNC Charlotte is \$7,357.00.
- 10. Expected Quality.** A Student Learning Outcomes Assessment Plan has been developed to evaluate student learning in the proposed program and other criteria and metrics have been specified as evaluation measures of the overall program.
- 11. Feasibility of Collaborative Program.** Given the highly specialized nature of the proposed program and since there are not any similar programs within the UNC System, few opportunities for collaboration exists.
- 12. Other Considerations.** None.

### III. Summary of Review Processes

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**Campus Review Process and Feedback.** The Request to Plan for a Master of Science in Architecture degree has been reviewed by each of units listed:

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School for Architecture Curriculum Committee; School for Architecture Graduate School Dean's Office; College of Arts + Architecture Dean's Office; Office of Academic Affairs; Office of the Chancellor.

**UNC General Administration Review Process and Feedback.** Throughout the review process, UNC Charlotte responded to questions from UNC General Administration regarding the faculty, the distinctiveness of this program from the M.Arch, overlap with the NCSU programs, and graduate student support. Reviewers from two UNC System institutions evaluated the proposal and in all response categories found the proposal "acceptable" or "acceptable with some considerations." One reviewer noted: "This program will offer students an opportunity to specialize in areas of architecture that are in high demand in leading firms in the state, region, and nation. The specializations outlined in the proposal represent growth areas in relevant technical topics in the architecture profession. Students who earn degrees in this program will be equipped to address critical building performance challenges in professional practice."

#### **IV. Recommendation**

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It is recommended that the Board of Governors approve the University of North Carolina at Charlotte's request to establish a Master of Science (M.S.) in Architecture degree program (CIP 04.0902) to enroll students starting Fall 2018.