



MEMORANDUM

To: Julio Frenk, President

From: Tomás A. Salerno
Chair, Faculty Senate

A handwritten signature in black ink, appearing to read 'Tomás'.

Date: November 21, 2018

Subject: Faculty Senate Legislation #2018-25(B) – Proposal to Create Six New Graduate Certificate Programs, School of Architecture

The Faculty Senate, at its November 14, 2018 meeting, had *no objections* to the proposal from the School of Architecture to create six new graduate certificate programs. The new certificate programs to be offered, effective as of Spring 2019, are as follows: (1) Certificate in Construction Management, (2) Certificate in Design for Health and Well-being, (3) Certificate in Sustainable and Resilient Design, (4) Certificate in Hospitality Design, (5) Certificate in Urban Design, and (6) Certificate in Real Estate Development and Urbanism. Each program will be headed by faculty qualified in their respective field.

The proposed programs will be open to current School of Architecture graduate students, who may apply the coursework from the certificates toward other related graduate programs in the School. The certificates can also be pursued as stand-alone programs.

The proposed new certificate programs do not “represent a significant departure, either in content or method of delivery” from what the University is currently approved to offer by SACSCOC.

The Faculty Senate does not approve budget concepts, therefore no budget information is included here.


This legislation is now forwarded to you for your action.

TAS/rh

Enclosure

cc: Jeffrey Duerk, Provost and Executive Vice President for Academic Affairs
Guillermo Prado, Dean of the Graduate School
Rodolphe el-Khoury, Dean of the School of Architecture
Allan Shulman, Director of Graduate Programs in Architecture, School of Architecture

CAPSULE: Proposal to Create New Graduate Certificate Programs, School of Architecture

APPROVED:  DATE: 12/18/18
(President's Signature)

OFFICE OR INDIVIDUAL TO IMPLEMENT: Dean Rodolphe el-Khoury

EFFECTIVE DATE OF LEGISLATION: IMMEDIATELY
(if other than June 1 next following)

NOT APPROVED AND REFERRED TO: _____

REMARKS (IF NOT APPROVED): _____



Proposal Submission Checklist

Proposals are to be submitted to the Office of Assessment and Accreditation (OAA), if applicable, the Graduate Council (for graduate programs excluding Law and Medical), if applicable, and the Faculty Senate. Refer to the [Procedures for Program Changes](#) document for information on the approvals and notifications needed for program changes and the [Proposal Submissions Specifications](#) document for an explanation of the process and a list of the materials required.

(Please note that change approvals can take 2 semesters to complete.)

Include this checklist at the beginning of each proposal.

(Complete the information below, save the form as a pdf, and insert it with the background materials that are specified, in the order listed, and send the package electronically as noted above.)

KEY CONTACT PERSONNEL INFORMATION

First Name

Allan

Last Name

Shulman

Proponent's Title

Professor of Architecture
Director, Graduate Programs in
Architecture

Department, if applicable

School/College

Architecture

E-mail

ashulman@miami.edu

Phone

305-772-0078

Title of Proposal

Proposal to add new graduate certificate programs
University of Miami School of Architecture
October 8, 2018

(-continue to next page-)

MANDATORY MEMORANDA AND FORMAT

Please check that each item listed below is included in the proposal package of materials, in the ORDER as listed. The applicable title (i.e. Letter of Explanation, Memo from the Dean, etc.) is to precede each section in the materials.

Only proposals conforming to this format will be accepted.

1. This completed checklist.

2. Letter of explanation. (2-3 pages only, double spaced, 12 pt font)

Yes No

If no, explain why:

3. A memo from the dean(s) signifying approval of the faculty of the relevant School(s) / Colleges(s).

Yes No

If no, explain why:

4. A memo that all affected or relevant School / College Council(s) have approved.

Yes No

If no, explain why:

Although the School of Architecture supports an interdisciplinary approach to these certificates, we anticipate a small number of students will choose options outside the School of Architecture, and that these would be approved by the School/Department prior to enrollment.

5. A memo from the department chair(s) signifying approval of the faculty of the relevant department(s).

Yes No

If no, explain why:

We have received memos from the School of Education and Human Development, and from the Rosenstiel School of Marine & Atmospheric Science; we are awaiting memos from the Miller School of Medicine and the Miami Business School.

6. A memo from the Office of Accreditation and Assessment (OAA) if the proposal involves academic programs (degrees, certificates, majors, minors, concentrations, specializations, tracks, etc.) such as new programs, closing programs, or program changes (such as changes in requirements, program length, modality, name, location).

(To be submitted by OAA to the Graduate Council or the Faculty Senate, as appropriate.)

Applicable Not applicable.

If not, explain why:

7. A memo from the Graduate School Dean signifying approval of the Graduate Council (for graduate programs only).

(To be submitted to the Faculty Senate by the Graduate Council.)

Applicable Not applicable.

If not, explain why:

8. Academic Deans Policy Council (ADPC) approval, for interdisciplinary issues and as appropriate. Please consult with the Dean of the Graduate School or the Secretary of the Faculty Senate to check if this is needed.

Yes No

If no, explain why:

9. Additional required documents as listed on the "Proposal Submissions Specifications," i.e. market analysis, budget information, assessment of library collections, etc. as specified.

List additional documents included:

FORM INSTRUCTIONS:

1. Once you have completed the form, save it to your computer by clicking the "Save" button below.
2. Print and scan it.
3. Submit the scanned version to facsen@miami.edu with your proposal. **Please note:** only scanned versions can be accepted.

Save

End form.

**Proposal to add new graduate certificate programs
University of Miami School of Architecture**

Letter of Explanation

The School of Architecture proposes six new certificates for graduate students. These new certificates will offer graduate students in the School of Architecture (SoA) graduate programs the opportunity to develop areas of professional concentration within the existing curriculum. Along with the two existing certificates currently offered by the School (Historic Preservation; Classical and Traditional Design), the new certificates further the mission of the School:

- To prepare students for professional leadership and lifelong learning in architecture, urbanism, and related fields.
- To preserve and develop knowledge for the profession through research and practice.
- To share knowledge locally and internationally through community service.
- To promote building and community design goals of environmental responsibility, social equity, and economic sustainability.

The new certificates are designed principally as a mechanism that formalizes areas of specialization, but does not preclude non-degree seeking students, which can be accommodated within the existing structures. The potential to accommodate non-degree seeking students into certificate courses would be limited to the unused capacity of existing courses. We will not open a new section to accommodate such students, thus no additional costs are considered.

Graduate students in the School of Architecture increasingly look to areas of concentration that can provide skill and knowledge bases for professional applications. Indeed, the certificates proposed (Design for Health and Well-being, Sustainable and Resilient Design, Hospitality Design, Construction Management, Urban Design, and Real Estate Development) represent areas of professional specialization. They engage critical areas of investigation in contemporary architecture, and denote strengths in the existing curriculum that could, even without further expansion, be elaborated as certificates. Further, they demonstrate the desire of the School to use its current curriculum as a platform to engage these specialized areas further. The development of these additional certificates will advance the School's focus in critical areas while helping direct the development of future courses. The proposed certificates can also help to gauge interest in the development of new graduate programs.

The new certificate programs take advantage of the culture and resources available at the School of Architecture as well as the other schools and departments within the University. Wherever possible, the proposed certificates have been designed to allow interdisciplinary studies. The proposed certificates include courses from the School of Education and Human Development, School of Marine & Atmospheric Science, Miami Business School, and the Department of Public Health Sciences at the Miller School of Medicine.



MEMORANDUM

Date: April 12, 2018

To: Guillermo J. Prado, Dean, Graduate School Council

From: Rodolphe el-Khoury, Dean, School of Architecture

Re: School of Architecture – Proposed Certificates

I'm writing to express my support for the current proposal to add six (6) new certificates options available to both undergraduate and graduate students. The certificates use existing resources and are structured around our current course offerings. Also, wherever possible, the proposed certificates have been designed to allow interdisciplinary studies. The proposed certificates include courses from the School of Education and Human Development, School of Marine & Atmospheric Science, Miami Business School, School of Engineering, and the Department of Public Health Sciences at the Miller School of Medicine.

The School of Architecture faculty, meeting as the School Council, has approved the following proposed certificates:

- Certificate in Construction Management
- Certificate in Healthcare Design
- Certificate in Sustainable and Resilient Design
- Certificate in Hospitality Design
- Certificate in Urban Design
- Certificate in Real Estate Development

We anticipate that the certificates will be attractive to our current students and will help with future recruitment.

UNIVERSITY OF MIAMI
SCHOOL of EDUCATION
& HUMAN DEVELOPMENT



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February 23, 2018

Rudolphe el-Khoury, Professor and Dean
School of Architecture
University of Miami
-----via email-----

RE: Certificate program in Sustainable and Resilient Design

Dear Dean el-Khoury,

I am delighted to support the School of Architecture's proposal to offer a certificate program in Sustainable and Resilient Design. This new and exciting program clearly dovetails with the School of Education and Human Development's mission and vision entailing well-being as a key goal cutting across the SEHD's research, teaching, and service activities. What is more, Professor Scot Evans, who normally teaches EPS623 *Development and Change in Community Organizations*, has responded enthusiastically to the possibility of students from your program enrolling in his course.

Please let me know what else the SEHD can do in support of your efforts in this field.

Sincerely yours,

Professor and Acting Dean

Copies: Allan Shulman, Architecture
Scot Evans and Laura Kohn-Wood, EPS
Dina Birman and Shawn Post, SEHD Senators



UNIVERSITY OF MIAMI
MILLER SCHOOL
of MEDICINE

01 November 2018

To:
Allan Shulman, Director, Graduate Programs, School of Architecture

From:
John C. Beier, Sc.D., Professor, Chief, Division of Environment & Public Health,
Department of Public Health Sciences, University of Miami Miller School of Medicine

Re:
School of Architecture Proposal, Graduate Certificate in Health & Well-being

I write to let you know that I, and the faculty in the Division of Environment & Public Health in the Department of Public Health Sciences at the Miller School have reviewed the proposal for a Graduate Certificate in Health & Well-being in the School of Architecture. Building on our long-time relationship, ongoing research initiatives, and joint appointments across our faculties, we are uniquely positioned to offer coursework relevant to this proposal.

We have advised Professor Lombard on the EPH courses we believe would be most relevant, and those courses are reflected in the options that would be available to the students in this program. As a division, we as faculty are significantly engaged in interdisciplinary work. We are pleased to advance opportunities for the students and this program will provide a good foundation for collaborative, interdisciplinary investigation among the graduate students in both fields.

Let me know if you need anything further from us at this point. We look forward to advancing this program together.

Thank you.

Best regards,

John C. Beier, Sc.D.
Professor
Chief, Division of Environment & Public Health
Department of Public Health Sciences
University of Miami Miller School of Medicine
Clinical Research Building
1120 NW 14th Street, Room 1062
Miami, Florida 33136 USA

UNIVERSITY OF MIAMI
ROSENSTIEL
SCHOOL of MARINE &
ATMOSPHERIC SCIENCE



Office of the Dean
Science and Administrative Building 107
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Miami, FL 33149-1031
Phone: 1 305 421-4000
Fax: 1 305 421-4711
Web Site: <http://www.rsmas.miami.edu>

October 1, 2018

Rodolphe el-Khoury, Professor and Dean
School of Architecture
University of Miami

Support for new Certificate in Sustainable and Resilient Design

Dear Dean el-Khoury:

I am writing to express my support for the School of Architecture's new certificate in Sustainable and Resilient Design.

This School of Architecture's new initiative addresses a critical global issue, and coordination between UM Schools is essential to future research efforts. The Rosenstiel School of Marine & Atmospheric Science will accommodate architecture students in the elective courses as listed in the proposal.

We anticipate that the program will attract high quality students, and complement our existing course participation while enhancing the School of Architecture offerings.

Please feel free to contact me if you have any questions.

Warm regards,

Roni Avissar, Dean
Rosenstiel School of Marine & Atmospheric Science
University of Miami



MEMORANDUM

DATE: October 29, 2018

TO: Allan Shulman, Professor and Director of Graduate Programs
School of Architecture

FROM: Patty Murphy, Executive Director
Office of Assessment and Accreditation 

RE: Six New (Graduate) Certificate Programs

On October 9, 2018, the School of Architecture notified my office of its intent to offer six new credit-bearing, graduate certificates effective Spring 2019:

1. Certificate in Construction Management
2. Certificate in Design for Health and Well-being
3. Certificate in Sustainable and Resilient Design
4. Certificate in Hospitality Design
5. Certificate in Urban Design
6. Certificate in Real Estate Development and Urbanism

The proposed certificate programs will be open to existing graduate students in other School of Architecture programs as well as students who choose to pursue it as a stand-alone program. Once completed, students may apply the coursework from the certificates toward other related graduate programs in the School of Architecture.

1. Certificate in Construction Management

The Certificate in Construction Management will require successful completion of 15 credit hours as shown below:

- Required core courses (9 credit hours):
 - CMA 601 Fundamentals of Construction Management
 - CMA 640 Virtual Design and Construction (VDC/BIM)
 - CMA 676 Interdisciplinary Design Studio/Integrated Project Delivery
- Elective courses (6 credit hours selected from the following):
 - ARC 608-609 Design-Build Studio
 - CMA 630/ARC 617 Construction Contract Documents
 - CMA 642 Emerging Technologies in Design and Construction
 - CMA 620 Construction Project Controls
 - CMA 632 Construction Risk Analysis and Control

- CMA 644 Sustainable Design and Construction
- CMA 690 Advanced Productivity and Lean Construction
- Other courses by approval

The program will be coordinated by Armando Montero, Associate Professor in Practice and Director of the Master in Construction Management. Professor Montero has a first professional degree in Architecture (BArch) from the University of Miami and is a Registered Architect in Florida. He has extensive teaching and professional experience in architecture, design, and construction management. He is also Principal of Armando M. Montero and Associates, PA and Partner of Property Assessment Group, LLC.

2. Certificate in Design for Health and Well-Being

The Certificate in Design for Health and Well-Being will require successful completion of 15 credit hours as shown below:

- One required studio course from the following:
 - ARC 608-609 Studio (Healthcare or Healthy Community Focus)
 - ARC 610 Urban Design Studio
- One required seminar course from the following:
 - ARC 682 Evidence-based Design Research Seminar
 - EPH 651 Research Methods
 - ARC 684 Capstone Project
- Elective courses selected from the following:
 - ARC 681 Interdisciplinary Course: Hospitals, Healthcare Services, and Access
 - EPH 640 Urban Environment and Public Health
 - EPH 646 Climate & Health
 - EPH 647 Community-Based Participatory Research
 - EPH 648 Climate, Cool Cities, Healthy Communities
 - MGT 684 Analysis of Healthcare Delivery and Policy
 - MGT 687 Healthcare Organization Economics and Ethics
 - BUS 655 Public Policy and Health

The program will be coordinated by Joanna Lombard, Professor in Practice and Director of the Master in Construction Management Program. Professor Lombard has a first professional degree in Architecture (BArch) from Tulane University and a Master of Architecture from Harvard University. She is a Registered Architect in Florida with extensive teaching and professional experience in architecture. She is Principal of Denis Hector & Joanna Lombard Architecture and Landscape. She is also a member of the Built Environment, Behavior and Health Research Group in the Department of Public Health Sciences in the University's Miller School of Medicine.

3. Certificate in Sustainable and Resilient Design

The Certificate in Sustainable and Resilient Design will require successful completion of 15 credit hours as shown below:

- Required core courses:
 - ARC 608 and ARC 609 Studio (Sustainable & Resilient Design Focus)
 - ARC 685 Sustainable Design in Context
 - ARC 683 An Introduction to Resilient Community Design

- Elective courses selected from the following:
 - ARC 684 Adaptation to Climate Change
 - ARC 686 Tropicalism/Tropical Architecture
 - ARC 663 Environmental Building Systems II
 - ARC 684 Special Problems (RAD LAB-UM)
 - ARCH 694 GIS in Urban Design Theory & Practice
 - EPS 623 Development & Change in Community Organizations
 - Other courses by approval

The program will be coordinated by Sonia Chao, Research Associate Professor and Director of the University of Miami Center for Urban and Community Design. Professor Chao has a first professional degree in Architecture (BArch) from the University of Miami and a Master of Architecture from Columbia University. She is a Registered Architect in Florida with extensive teaching and professional experience in architecture. She is Principal of Sonia R. Chao Architects. She is also Co-Principal Investigator on a NSF-CRIP Grant Collaborative Research, "A Human-Centered Computational Framework for Urban Community Design of Resilient Coastal Cities."

4. Certificate in Hospitality Design

The Certificate in Hospitality Design will require successful completion of 15 credit hours as shown below:

- Required core courses:
 - ARC 608-609 Studio (Hotel Studio Focus)
 - ARC 684 Introduction to the Hotel Design and Development
- Elective courses selected from the following:
 - ARC 621 Urban Design History and Theory
 - ARC 623 Urban Design and Development Charrette
 - ARC 628 Introduction to Historic Preservation
 - ARC 638 Interior Architecture Design
 - ARC 640 Tropical Architecture
 - RED 601 Introduction to Real Estate Development and Urbanism
 - RED 650 Complex Real Estate Transactions
 - RED 630 Real Estate Market Analysis
 - Other courses by approval

The program will be coordinated by Allan Shulman, Professor and Director of Graduate Programs in Architecture. Professor Shulman has a first professional degree in Architecture (BArch) from Cornell University and a Master of Suburb and Town Design from the University of Miami. He is a Registered Architect in Florida with extensive teaching and professional experience in architecture. He is Founding Principal of Shulman and Associates.

5. Certificate in Urban Design

The Certificate in Urban Design will require successful completion of 15 credit hours as shown below:

- At least one required studio course from the following:
 - ARC 601 Urban Design I: Form and Types/Form Based Codes
 - ARC 602 Urban Design II: General Urban to Urban Core
 - ARC 603 Urban Design III: Regional/Informal Urbanism

- At least one required seminar course selected from the following:
 - ARC 548 Seminar in Community Development
 - ARC 621 History-Theory II: Housing, Transportation & Infrastructure
 - or ARC 622 History-Theory III: Urban Design Theory
 - ARC 623 Hines Competition, National Charrette Institute Workshop, Capstone Project
 - ARC 641 Seminar on Town Design
 - ARC 642 Seminar on Housing
 - ARC 643 Seminar on Retrofit of Suburbia
 - ARC 647 Architecture and Urban Identity
 - ARC 694 Geographic Information Systems in Urban Design
 - ARC 690 History of Cities
 - RED 601 Introduction to Real Estate Development and Urbanism
 - RED 610 Financing Urban Real Estate Development
 - RED 630. Market Analysis for Urban Markets
 - RED 660 Urban infill, Preservation & Mixed Use Development
 - RED 650 Complex Urban Real Estate Transactions
- Other courses by approval

The program will be coordinated by Elizabeth Plater-Zyberk, Malcolm Matheson Distinguished Professor of Architecture and Director of the Master of Urban Design Program. Professor Plater-Zyberk has a bachelor's degree in Architecture and Urban Planning (BA) from Princeton University of Miami and a Master of Architecture from Yale University. She is a Registered Architect in Florida with extensive teaching and professional experience in architecture and urban design. She is Partner of DPZX LLC.

6. Certificate in Real Estate Development and Urbanism

The Certificate in Real Estate Development and Urbanism will require successful completion of 15 credit hours as shown below:

- Required core courses (9 credit hours):
 - RED 601 Intro to RED+U, or RED 660 Urban Infill, Preservation & Redevelopment
 - 6 credit hours from the following:
 - RED 610 or other approved Real Estate Finance course;
 - RED 630 or approved Real Estate Market Analysis course; or
 - Other approved Studio, ARC, RED, BUS or LAW courses
- Elective courses (6 credit hours selected from the following):
 - Any approved architecture studio
 - RED 660 Urban Infill, Preservation, and Mixed Use Development
 - RED 620 Real Estate Law
 - RED 640 National Charrette Institute (NCI)
 - RED 670 Construction and Project Management
 - Other courses by approval

The program will be coordinated by Chuck Bohl, Associate Professor and Director of the Master in Real Estate Development and Urbanism Program. Dr. Bohl has a Master of Urban and Regional Planning from SUNY-Albany and a PhD in City and Regional Planning from UNC-Chapel Hill. He is a Certified Planner with the National Charrette Institute. He has extensive teaching and professional experience in architecture and urban planning. He is also Principal of Charles Bohl and Associates.

The proposed new certificate programs do not "represent a significant departure, either in content or method of delivery" from what we are currently approved by SACSCOC to offer due to the following:

- SACSCOC does not regulate the length of certificate programs.
- The curriculum for each of the program is simply a repackaging of existing courses. No new courses will be required.
- The new programs will be supported by current qualified faculty. No new faculty will be hired.
- Each program will be coordinated by a qualified faculty member.
- The majority of each program will not be offered via distance education and, in any case, the University is approved to offer 100% distance education programs.
- Each program will be offered on the University's Coral Gables campus.

SACSCOC only requires notification of program changes that represent a significant departure from our current programs. Therefore, no notification or approval is required for this change.

Please contact me if you have any questions at pattymurphy@miami.edu or (305) 284-3276.

CC: Faculty Senate
Guillermo Prado, Dean of the Graduate School
Rodolphe el-Khoury, Dean of the School of Architecture
Karen Beckett, University Registrar
Carrie Glass, Executive Director of Student Financial Assistance and Employment

UNIVERSITY OF MIAMI

GRADUATE SCHOOL



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MEMORANDUM

DATE: October 22, 2018

TO: Tomas Salerno
Chair, Faculty Senate

FROM: Guillermo (Willy) Prado *Guillermo Prado*
Dean, The Graduate School

SUBJECT: Proposal – School of Architecture graduate certificate programs

The School of Architecture submitted a proposal for six new graduate certificate programs:

- Certificate in Construction Management
- Certificate in Design for Health & Well-being
- Certificate in Sustainable and Resilient Design
- Certificate in Hospitality Design
- Certificate in Urban Design
- Certificate in Real Estate Development and Urbanism

The proposal was discussed at the meeting of the Graduate Council on Tuesday, October 16, 2018, and was approved by those present.

cc: Rodolphe el-Khoury, Dean, School of Architecture
Allan Shulman, Director of Graduate Programs, School of Architecture
Office of Assessment and Accreditation

Proposal to add new graduate certificate programs
University of Miami School of Architecture

October 8, 2018

Proposal to add new graduate certificate programs University of Miami School of Architecture

Proposed new graduate certificate programs: (name for student transcripts)

- Certificate in Construction Management (coordinator: Armando Montero)
- Certificate in Design for Health & Well-being (coordinator: Joanna Lombard)
- Certificate in Sustainable and Resilient Design (coordinator: Sonia Chao)
- Certificate in Hospitality Design (coordinator: Allan Shulman)
- Certificate in Urban Design (coordinator: Elizabeth Plater-Zyberk)
- Certificate in Real Estate Development and Urbanism (coordinator: Chuck Bohl)

Responsible administrative unit for the program:

School of Architecture

Graduate Programs in Architecture (director: Allan Shulman)

The proposed date for implementation:

Spring 2019

Preface:

The School of Architecture proposes six new certificates for graduate students. These new certificates will offer graduate students in the School of Architecture (SoA) graduate programs the opportunity to develop areas of professional concentration within the existing curriculum. Along with the two existing certificates currently offered by the School (Historic Preservation; Classical and Traditional Design), the new certificates further the mission of the School:

- To prepare students for professional leadership and lifelong learning in architecture, urbanism, and related fields.
- To preserve and develop knowledge for the profession through research and practice.
- To share knowledge locally and internationally through community service.
- To promote building and community design goals of environmental responsibility, social equity, and economic sustainability.

The new certificates are designed principally as a mechanism that formalizes areas of specialization, but does not preclude non-degree seeking students, which can be accommodated within the existing structures.

Note: the potential to accommodate non-degree seeking students into certificate courses would be limited to the unused capacity of existing courses. We will not open a new section to accommodate such students, thus no additional costs are considered.

1. Rationale of new certificate programs (generally)

Graduate students in the School of Architecture increasingly look to areas of concentration that can provide skill and knowledge bases for professional applications. Design for Health and Well-being, Sustainable and Resilient Design, Hospitality Design, Construction Management, Urban Design and Real Estate Development are also, increasingly, areas of professional specialization. They engage critical areas of investigation in contemporary architecture. The proposed new graduate certificate programs address both the intellectual and academic needs of the School of Architecture, and the desire of the School to use its current curriculum as a platform to engage these specialized areas further.

The proposed new graduate certificates were developed by the School and its faculty based on areas of existing strength and growth within the School. They denote areas of focus in the existing curriculum that could, even without further expansion, be elaborated as certificates. In cases where the School offers graduate programs in the same area, credit earned toward certificates can be used toward graduate degree programs at the University of Miami. The development of these additional certificates will also advance the School's focus in critical areas while helping direct the development of future courses. Indeed, the proposed certificates are designed to gauge interest in the development of new graduate programs.

The new certificate programs take advantage of the culture and resources available at the School of Architecture as well as the other schools and departments within the University. Wherever possible, the proposed certificates have been designed to allow interdisciplinary studies. The proposed certificates include courses from the School of Education and Human Development, School of Marine & Atmospheric Science, Miami Business School, and the Department of Public Health Sciences at the Miller School of Medicine.

a. Level of demand

Level of demand is addressed under each certificate proposal. The certificates are designed to address contemporary challenges by offering areas of concentration within our existing curriculum.

b. Interactions with other programs

Interactions with other programs is addressed under each certificate proposal

c. Relationship with undergraduate and Professional Programs

All the proposed certificate programs will be available to all graduate students.

2. Resources of the School of Architecture (generally)

The School of Architecture faculty comprises about 33 full-time and 30 part-time members, depending on the semester. Part-time numbers fluctuate with enrollment and full-time faculty leaves, sabbaticals, and research releases. To meet the needs of its Master of Architecture, Master of Science, Master of Urban Design and Master of Real Estate Development and Urbanism degrees, the curriculum comprises approximately 150 courses per year, including

studios, seminars, and other offerings. The School's curricular resources are enhanced by the interdisciplinary opportunities offered by the other schools and colleges of the University of Miami.

a. Library

The Paul Buisson Architecture Library fronts the school's central courtyard, and is a branch of the University of Miami Libraries. Its primary goal is to support the scholarly research, learning, and teaching needs of U-SoA faculty, students, and alumni. The Architecture Library houses more than 22,000 books, DVDs, microform materials, and over 80 current architecture-related journals. In addition, library patrons may search the University of Miami Libraries catalog to access the Otto G. Richter, Marine Science, Music, Architecture, and Business, Law and Medical Libraries, which collectively host information resources consisting of more than 3.5 million volumes; 96,000 serials; more than 700,000 e-resources; and approximately 4.1 million microforms. Students and faculty also have access to a growing number of digital image services and collections through the UM Library system.

b. Laboratory Facilities, Equipment, and Space

Our physical resources include the following facilities:

The Jorge M. Perez Architecture Center (2005) is the centerpiece of the five-building SoA complex. Designed by the architectural theorist and innovator Leon Krier, the Perez Center houses the Stanley and Jewell Glasgow Lecture Hall, the Irvin Korach Gallery, and the Marshall and Vera Lea Rinker Classroom. The Perez Architecture Center hosts school, university, and community speakers and events, with related reviews and exhibitions held in the Korach Gallery.

The Marion Manley Studio facilities overlook Lake Osceola at the heart of the campus. Designed by Frank E. Watson, the SoA buildings were part of a complex built in 1947 to house the returning veterans of World War II. The current compound around the courtyard was modified in 1983 to house offices, studios, and classrooms of the School of Architecture.

The new Thomas P. Murphy Design Studio building, named for Tom P. Murphy Jr., the President and CEO of Coastal Construction and designed by Arquitectonica, will be LEED-certified and will include studios to accommodate about 120 students. It will include a state-of-the-art fabrications lab and modern workstations, designed to enable advanced digital production. A lounge, computer lab, presentation areas, review spaces and offices are additional amenities. Slated to open in late Spring/early Summer 2018, the facility occupies about 20,000 square feet, including outdoor workspace and an outdoor jury area.

The B.E & W.R. Miller BuildLab was made possible by the generous donation of the Miller Family. The BuildLab, designed by Professor Rocco Ceo, provides a home for the design/build program where students execute an architectural project from beginning to end in a safe and properly equipped environment. Completed earlier this year, the space is currently being used by students as part of the hands-on learning process. The students are tasked with completing the

furnishings and interior and exterior details of the open-air building, which has a 40-foot by 40-foot concrete frame with 17.5-foot-high ceilings.

The School's FAB LAB, or modeling and fabrication facilities, provides students the opportunity to turn their design projects into 3D models, allowing them to elaborate on the techniques learned in the design studio, construction technology, materials, lighting and structure courses. General assignments and specific research projects are pursued during a regularly scheduled period under the supervision of a full-time Shop Director and student staff assistants. Immediately adjacent to the design studios, the modeling and fabrication facilities occupy approximately 1,500 square feet and include both digital and analog fabrication equipment. Along with traditional woodworking tools and machinery, students have access to techs such as 3D printers, laser cutters, and CNC milling.

RAD-UM, the University of Miami branch of RAD (Responsive Architecture & Design), is a research unit housed at SoA. Directed by U-SoA Dean Rodolphe el-Khoury, RAD-UM provides resources and expertise for project-based research on the spatial ramifications of embedded technology and ubiquitous computing. The research is premised on the notion that every building or landscape component can be equipped with computational power. Projects at RAD-UM develop models for such digitally enhanced environments to better handle persistent and emerging challenges in the areas of healthcare, building technology and sustainability. The projects are set up for multi-disciplinary collaboration and for potential development in partnership with industry.

The Center for Urban and Community Design was founded in 1992 in the aftermath of Hurricane Andrew with the mission of fostering a collaborative interdisciplinary approach that supports the buttressing, retro-fitting and creation of sustainable communities and buildings. Directed by U-SoA Research Assistant Professor Sonia Chao, the Center seeks to integrate research, teaching, and service, encouraging interdisciplinary thought and action in the areas of historic preservation, urban design & community engagement, and, sustainable & resilient design in the sub-tropics and tropics. The Center assists or leads faculty, alumni and students in funded research, publications, and community partnerships, workshops, and charrettes.

Computing is migrating from dedicated static appliances to mobile devices, objects of everyday life, and physical environments thanks to increasingly proliferating microchips and ever-expanding information networks. The spatial nature of ubiquitous computing directly implicates and empowers architecture, landscape, and urban design. RAD-UM capitalizes on this potential, bringing research to bear on the built environment from a variety of fields that exploit the spatial consequences of distributed computing: responsive and interactive systems, augmented reality, embedded/situated technology, ambient intelligence, mobile computing and locative media.

The Computer Laboratory is SoA's central resource for digital design and research. SoA and UMIT are committed to providing its students with the best possible environment for computer-based, collaborative teaching and research. UMIT at SoA also provides limited support for a variety of configuration and application issue to students, faculty, and staff at the School of Architecture. Services provided include computer and A/V support, printing, and plotting.

c. Other resources

Other resources specific to individual certificates are listed under each certificate program.

3. Curriculum (generally)

a. Major division or divisions of the discipline in which the proposed graduate work will be offered.

Studies at the School of Architecture and within the proposed certificate programs are implicitly integrative, combining knowledge across traditional divisions of the discipline. These include design, history and theory, technology and building systems, drawing and visualization, and professional practice, among others. The proposed certificates accordingly span all disciplines of the current curriculum.

b. Adequacy of your present graduate curricular structure for the proposed program.

The current professional curriculum provides a sense of stewardship and understanding of the built environment, spanning the areas proposed under new certificates. The proposed certificates do not require the addition of any new courses; rather they comprise new options for combining existing courses to achieve areas of professional concentration. Further, they seek to embody focal areas of the current curriculum, and clarify priorities for future curricular development.

c. Anticipated additions, deletions, and changes in your current curricular structure resulting from the new program. For each item, list the faculty involved.

No additions or deletions in the current curricular structure are proposed under this proposal.

d. List any current, anticipated, or agreed upon cooperative or interdisciplinary work with other components of the University or with any extramural agency as pertinent to the proposed program.

The proposed certificate programs will not require any formal cooperative agreements. The courses proposed mainly reside within the SoA curriculum and are listed herein. Interdisciplinary opportunities have been identified using existing courses in the School of Education and Human Development, School of Marine & Atmospheric Science, Miami Business School, School of Engineering, and the Department of Public Health Sciences at the Miller School of Medicine.

e. Detailed description of the proposed program

A detailed description of each proposed certificate is listed under the individual certificate options (attached)

f. Teaching

The current proposal does not include any change in curriculum or in the method of delivery of courses, which generally comprise studios, seminars, and other courses.

g. Expected distribution of graduate students among advisors

The current proposal does not include any change in curriculum or in the method of delivery of courses. As the new certificates do not require the completion of directed research or a thesis, no additional need for faculty advisors is foreseen. The current distribution of graduate students as teaching assistants, graduate assistants and research assistants, would remain.

h. Colloquia, special seminars, conferences, etc.

No new colloquia, special seminar or conferences are anticipated as part of this proposal. The proposed certificates build on the School of Architecture's current offerings of seminars, conferences and colloquia. A sample of current programs are listed under each certificate under "Other Resources".

i. Learning Outcomes Assessment Plan

Individual Learning Outcomes are listed under each certificate proposal.

4. Faculty (generally)

a. Designated faculty

As is the case with the School's two existing certificates (Historic Preservation; Classical and Traditional Design), the certificates proposed span the current and existing curriculum. They will not involve any new or designated faculty, although coordinators for the new certificates are identified.

b. Need for additional faculty

No new faculty are anticipated as part of this proposal.

c. Interaction of the proposed program with other graduate programs

All the proposed certificate programs will be available to all U-SoA graduate students. Credit earned toward certificates can, in some cases, be used toward graduate degrees in the same area (ie. Credit earned in the Certificate in Urban Design could be applied later if the student is accepted into the Master of Urban Design program. Indeed, certificates may offer an enticement to further enrich studies in a particular area at the School of Architecture.)

5. Students (generally)

a. Number of students in the program and the pool from which they will be selected

The School of Architecture graduate program comprises about 100 students. We estimate that the number of students who will work toward a certificate will begin at about 10 and rise to about 30.

b. Requirements for admission to and expected retention of students in the proposed program

No requirements for certificates, other than those specific to the certificate, are anticipated at this time. The certificates are intended for the use of current matriculated full-time graduate students.

c. Anticipated need for and specific use of teaching assistants and research assistants in the program

The current proposal does not include any change in curriculum or in the method of delivery of courses. The current distribution of graduate students as teaching assistants or research assistants would remain as is.

6. Administration (generally)

a. Anticipated administrative increments imposed by addition of these certificates

The School anticipates no need for additional secretarial help, office equipment, supplies, travel, publication costs, or other funds.

b. Arrangements for administration and for academic direction of the program

A coordinator for each certificate has been indentified. A small increase in advising time may occur as graduate students inquire about certificate requirements and arrange their coursework with faculty or administration representatives. School Administration, Coordinators, and the Program Director will be tasked with arranging existing courses so that students can accomplish their preferred certificate in a practical amount of time.

7. Budget (generally)

The proposed certificates use existing courses and School resources. The only change in budget will be a small stipend to be agreed with the Dean, depending on the activity of the certificate.

8. Comparisons

Comparisons are addressed under each certificate proposal

9. Online and Distance Degree and Certificate Programs only

NA

10. Transfer of coursework to graduate degree programs

Courses taken in the certificate program can be substituted for courses in a graduate degree program in the same area of professional concentration (within the School of Architecture). Courses can also be transferred to a graduate degree program in the same area of professional concentration (within the School of Architecture) after the certificate is completed.

A. Certificate in Construction Management

Coordinator: Armando Montero
Associate Professor in Practice, Director of the Master in Construction
Management Program
(cv attached)

1. Rationale:

Growth in the construction industry is projected to outpace all other industries through 2030 creating a high demand for qualified professionals in the industry. The Certificate in Construction Management addresses the growing demand for professionals with the advanced knowledge, discipline, and skills needed to face the challenges of the construction industry and become future leaders of design and construction related organizations worldwide. The certificate takes advantage of the culture and resources available at the School of Architecture as well as the the Miami Business School and the School of Law.

The Certificate in Construction Management prepares graduate architecture students for effective management leadership in the construction field. It provides a foundation for training in professional management of construction projects. This program focuses on three components that represent the functional areas of construction management:

- Management
- Project Controls
- Design and Construction Technology

Level of demand

The level of demand for qualified construction professionals remains high and is expected to grow over the next 15 years. Graduate programs in construction management have large student populations, spurring the School of Architecture in 2018 to introduce its own Master of Construction Management (MCM). While the School's graduate architectural programs do a reasonable job at introducing students to the technical and managerial aspects of project management, a Certificate in Construction Management will introduce graduate students to a broader understanding of productivity assessment, managing a portfolio of projects and keeping up with cutting-edge technology.

Interaction with other programs/departments

The curriculum of the Certificate in Construction Management will intertwine with other graduate programs and schools at the University of Miami. In addition to existing SoA courses, the curriculum includes a mix of existing courses identified within the Miami Business School and College of Engineering.

Relationship with undergraduate and professional programs.

The Certificate in Construction Management is designed to augment the knowledge and skill sets of our existing graduate professional degree programs (M.Arch, M.Sc.Arch), and to enrich the School generally.

2. Resources:

The School of Architecture has the resources needed to implement the proposed certificate program. As the certificate builds on existing courses and existing research interests of the faculty, no additional library, faculty, administrative or physical resources are expected for coursework or related research.

Other resources

The current School of Architecture Construction Management Advisory Board and its members, assembled to support the School of Architecture's new Master of Construction Management, are poised to be a valuable resource of experience and expertise available to students pursuing a Certificate in Construction Management. Students will be mentored by the top leadership of some of the largest design and construction organizations. The board will also provide practicum and internship opportunities as part of the curriculum.

The Emerging Practitioner Teaching Fellowship, initiated in 2016, supports individuals in their work to advance the culture of architecture and design through creative practice or research. The fellowship is meant to complement the technology curriculum and enhance research opportunities with emphasis on digital technology. Past emerging practitioners have developed courses that emphasize the role of building technology in the design and construction process.

The School of Architecture's design/build program allows students to execute an architectural project from beginning to end in a safe and properly equipped environment. The program is housed in the new B.E & W.R. Miller BuildLab, completed earlier this year.

3. Curriculum - Certificate in Construction Management

Certificate Requirement, 15 credits

Students are required to take the Core Courses listed below, for a total of 9 credits. The remaining 6 credits can be selected from Other Courses and Seminars below.

<u>Courses</u>	<u>Credits</u>
<i>Core Courses (9 credits)</i>	
CMA 601 Fundamentals of Construction Management	3
CMA 640 Virtual Design and Construction (VDC/BIM)	3
CMA 676 Integrated Project Delivery	3
<i>Other Courses and Seminars, (select 6 credits)</i>	
ARC 608-609 Design-Build Studio	6*
CMA 630/ARC 617 Construction Contract Documents	3
CMA 642 Emerging Technologies in Design and Construction	2
CMA 620 Construction Project Controls	2
CMA 632 Construction Risk Analysis and Control	2
CMA 644 Sustainable Design and Construction	2
CMA 690 Advanced Productivity and Lean Construction	2

* (Architecture students receive 6 credits for full-semester design studios, and 3 credits for half-semester design studios. In order to meet the studio requirement, non-architecture students may earn 3 credits in a full-semester studio. Studio faculty approval is required.)

Other Options

In addition to the list above and below, students may submit other courses, either within the School or within the University of Miami. Submissions will be evaluated by the Certificate Coordinator and Director of the Graduate Architecture Programs in consultation with program faculty.

Program Learning Objectives

Students who receive a Certificate in Construction Management in the School's graduate program establish a foundation in Construction Management training, and an introduction to important areas of the Construction Management field, including:

- a. Critical thinking and creativity
- b. Problem-solving and decision making
- c. Effective and professional oral and written communications
- d. Use of information and communication technology
- e. Principles of leadership in business and management
- f. Current issues in construction
- g. Complex project decision making and associated risk management
- h. Professional ethics including application to situations and choices
- i. Advanced construction management practices

j. Research methods

Student Learning Outcomes

Graduate students with a Certificate in Construction Management from University of Miami School of Architecture develop new skills and build expertise in the specialized area of Construction Management, including:

- a. Understanding the value of sustainable building practices to optimize use of available resources
- b. Applying global, ethical, and sustainability perspectives to construction management knowledge.
- c. Understanding how the legal, economic, and social relationships between contracting, the building trades, and the regulatory environment inform construction management.
- d. Comparing construction management technologies, innovations, and processes.
- e. Applying various techniques and methods to efficiently and effectively plan and control construction projects.
- f. Demonstrating leadership qualities through experiential learning.
- h. Analyzing how issues of cost, safety, and design impact project development and implementation.

Overview of other educational opportunities in Construction Management

The proposed Certificate in Construction Management builds on existing curricular and degree options available in the School of Architecture. Additional educational paths are available to graduate students and professionals interested in furthering their knowledge and skills in construction management. In certain cases, earned certificate credits in certificate programs can be used toward the degree programs at the University of Miami.

Master of Construction Management (MCM) – 36 credits

The MCM program is open to graduates from Architecture, Engineering, and Construction programs. The curriculum will broaden educational and career options for students. Formal knowledge and experience in project and construction management are highly sought after not only by architectural firms but also construction companies and real estate developers. With the guidance of the Graduate Program Director, students would design a curriculum suited to their own interests and time constraints. The program is a non-thesis consisting of a minimum of 36 credit hours. This includes 15 credits of required core courses, 10 credits of professional practice / practicums and internship and 11 credits of courses as electives. Most courses would be offered in the late afternoon or evening to allow students to work and participate in required practicums or internships at leading organizations during the day.

Two Degree Option – Master of Construction Management (MCM) and Master of Real Estate Development _ Urbanism (MRED+U)

Architecture students can receive a Master of Construction Management and a Master of Real Estate Development + Urbanism, a dual degree option that features a reduced credit load and offers unprecedented knowledge and skill in planning, design, and construction of the built environment. Students may obtain two Master's Degrees by completing 60 credits of study.

Executive Master in Construction Management (EMCM) – 30 credits

The EMCM program is open to mid-career professionals with a prior undergraduate degree. Professionals working in the field or seeking a mid-career change will be able to enroll in an Executive Master's Degree in Construction Management. Courses will be offered in the evenings and on weekends, to meet the needs of working professionals. The program will focus on current issues and events in construction management and address the needs of the industry by developing candidates for middle and upper management positions. The curriculum consists of 12 credits of core courses, 12 credits of free electives and 6 credits in a culminating experience (2 credits research and 4 credits Capstone project). Courses in the Executive program will be taught by leaders in the construction industry as identified and recruited by the Construction Management Advisory Board.

4. Faculty

See cover description above

5. Students

See cover description above

6. Administration

See cover description above

7. Budget

See cover description above

8. Comparisons

New School of Architecture, Master of Construction Management (MCM):

<http://newschoolarch.edu/academics/school-of-architecture/cm-programs/master-of-constructionmanagement/>

USC Viterbi, Master of Construction Management (MCM):

<https://viterbigradadmission.usc.edu/programs/masters/msprograms/civil-environmental-engineering/master-construction-mgmt/>

University of Florida, College of Design and Construction, Master of Science in Construction Mgmt.:

<https://dcp.ufl.edu/rinker/academics/masters/construction-management/>

Clemson University, Master's in Construction Science and Management (MCSM):

<http://www.clemson.edu/caah/departments/csm/graduate/index.html>

Kennesaw State University, Masters of Science in Construction Mgmt.:

<http://cacm.kennesaw.edu/>

9. Online and Distance Degree and Certificate Programs only

N/A

10. Transfer of coursework to graduate degree programs

Courses taken in the Certificate in Construction Management can be transferred to a SoA graduate degree program in Construction Management after the certificate is completed.

B. Certificate in Design for Health & Well-being

Coordinator: Joanna Lombard
Professor, University of Miami School of Architecture
Miller School of Medicine Department of Public Health Sciences, Built
Environment, Behavior and Health Research Group
(cv attached)

1. Rationale:

As a growing body of research demonstrates the significant impacts of the built environment on health and well-being, new systems of building certification and demands for evidence-based decision-making have expanded beyond the field of healthcare buildings to include the full spectrum of urban, institutional, commercial and residential design. At the same time, the field of healthcare design is addressing fundamental change as healthcare systems are in the midst of realignments with population health and community-based care that is moving beyond the walls of acute care facilities to encompass wellness that begins with behaviors, which research is showing to be highly influenced by environment.

The University of Miami Built Environment Behavior, and Health Research Group with faculty in the Department of Public Health Sciences and the School of Architecture has conducted an ongoing program of funded research in this area of inquiry since 1999. In 2015, research group members Professor Joanna Lombard and Public Health Sciences Research Associate Professor Scott Brown were selected as Charter Members of one of eleven founding university teams selected by the American Institute of Architects (AIA), AIA Foundation, and the Association of Collegiate Schools of Architecture for the AIA Design + Health Research Consortium. The work of the research group has been widely disseminated, informed public policy and has been integrated into both architecture and urban design studios in the School of Architecture.

Focusing more specifically on healthcare environments, in 2009, Professor Joanna Lombard initiated the School's first Healthcare Design Studio and aligned with the School of Business, the first healthcare focused symposium, "Future Directions: Health Care and the Built Environment." Over the last 9 years, subsequent studios and related colloquia have been associated with healthcare systems and urban environments, addressing the rapidly changing world of healthcare and engaging topical research in public health. Alumni from these studios have found positions around the US working in this vanguard area of the intersection of health and well-being, applied to building and healthcare design specifically, as well as the larger issues of community design.

Level of demand

Adapting to the new considerations of the locus of healthcare as well as expanding awareness of the impacts of the built environment on health and well-being, two new building assessment standards have emerged—Well and Fitwel-- to add to the already

widely applied [LEED](#) and [Living Building Challenge](#) programs which had included health-based standards more specific to healthcare and ecological concerns respectively. The level of demand for graduates with capacity in this area of knowledge with corresponding skill in design applications that range from community-based to specific building types, including new forms of healthcare design, is correspondingly expanding rapidly. Other institutions also have identified this as an impactful area for professional growth and are responding. Discussion at the 2018 AIA/AAH-ACHA sponsored Architecture+Health Educator's Summit indicated that architecture programs with degrees specifically focused on healthcare architecture are expanding their own programs to address the larger concerns of wellness, while nine universities recently have opened multi-disciplinary centers and institutes to integrate knowledge on health and well-being in relation to the built environment.

Interaction with other programs/departments

The University of Miami is in a unique position to provide the multi-disciplinary approach essential to this topic. School of Architecture faculty active in the Built Environment, Behavior and Health Research Group with faculty in the Leonard M. Miller School of Medicine Department of Public Health Sciences, Environment and Public Health Division, also already collaborate with faculty in the Miami Business School, the School of Law, and the College of Arts and Sciences. Further, this ongoing work, along with new opportunities with the College of Engineering and the School of Nursing and Health Studies, offer unique potential for a dynamic and engaging experiential learning environment. Additionally, alumni and faculty as well as engaged professionals in award-winning national design firms including HDR, LRK, Perkins & Will, Arquitectonica, Zyscovich and Bostwick Design Partnership, and a number of real estate firms engaged in community, commercial and healthcare-based development offer valuable opportunities to productively integrate education and professional practice.

Relationship with undergraduate and professional programs.

Currently, across the US, related initiatives focus on graduate students. UM's current collaboration, for example, the UM School of Law, "[Hospitals, Health Care Services and Access: Interdisciplinary Course](#)" in which Professor Lombard (Architecture) and Professor Steven Ullmann (Business School) participate and collaborate on a case study, the students work across disciplines at the graduate level. The Certificate in Design for Health + Well-being would draw upon these collaborations to augment the knowledge and skill sets of the professional degrees.

2. Resources:

The School of Architecture has the resources needed to implement the proposed certificate program. As the certificate builds on existing courses and existing research interests of the faculty, no additional library, faculty, administrative or physical resources are expected for coursework or related research.

Other resources

Healthcare Design Colloquium: The annual colloquium showcases themes in the global health-care marketplace, such as health education, health research, healthcare design, and healthcare business, and technology. It is meant to dovetail with and complement the Business School's annual Business of Healthcare Conference with an emphasis on design issues.

3. Curriculum - Certificate in Design for Health & Well-being

Certificate Requirements, 15 credits

One Studio and Research Seminar are required. Typically, for architecture students, this represents 9 credits.* The remaining 6 credits can be completed via an additional studio, or selected from the course options listed below.

<u>Courses</u>	<u>Credits</u>
Required Courses	
ARC 608-609 Studio (Healthcare or Healthy Community Focus)	
or	
ARC 610 Urban Design Studio	6*
ARC 682 Evidence-based Design Research Seminar	
or	
EPH 651 Research Methods	3
ARC 684 Capstone Project	3
Electives	
ARC 681 Interdisciplinary Course: Hospitals, Healthcare Services, and Access	3
EPH 640 Urban Environment and Public Health	3
EPH 646 Climate & Health	3
EPH 647 Community-Based Participatory Research	
EPH 648 Climate, Cool Cities, Healthy Communities	3
MGT 684 Analysis of Healthcare Delivery and Policy	3
MGT 687 Healthcare Organization Economics and Ethics	3
BUS 655 Public Policy and Health	3

* (Architecture students receive 6 credits for full-semester design studios, and 3 credits for half-semester design studios. In order to meet the studio requirement, non-architecture students may earn 3 credits in a full-semester studio. Studio faculty approval is required.)

Other Options

In addition to the list above and below, students may submit other courses, either within the School or within the University of Miami. Submissions will be evaluated by the Certificate Coordinator and Director of the Graduate Architecture Programs in consultation with program faculty.

Program Learning Objectives

Students who receive a Certificate in Healthcare Design in the School's graduate architecture programs establish a foundation in the impact of the built environment on health and well-being, and an introduction to important areas of the principles of healthy building and community design as well as new models in the healthcare field, including:

- a. Critical thinking and creativity

- b. Problem-solving and decision making
- c. Effective and professional oral and written communications
- d. Critical assessment of current design practices
- e. Health and community infrastructure in addressing inequalities
- f. Effective application of data and evidence-based design practices

Student Learning Outcomes

Graduates with a Certificate in Design for Health & Well-being from University of Miami School of Architecture develop new skills and build expertise in the specialized area of design and health, including:

- a. Understanding the value of sustainable building practices to optimize use of available resources
- b. Applying global, ethical, and sustainability perspectives.
- c. Understanding the impact of urban and building design on health and well-being
- d. Awareness of the integration of new models of healthcare on building design
- f. Demonstrating leadership qualities through experiential learning.

4. Faculty

See cover description above

5. Students

See cover description above

6. Administration

See cover description above

7. Budget

See cover description above

8. Comparisons

Healthcare Focus (may include built environment + health topics)

Ball State University, Online Graduate Certificate in Planning and Design of Healthcare Environments

<https://cms.bsu.edu/academics/collegesanddepartments/online/academic-programs/graduate-certificates/healthcarefacilitydesign>

University of Kansas, Certificate for Health & Wellness Architecture; and Health + Wellness option, final year Master of Architecture program.

<https://healthandwellness.ku.edu/>

<http://healthandwellness.ku.edu/curriculum>

Texas A & M University, Certificate in Health Systems & Design
<http://chsd.arch.tamu.edu/>

Built Environment & Health Focus (may include healthcare studios/projects)

Portland State University, Graduate Certificate in Public Interest Design, Center for
Public Interest Design
<https://www.pdx.edu/public-interest-design/certificate-in-public-interest-design>

9. Online and Distance Degree and Certificate Programs only

N/A

10. Transfer of coursework to graduate degree programs

N/A

C. Certificate in Sustainable and Resilient Design

Coordinator: Sonia Chao
Director, UM Center for Urban & Community Design; Co-Principal Investigator, National Science Foundation-CRISP Grant, Collaborative Research: A Human-Centered Computational Framework for Urban and Community Design of Resilient Coastal Cities; *Executive Board Member*, Florida Climate Institute; Faculty Affiliate, UM Hemispheric Caribbean Studies; Task Force Member, UM Office of Civic & Community Engagement
(cv attached)

1. Rationale:

Environmental impacts of building practices, climate change and rising sea levels are changing the landscape of architecture as a profession. Architects play a central role in selecting material and technology strategies, as well as developing robust adaptation strategies by addressing material impacts and climate stressors in their designs. Research, innovation, and community outreach are central and connected aspects of sustainable and resilient building practices.

South Florida is ground zero for issues of coastal resiliency in particular. The School of Architecture has developed a coastal resiliency curriculum that capitalizes on civic and scholarly partnerships, and aims to better familiarize students with these and other inter-related design, planning, and regulatory issues, and the responding strategies under development. SoA faculty have been awarded significant research grants by the National Endowment for the Arts, the National Science Foundation, the W. K. Kellogg Foundation, and the Knight Foundation, resulting in the publication of related findings that aim to foster solutions.

Level of demand

Inspired by the important coverage of this area in both academic and professional forums, students have requested more offerings in the area of sustainable and resilient design. This trend parallels the increased focus on this area in our peer institutions.

Interaction with other programs/departments

The curriculum of the Certificate in Sustainable and Resilient Design is designed to take advantage of numerous other programs and schools at the University of Miami, including Marine Ecosystems and Society, Educational and Psychological Studies, and Engineering.

Relationship with undergraduate and professional programs

The Certificate in Sustainable and Resilient Design is designed to augment the knowledge and skill sets of our professional degrees.

2. Resources:

The School of Architecture has the resources needed to implement the proposed certificate program. As the certificate builds on existing courses and existing research interests of the faculty, no additional library, faculty, administrative or physical resources are expected for coursework or related research.

Other Resources:

Resilience Colloquium: The annual colloquium, conducted in September, focuses on the role of landscape in sea-level rise strategies for South Florida.

SoA's Center for Urban & Community Design (CUCD) currently offers project-based services to local and regional communities, and promotes resilient design by supporting collaborations, applied research, and exchanges with local and regional institutions and communities. The Center also conducts research into best practices in sustainable town and building designs and provides students with hands-on field-work. Recent collaborations include the Resilient Redesign III charrette with the South Florida Regional Climate Compact, HUD/AARP High School Charrette, and the Cutler Bay High School Symposium.

- b. Problem-solving and decision making
- c. Effective and professional oral and written communications
- d. Use of information and communication technology
- e. Research methods

Student Learning Outcomes

Graduates with a Certificate in Sustainable and Resilient Design from University of Miami School of Architecture develop new skills and build expertise in this specialized area of design, including:

- a. Understanding the value of sustainable building practices to optimize use of available resources
- b. Applying global, ethical, and sustainability perspectives to design practices
- c. Understanding the benefits of conventional and renewable energy systems; issues surrounding new transportation technologies; energy intensity of food production; effects of supply chain management and international commerce in energy security, energy management in buildings; and mechanisms needed to evolve into sustainable energy operations.
- d. Implementing sustainability management at the nexus of a local business, local government, and community, as well as use management systems and performance frameworks.
- e. Leveraging knowledge of focused subject areas—such as environmental economics, greenhouse emissions management, sustainable building design, sustainable supply chain management, environmental toxicology, or risk management, to achieve a specific objective.
- f. Demonstrating leadership qualities through experiential learning

4. Faculty

See cover description above

5. Students

See cover description above

6. Administration

See cover description above

7. Budget

See cover description above

8. Comparisons

USC School of Architecture, Certificate in Sustainable Design:
<https://arch.usc.edu/programs/certificate-sustainable-design>

Harvard University, Graduate School of Design, Green Building and Community Sustainability Certificate:
<https://www.extension.harvard.edu/academics/professional-graduate-certificates/green-building-community-sustainability-certificate>

Boston Architectural College, Sustainable Design Certificate:
<https://the-bac.edu/academics/certificates-and-courses/the-sustainable-design-institute/sustainable-design-certificate>

Pratt Institute, Master of Science in Sustainable Environmental Systems:
<https://www.pratt.edu/academics/architecture/sustainable-environmental-systems/>

Savannah College of Art and Design, Master in Design for Sustainability:
<https://www.scad.edu/academics/programs/design-sustainability>

9. Online and Distance Degree and Certificate Programs only

N/A

10. Transfer of coursework to graduate degree programs

N/A

D. Certificate in Hospitality Design

Coordinator: Allan Shulman
Professor and Director, Graduate Programs in Architecture
(cv attached)

1. Rationale:

The hospitality industry is a foundational building block of modern urban centers. Hospitality has emerged in the last 10 years as a critical area of lifestyle innovation and brand development, as well as a laboratory for the application of new ideas about resilience and sustainability. Supported by the School's Real Estate Development + Urbanism program, the Certificate in Hospitality Design will provide a foundation in hospitality design training for interested graduate students.

Miami, as one of the major US hotel and hospitality markets, is well-suited as a center of research and practical application of hospitality design. Many local architectural firms specialize in hospitality design, and export these services within the region and around the world.

Since its inception in 2014, the SoA Hotel Studio has consistently attracted students seeking to explore the specialized field of hospitality architecture. The Hospitality Studio engages the program and function of hotels, but also the very important role of hotels in responding to and enriching their context. Urban hotels and resort hotels present a set of critical issues that require inter-disciplinary approaches. Since 2016, the School has also offered a seminar in hospitality design. Together, these two courses have provided a foundation for further engagement and exploration of the field.

Level of Demand

The hospitality industry has experienced extraordinary growth over the last 10 years. According to the US Bureau of Labor Statistics, 16 million people work in the leisure and hospitality industry today, or about 9 percent of all employed persons. The design of hotels, restaurants, and meeting venues is now considered a specialized design area, and employment related to hospitality design represents a sizable slice of employment in the field of architecture. Yet the market for hospitality design is underserved in architectural schools – there is only one other Certificate of Hospitality Design in the US, at the University of Nevada Las Vegas.

Interaction with other programs/departments

The curriculum of the Certificate in Hospitality Design connects with other areas of study within the School of Architecture, including the Master of Real Estate Development + Urbanism degree program.

Relationship with undergraduate and professional programs.

The Certificate in Hospitality Design is designed to augment the knowledge and skill sets of SoA professional degree candidates.

2. Resources:

The School of Architecture has the resources needed to implement the proposed certificate program. As the certificate builds on existing courses and existing research interests of the faculty, no additional library, faculty, administrative or physical resources are expected for coursework or related research.

3. Curriculum - Certificate in Hospitality Design

Certificate Requirement, 15 credits

Students must complete at least one studio and one core topical seminar in a single focus area: housing or hospitality. Typically, for architecture students, this represents 9 credits.* The remaining credits can be completed via an additional Housing or Hospitality Design Studio, or selected from the course options list below.

Courses	Credits
<i>Required courses</i>	
ARC 608-609 Hotel Studio and ARC 684 Introduction to the Hotel Design and Development	6* 3
<i>Other courses and seminars</i>	
ARC 621 Urban Design History and Theory	3
ARC 623 Urban Design and Development Charrette	3
ARC 628 Introduction to Historic Preservation	3
ARC 638 Interior Architecture Design	3
ARC 640 Tropical Architecture	3
RED 601 Introduction to Real Estate Development and Urbanism	3
RED 650 Complex Real Estate Transactions	3
RED 630 Real Estate Market Analysis	3

* (Architecture students receive 6 credits for full-semester design studios, and 3 credits for half-semester design studios. In order to meet the studio requirement, non-architecture students may earn 3 credits in a full-semester studio. Studio faculty approval is required.)

Other Options

In addition to the list above, students may submit other courses, either within the School or within the University of Miami. Submissions will be evaluated by the Certificate Coordinator and Director of the Graduate Architecture Programs in consultation with program faculty.

Program Learning Objectives

Students who receive a Certificate in Hospitality Design in the School's graduate architecture program establish a foundation in training in this area, and an introduction to important areas of the hospitality design field, including:

- a. Critical thinking and creativity
- b. Problem-solving and decision making
- c. Effective and professional oral and written communications
- d. Use of information and communication technology
- e. Exposure to industry leaders

- f. Investigate the issues that shape contemporary principles of hotel design and development
- g. Explore relationship between hotel design and urban design/context planning
- h. Explore design research methods through the prism of hospitality architecture

Student Learning Outcomes

Graduates with a Certificate in Hospitality Design from the University of Miami School of Architecture develop new skills and build expertise in the specialized area of hospitality design, including:

- a. Understanding the role entrepreneurship and branding play in hospitality design
- b. Applying global, ethical, and sustainability perspectives to hotel design and development
- c. Understanding standards of hospitality design
- d. Understanding historical and contemporary approaches to hospitality design
- f. Demonstrating leadership qualities through experiential learning.

4. Faculty

See cover description above

5. Students

See cover description above

6. Administration

See cover description above

7. Budget

See cover description above

8. Comparisons

University of Las Vegas, Nevada Graduate Certificate in Hospitality Design:
<https://www.unlv.edu/certificate/grad-cert-hospitality-design>

9. Online and Distance Degree and Certificate Programs only

N/A

10. Transfer of coursework to graduate degree programs

N/A

E. Certificate in Urban Design

Coordinator: Elizabeth Plater-Zyberk
Malcolm Matheson Distinguished Professor of Architecture and Director
of the Master of Urban Design Program
(cv attached)

1. Rationale:

The vital role of designers in shaping the physical environment and its relationship to the natural world is at the core of the school's pedagogy. Urban Design and Real Estate Development, and the nexus between them, form a critical field of inquiry supported by the two distinct Master programs: the Master of Urban Design and the Master of Real Estate Development + Urbanism. Students in both programs share experiences in the classroom and in learning engagements with communities.

Level of demand

The level of demand for graduates with a focus on urban and community design is growing and expected to continue to grow as the world's urban population continues to grow and climate change impacts require response in the built environment.

Interaction with other programs/departments

The curricular requirements of the Certificate in Urban Design are served by numerous courses offered at the School of Architecture, College of Arts and Sciences, and Miller School of Medicine.

Relationship with undergraduate and professional programs.

The Certificate in Urban Design is designed to augment the knowledge and skill sets of our undergraduate and graduate professional degrees.

2. Resources:

The School of Architecture has all resources needed to implement the proposed certificate program. The certificate builds on existing courses and existing research interests of the faculty, and no additional library resources are expected for coursework or related research.

Additional Resources:

Center for Urban and Community Design. The CUCD was founded in 1992 in the aftermath of Hurricane Andrew with the mission of fostering a collaborative interdisciplinary approach that supports the creation and retro-fitting of sustainable buildings and communities. The Center integrates research, teaching, and service, with community action in the areas of historic preservation and urban and community design, with a focus on sustainable and resilient design in the sub-tropics and tropics. The Center assists faculty, alumni and students in funded research and publications, and in community partnerships, workshops, and charrettes.

Open City Studios. In its 28th year, the Open City Studio offers six-week intensive study abroad experiences in world cities for both undergraduate and graduate students. Recent programs have focused on the study of Asian cities, with studios in Japan and China.

Mapping Informal Cities Project. Initiated in 2008 in coordination with UM's Center for Computational Science, this initiative has mapped informal cities around the world. Walking the streets and deploying drones for mapping, students study building and patterns, observe social and environmental conditions, and analyze the evolving forms of community structure.

Smart Cities Program. In partnership with the Center for Computational Science, the SoA has initiated a research program led by Dean el-Khoury to explore the transformative effect of information technology on the city. Current projects include the design of "Zenciti," a smart city in Yucatan, and a ubiquitous sensing project deploying an array of multi-sensing devices in Miami Beach. The Smart Cities program sponsors the Annual Smart Cities Miami Conference.

With the School of Business Administration's expertise in business startup training and entrepreneurship, Third Place Projects (TPP), funded by the Knight Foundation, has been launched by School of Architecture faculty and students in two South Florida communities. Using a term coined by sociologist Ray Oldenberg to describe the important places of community interaction outside home and work, TPP brings the SoA's expertise in architecture and place-making to neighborhoods, providing new shared activity spaces such as public markets.

Annual Capstone Urban Workshop. Focusing on a current urban development challenge, architecture, urban design, and real estate students and faculty analyze existing conditions and generate design and development scenarios for a specific urban site, proposing strategies for improvements to the public realm as well as for private development.

3. Curriculum – Certificate in Urban Design

Certificate Requirement: 15 credits

Students must complete 1 studio and 1 seminar selected from among the Primary Studio and Seminar courses listed below for a total of 9 credits. An additional 6 credits may be provided by a 6 credit studio or 2 seminar courses from either the Primary or Options courses.

Primary Courses (minimum 9 Credits) Credits

Studios

ARC 601 Urban Design I: Form and Types/Form Based Codes	6*
ARC 602 Urban Design II: General Urban to Urban Core	6*
ARC 603 Urban Design III: Regional/Informal Urbanism	6*

Seminars

ARC 548 Seminar in Community Development	3
ARC 621 History-Theory II: Housing, Transportation & Infrastructure	3
ARC 622 History-Theory III: Urban Design Theory	3
ARC 623 Hines Competition, National Charrette Institute Workshop, Capstone Project	3
ARC 641 Seminar on Town Design	3
ARC 642 Seminar on Housing	3
ARC 643 Seminar on Retrofit of Suburbia	3
ARC 647 Architecture and Urban Identity	3
ARC 694 Geographic Information Systems in Urban Design	3
ARC 690 History of Cities	3
RED 601 Introduction to Real Estate Development and Urbanism	3
RED 610 Financing Urban Real Estate Development	3
RED 630. Market Analysis for Urban Markets	3
RED 660 Urban infill, Preservation & Mixed Use Development	3
RED 650 Complex Urban Real Estate Transactions	3

* (Architecture students receive 6 credits for full-semester design studios, and 3 credits for half-semester design studios. In order to meet the studio requirement, non-architecture students may earn 3 credits in a full-semester studio. Studio faculty approval is required.)

Other Options (up to 6 credits)

In addition to the list above and below, students may submit other courses, either within the School or within the University of Miami. Submissions will be evaluated by the Certificate Coordinator and Director of the Graduate Architecture Programs in consultation with program faculty.

Program Learning Objectives

Students who receive a Certificate in Urban Design in either the School's undergraduate or graduate architecture programs establish a foundation in urban design theory and practice, and an introduction to important areas of the urban design field, including:

- a. Critical thinking and creativity
- b. Problem-solving and decision making
- c. Effective and professional oral and written communications
- d. Use of information and communication technology
- e. Urban design and policy
- f. Urban theory and urban design history
- g. Public engagement and community design
- h. Integrative decision making
- i. Research methods in urban design

Student Learning Outcomes

Students with a Certificate in Urban Design from the University of Miami School of Architecture will graduate with knowledge and skills that include:

- a. Understanding a global and ethical perspective on the environmental, social and economic determinants of human settlements.
- b. Understanding the role and value of urban design at regional, municipal and neighborhood scales.
- c. Understanding basic tools of urban analysis and urban design.
- d. Applying various techniques and methods to effectively plan urban areas at a variety of scales.

Measurement of Learning Outcomes

The School of Architecture participates in the University's ongoing system of measurement of learning outcomes as part of the SACS requirements.

4. Faculty

See cover description above

5. Students

See cover description above

6. Administration

See cover description above

7. Budget

See cover description above

8. Comparisons

The University of Utah College of Architecture & Planning, Department of City & Metropolitan Planning Graduate Certificate in Urban Design:

<http://plan.cap.utah.edu/graduate-certificate-in-urban-design/>

The University of Sydney Graduate Certificate in Urban Design:

<https://sydney.edu.au/courses/courses/pc/graduate-certificate-in-urban-design.html>

9. Online and Distance Degree and Certificate Programs only

N/A

10. Transfer of coursework to graduate degree programs

Courses taken in the Certificate in Urban Design can be transferred to the SoA's Master of Urban Design program after the certificate is completed.

F. Certificate in Real Estate Development and Urbanism

Coordinator: Chuck Bohl
Assoc. Professor and Director, Master in Real Estate Development + Urbanism
Program (MRED+U)
(cv attached)

1. Rationale:

The Certificate in Real Estate Development and Urbanism is designed to provide students with skills and experience to compete in the evolving world of urban real estate development. The curriculum is enriched by the University's location in one of the nation's most dynamic real estate markets, and by the School of Architecture faculty's experience in livable community design. The certificate lays a foundation for training real estate industry professionals capable of tapping the power of the market to deliver development that offers a high quality of life for diverse populations to live, work, and pursue daily activities in walkable, sustainable neighborhoods and communities.

The Certificate will build on course offerings in the existing Master of Real Estate Development and Urbanism program, include real estate development, real estate finance, market analysis, real estate law, land use policies and codes, construction and project management, public private partnerships, sustainable development and entrepreneurship. The existing curriculum incorporates case studies and materials on mixed-use development, urban infill, the redevelopment and repositioning of urban properties, historic preservation, and the integration of design, policy, management and real estate development decision making in shaping the built environment of communities.

There is a strong and increasing demand for graduates in architecture with interdisciplinary skillsets, and a foundational knowledge in real estate development and knowledge of the interaction between real estate, architecture, construction and urban design.

Interaction with other programs/departments

The curriculum of the Certificate in Real Estate Development connects with existing course offerings at the School of Architecture, as well as other programs and schools at the University of Miami. In addition to existing SoA courses, the curriculum includes a mix of existing courses identified within the participating schools, including the Miami Business School and the School of Law.

Relationship with undergraduate and professional programs

The Certificate in Real Estate Development is designed to augment the knowledge and skill sets of our professional degrees.

2. Resources:

The School of Architecture has the resources needed to implement the proposed certificate program. As the certificate builds on existing courses and existing research interests of the faculty, no additional library, faculty, administrative or physical resources are expected for coursework or related research.

Other Resources

Real Estate Impact Conference: In concert with the Miami Business School, the School of Architecture's annual Real Estate Impact Conference assembles the biggest names and issues in real estate development to discuss the most relevant topics. The MRED+U Program also organizes a wide variety of interdisciplinary events and activities throughout the year that enriches student experiences.

3. Curriculum - Certificate in Real Estate Development + Urbanism (RED+U) Certificate Requirement, 15 credits

<u>Courses</u>	<u>Credits</u>
<i>Required courses</i>	
RED 601 Intro to RED+U, or	3
RED 660 Urban Infill, Preservation & Redevelopment	3
RED 610 or other approved Real Estate Finance course	3
RED 630 or approved Real Estate Market Analysis course	3
Other approved Studio, ARC, RED, BUS or LAW courses	6

Options to satisfy the 6 additional credits:

- Any approved architecture studio*
- RED courses that can be taken without prerequisites including:
RED 660, RED 620 (2 credits), RED 640 (1 credit) and RED 670 and other
RED elective courses
- Other approved courses in Architecture, Urban Design, Business and Law.
- RED courses with prerequisites / requiring approval of instructor and/or director:
RED 650, RED 680, RED 690, RED 699 (the Capstone can be taken as either a 3-
credit course or 6-credit studio).

Notes:

The 1-credit Argus software courses can also go towards the real estate finance requirement, and could be combined with any 2-credit finance course to fulfill the 3-credit finance requirement.

* (Architecture students receive 6 credits for full-semester design studios, and 3 credits for half-semester design studios. Non-architecture students may earn 3 credits in a full-semester studio. Studio faculty approval is required.)

Program Learning Objectives

Students who receive a Certificate in Real Estate Development in the School's graduate architecture programs establish a foundation in real estate development training, and an introduction to important areas of the field, including:

- a. The core principles and practice of urban real estate development
- b. Principles and practice of place making and urbanism
- c. Analytical methods for assessing real estate markets and product types
- d. Financial methods for analyzing property and modeling development scenarios.
- e. Exemplary models of real estate development that integrate financial feasibility, livable community design and sustainability
- f. Critical thinking and creativity
- g. Problem-solving and decision-making
- h. Effective and professional individual and team oral and written communications

- i. Use of information and communication technology
- j. Research methods

Student Learning Outcomes

Graduates with a Certificate in Real Estate Development from University of Miami School of Architecture develop new skills and build expertise in the specialized area of real estate development, including:

- a. Understand the complex interaction of real estate development and urbanism
- b. Apply global, ethical, and sustainability perspectives to real estate development.
- c. Understand the legal, economic, and social relationships between real-estate development process.
- d. Compare real estate development techniques, innovations, and processes.
- e. Apply various techniques and methods to efficiently and effectively plan and control real estate development projects.
- f. Demonstrate leadership qualities through experiential learning.

4. Faculty

See cover description above

5. Students

See cover description above

6. Administration

See cover description above

7. Budget

See cover description above

8. Comparisons

Below are examples of comparative certificate programs in real estate development. The SoA's emphasis on the nexus between real estate and urbanism is somewhat unique and reflects the strengths of the SoA faculty and research, as well as the interdisciplinary strengths in real estate at UM involving the SoA, Miami Business School, Law School, and other schools. Similar existing programs include:

Harvard University Extension School Real Estate Investment Certificate:

<https://www.extension.harvard.edu/academics/professional-graduate-certificates/real-estate-investment-certificate?&act=HES-G+Harvard+Extension+School&campaignid=71700000028927572&adgroupid=58700003639034865&adgroup=CRT-NT+-+Real+Estate+-+Development+%28b%2B%29&creative=243914921169&kwid=43700028447730903&mat>

chtype=b&network=g&adposition=1t2&target=&device=c&devicemodel=&feeditemid=&loc_physical_ms=9011905&loc_interest_ms=&targetid=kwd-46831268620&utm_source=GOOGLE&utm_medium=cpc&utm_campaign=CRT-NT+-n

9. Online and Distance Degree and Certificate Programs only

N/A

10. Transfer of coursework to graduate degree programs

Courses taken in the Certificate in Real Estate Development can be transferred to the SoA's Master of Real Estate Development and Urbanism program after the certificate is completed.

Charles Bohl, Ph.D.

Assoc. Professor and Director, Master in Real Estate Development + Urbanism Program (MRED+U)

Educational Credentials

- University of North Carolina Chapel Hill, Ph.D.: City & Regional Planning, 1994
- State University of New York – Albany, M. Urban & Regional Planning, 1991
- New York University, B.A., Liberal Studies, The Gallatin Division, 1983

Teaching Experience

- University of Miami School of Architecture
 - Associate Professor, & Director of the Masters Program in Real Estate & Urbanism (MREDU), 2008-Present
 - Research Associate Professor & Director of the Knight Program in Community Building, 2000-2008
- University of North Carolina at Chapel Hill, Senior Research Associate, Center for Urban Regional Studies, 1999-2000
- North Carolina State University, School of Design, Architecture Department, Instructor, 1998-1999
- University of North Carolina at Chapel Hill, Dept. of City and Regional Planning, Instructor, 1998-1999
- University of North Carolina at Chapel Hill, The Graduate School, Senior Fellow, Weiss Urban Livability Program, 1998-1999

Professional Experience

- Charles Bohl & Associates, Miami, FL., Principal, 2003-Present
- Niagara Mohawk Power Corporation, New York, Economic Development Specialist, 1991-1995

Licenses/Registration: National Charrette Institute, Certified Planner

Selected Publications and Recent Research

- Bohl, Charles C., principal investigator; "The Third Place Project"; Sponsor: John S. and James L. Knight Foundation; Amount: \$649,619; 2015-2017.
- Bohl, Charles C., Elizabeth Plater-Zyberk, David Brain and Andrea Gollin. "Community Design Charrettes: An Essential Methodology for Civic Engagement in the Community Design Process" in *Sustainable Urbanism And Beyond: Rethinking Cities For The Future*, New York: Hass, Tigran, ed.: Rizzoli; 2012.
- Bohl, Charles C. "Place Making: The Key to Building Long-Term Value in Brazilian Real Estate and Communities." *Panorama ADIT*, 2012, Vol 1(No.1): 24-25.

Professional Memberships: Urban Land Institute (ULI), Congress for the New Urbanism (CNU)

Sonia Chao Co-Principal Investigator, National Science Foundation-CRISP Grant,
Collaborative Research: A Human-Centered Computational Framework for Urban and
Community Design of Resilient Coastal Cities
Executive Board Member, Florida Climate Institute
Faculty Affiliate, UM Hemispheric Caribbean Studies
Task Force Member, UM Office of Civic & Community Engagement
Director, UM Center for Urban & Community Design

Educational Credentials

- Columbia University, Graduate School of Art, Architecture & Planning, M.Arch., 1984
- U. Miami School of Architecture, B.Arch., 1983

Teaching Experience

- University of Miami School of Architecture
 - Director of Center for Urban and Community Development, 2006-Present
 - Research Associate Professor, 2004-Present
 - Full Time Lecturer, 2002-2003
 - Part Time Lecturer, 1998-2002

Professional Experience

- Sonia R. Chao Architects, Miami, FL, Principal, 1998-Present

Licenses/Registration: LEED AP, Florida

Selected Publications and Recent Research

- Chair, "Resilient Miami Initiative". Interdisciplinary ad hoc faculty group from University of Miami & FAU focused on the resiliency of historic neighborhoods in Southeast, Florida, 2015.
- Publication, Chao, Sonia. et al. "Under the Sun: Sustainable Traditions & Innovations in Sustainable Architecture and Urbanism". Digital and Print Submissions to Foundation: Summer, 2013 and Spring, 2014; Released by University of Florida Press, January 2016.
- Principal Investigator, Phase II: "Haiti: Developing Sustainable Traditions & Innovations in Architecture and Urbanism for the Region, Towns and the Rural Villages of Akayè (Arcahaie)", W. K. Kellogg Foundation, Battle Creek Michigan. Funded research (\$46,614.00), 2015.
- Principal Investigator, "Haiti: Developing Sustainable Traditions & Innovations in Architecture and Urbanism for the Region, Towns and the Rural Villages of Akayè (Arcahaie)", W. K. Kellogg Foundation, Battle Creek Michigan. Funded research (\$240, 477.00), 2014.
- Session Organizing Committee, Presenter & Session Moderator. "Havana: Paradigm of a Caribbean City", Congress for the New Urbanism, West Palm Beach, Fl. May 2012.

Professional Memberships: AIA, CNU, USGBC

Joanna Lombard

Professor, University of Miami School of Architecture
Miller School of Medicine Department of Public Health Sciences, Built Environment, Behavior and Health
Research Group

Educational Credentials

- Harvard University Graduate School of Design, Master of Architecture
- Tulane University School of Architecture, Bachelor of Architecture

Teaching Experience

- University of Miami School of Architecture
 - o Professor, 2001-Present
 - o Associate Professor, 1986-2000
- University of Pennsylvania, Visiting Faculty, 1988
- University of Miami School of Architecture, Assistant Professor, 1980-1986
- University of Miami School of Architecture, Instructor, 1979-1980

Professional Experience

- Denis Hector & Joanna Lombard Architecture and Landscape, Miami, Fl., Principal, 1988-Present
- Joanna Lombard Architect, Miami, Fl., Principal, 1983-1987

Licenses/Registration

Registered Architect #9701, Florida, 1983-present

Selected Peer-reviewed Publications

- “Neighborhood greenness and chronic health conditions in Medicare beneficiaries.” S.C. Brown, J. Lombard, K. Wang, M. Byrne, M. Toro, E. Plater-Zyberk, D. Feaster, J. Kardys, M. Nardi, G. Perez-Gomez, H. Pantin, J. Szapocznik, *American Journal of Preventive Medicine*, 2016, 51(1): 78–89.
- “Walking and Proximity to the Urban Growth Boundary and Central Business District,” S.C. Brown, J. Lombard M. Toro, S. Huang, T. Perrino, G. Perez- Gomez, E. Plater-Zyberk, H. Pantin, O. Affuso, N. Kumar, K. Wang, J.Szapocznik. *American Journal of Preventive Medicine*2014, 47(4):481-486.
- “Neighborhoods and Social Interaction,” S.C. Brown and J.Lombard. *Wellbeing and the Environment: Wellbeing: A Complete Reference Guide, Volume II*, eds. Rachel Cooper, Elizabeth Burton and Cary L. Cooper, Wiley -Blackwell. John Wiley & Sons, Inc., 2014: (1-28).
- “Walk Score: Associations with Purposive Walking in Recent Cuban Immigrants.” S.C. Brown, H. Pantin, J. Lombard, M. Toro, S. Huang, E. Plater-Zyberk, T.Perrino, G. Perez-Gomez, L. Barrera-Allen, J. Szapocznik. *American Journal of Preventive Medicine*, 2013.

Recent Research

- Co-Principal Investigator “Increasing Physical Activity Opportunities in Miami-Dade County Parks, Co- Principal Investigator Scott Brown, Investigator Kefeng Wang, Miami-Dade Parks, Recreation & Open Spaces, U.S. CDC Partners to Improve Community Health (PICH) Grant, Florida Dept. of Health in Miami-Dade County, \$330,000. 2016–2018.
- Investigator, “Health Impacts of the Built-Environment among Miami Medicare/Medicaid Beneficiaries,” Principal Investigators Scott Brown & Elizabeth Plater-Zyberk, U.S. Dept. of Housing and Urban Development Sustainable Communities Research Grant, \$500,000. 2011-2017
- Investigator, “Hispanics, Built Environment, & Metabolic Syndrome,” Principal Investigator/Project Director, José Szapocznik, National Institute of Diabetes, Digestive and Kidney Diseases (NIDDK) Grant No. R01 DK 074687, \$4,044,735, 2007-2012

Professional Memberships:

Member, AIA Miami Chapter; AIA Design + Health Research Consortium; AIA Miami/MCAD Active Design Guidelines Advisory Board; Vice-Chair, Health & Built Environment Committee, Consortium for a Healthier Miami-Dade

Elizabeth Plater Zyberk FAIA, LEED AP

Malcolm Matheson Distinguished Professor of Architecture and Director of the Master of Urban Design Program.

Educational Credentials

- Yale School of Architecture, Master of Architecture, 1974
- Princeton University, B.A.Cum Laude in Architecture & Urban Planning, 1972

Teaching Experience

- University of Miami School of Architecture
 - Malcolm Matheson Distinguished Professor 2006-Present
 - Dean, 1995-2013
 - Director, Center for Urban & Community Design, 1992-1995
 - Professor, 1990-Present
 - Associate Professor, 1979-1990

Professional Experience

- DPZ LLC, Miami, Florida, Partner, 1980 - Present
- Arquitectonica International Corporation, Miami, FL, co-Founder 1976-1980
- Venturi and Rauch, Architects & Planners, Philadelphia, PA, Designer, 1974-1976

Licenses/Registration: Florida

Selected Publications and Recent Research

- "Net-zero water management: achieving energy-positive municipal water supply." Environmental Science: Water Research & Technology (Royal Society of Chemistry), James D. Englehardt, Tingting Wu, Frederick Bloetscher, Yang Deng, Piet du Pisani, Sebastian Eilert, Samir Elmir, Tianjiao Guo, Joseph Jacangelo, Mark LeChevallier, Harold Leverenz, Erika Mancha, Elizabeth Plater-Zyberk, Bahman Sheikh, Eva Steinle-Darling and George Tchobanoglous. March 2016.
- "Form-Based Codes," AIA Architect's Handbook for Professional Practice, 15th Edition, Wiley & Sons, March 2013.
- Jesse Ball DuPont Grant, "South Florida Workplace Affordable Housing," work program shared by University of Miami School of Architecture and the Office of Civic & Community Engagement, (\$75,000). 2012.
- Dept. of Housing and Urban Development, "Health Impacts of the Built-Environment among Miami Medicare/Medicaid Beneficiaries," Principal Investigators Scott Brown & Elizabeth Plater-Zyberk, (\$500,000). 2011.

Professional Memberships: AIA, FAIA, Congress for the New Urbanism

Allan T. Shulman, FAIA, LEED AP
Professor and Director, Graduate Programs in Architecture

Educational Credentials

- University of Miami School of Architecture, Masters of Suburb & Town Design, 1993
- Cornell University, Bachelor of Architecture, 1985
- Waseda University, Independent Studies, 1983

Teaching Experience:

- University of Miami School of Architecture
 - Director of Graduate Programs in Architecture 2016-Present
 - Professor, 2018-Present
 - Associate Professor, 2011-Present
 - Assistant Professor, 2008-2011
 - Research Assistant Professor, 2000-2008
 - Full-Time Lecturer, 1999-2000
 - Part-Time Lecturer, 1992-1999
- Universidad Politecnica de Puerto Rico, San Juan, Visiting Lecturer,= 1998
- FIU, School of Architecture, Lecturer 1995, 1997-1998

Professional Experience

- Shulman + Associates, Miami, Founding Principal, 1995-Present. 78 design and preservation awards; Silver Medal for Design from American Institute of Architects, 2010; 65 International/National press citations; 53 Local press citations
- The Russell Partnership, Inc., Miami, Project Manager 1993-94; Rafael Viñoly Architects, New York, Temp. Assignment 1990-91; Roxanne Warren & Associate Architects, New York, Associate, 1989-91,

Licenses/Registration: Florida

Selected Publications and Recent Research

- Lecture at National Autonomous University of Mexico (UNAM), October 5, 2016 (invited)
- The Discipline of Nature: Architect Alfred Browning Parker in Florida, co-curator, HistoryMiami, 2016
- *Building Bacardi: Architecture, Art & Identity* (New York: Rizzoli), 2016
- *Drawn from Miami*, co-curator, inaugural exhibit at Miami Center for Architecture & Design, 2014
- "Urban Assemblage," "Mapping Lincoln Road: Revelations in a Nolli," and "Miami Builds a Center for Architecture" (New York: CLOG) 2013.
- "The Concrete Line: Miami's Marine Passenger Terminals" and "The mixable one: two projects for Compañia Ron Bacardi, S.A.," Annals of X Docomomo Brazil Seminar, 2013
- "East-West Dialogues: Modernism in Florida" conference & lecture series, Chair, 2013-present; funded by \$50,000 grant from Deering Danielson Foundation.
- Organizing Directorate, *Subtropical Urbanism: Beyond Climate Change*, Florida Atlantic University in collaboration with the Queensland Univ. of Technology Centre for Subtropical Design, 8-11 March 2011
- *Miami Architecture: An AIA Guide* (Gainesville: Univ. Press of Florida), 2010. With Donnelly and Robinson.

Professional Memberships: DoCoMoMo, USGBC, ULI, CNU, SAH, AIA

Armando M. Montero

Director, Master of Construction Management Program
Assistant Professor in Practice

Educational Credentials

B. Arch. University of Miami, December 1979
Major: Architecture and Environmental Design
Minor: Engineering
Electives in: Real Estate, Passive Environmental Design, Art.
Florida Registered Architect AR 10463, June 1984
LEED AP Certification

Teaching Experience

Over 40 years of teaching experience in Higher Education
Program Director, Master of Construction Management , 2017-Present
University of Miami School of Architecture, Asst. Prof of Practice, 2016-Present
University of Miami School of Architecture, Part time Lecturer, 1995-2015
Miami Dade College, Professor, 1984 - 2005

Professional Experience

Aragon Associated Architects Principal 1980-1984
Responsible for office administration, business development coordination and design implementation.
Armando M. Montero and Associates, P.A. Principal 1984-Present
Principal in charge of design, business development and administration.
Property Assessment Group, LLC Partner 2009-Present *Responsible for building condition assessments and reporting. Consulting with clients and advising on real estate options zoning evaluations and development strategies for clients. Construction management*