UNIVERSITY
OF MIAMI
FACULTY SENATE

The John Knoblock
Faculty Senate Office
Ashe Administration Building, #325
1252 Memorial Drive
Coral Gables, FL 33146

facsen@miami.edu
web site: www.miami.edu/fs
P: 305-284-3721
F: 305-284-5515

MEMORANDUM

To: Julio Frenk
University President

From: Linda L. Neider
Chair, Faculty Senate

Date: September 4, 2019

Subject: Faculty Senate Legislation #2019-02 (B) – Establish a Master of Professional Science (MPS) in Urban Sustainability and Resilience, with Two Tracks, College of Arts and Sciences jointly with the School of Architecture

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The Faculty Senate, at its August 28, 2019 meeting, voted unanimously to approve the proposal to establish a Master of Professional Science in Urban Sustainability and Resilience offered jointly by the College of Arts and Sciences and the School of Architecture. The degree will be awarded by the College of Arts and Sciences, with the program housed in the Department of Geography and Regional Studies. The two tracks are a Sustainability track, and a Resilience track. The program will not require completion of a master's thesis or a comprehensive exam.

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

This legislation is sent to you for your action.

LLN/ss/rh

Enclosure

cc: Jeffrey Duerk, Executive Vice President and Provost
Rodolphe el-Khoury, Dean, School of Architecture
Leonidas Bachas, Dean, College of Arts and Sciences
Sonia Chao, Research Associate Professor, School of Architecture
Imelda Moise, Assistant Professor, College of Arts and Sciences
Shouraseni Sen Roy, Professor, College of Arts and Sciences
Maryann Tobin, Executive Director of Programs, College of Arts and Sciences

CAPSULE: Faculty Senate Legislation #2019-02 (B) – Establish a Master of Professional Science (MPS) in Urban Sustainability and Resilience, with Two Tracks, College of Arts and Sciences jointly with the School of Architecture

PRESIDENT'S RESPONSE

APPROVED: _____ DATE: 9/25/19
(President's Signature) Dean Rodolphe el-Khoury

OFFICE OR INDIVIDUAL TO IMPLEMENT: Dean Leonidas Bachas

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

NOT APPROVED AND REFERRED TO: _____

REMARKS (IF NOT APPROVED): _____

UNIVERSITY OF MIAMI

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.)

FORM INSTRUCTIONS:
1. Save/download the form as a pdf.
2. After completing the information below, print and scan the form.
3. Insert it with the background materials that are specified, in the order listed, and submit to facsen@miami.edu.
Please note: *only scanned versions can be accepted.*

Include this checklist at the beginning of each proposal.

KEY CONTACT PERSONNEL INFORMATION

First Name	Last Name	Proponent's Title
Shouraseni Sen	Roy	Professor

Department, if applicable	School/College
Geography and Regional Studies	College of Arts & Sciences

E-mail	Phone
ssr@miami.edu	8-4820

Title of Proposal

Proposal to Establish a Master of Professional Science in Urban Sustainability and Resilience

(-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:

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

◉ Yes ○ No

If no, explain why:

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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:

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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:

The Dean of the Graduate School has approved this proposal without requiring a presentation to the ADPC.

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:

End form.

DEGREE PROPOSAL

MASTERS OF PROFESSIONAL SCIENCE IN URBAN SUSTAINABILITY AND RESILIENCE

Proposal jointly by the College of Arts & Sciences and School of Architecture

Name of the Program for the Diploma and Student Transcripts:

Master of Professional Science in Urban Sustainability and Resilience

Responsible Academic Unit for the Program:

Department of Geography and Regional Studies, College of Arts and Sciences

Questions about this proposal should be directed to:

Dr. Shouraseni Sen Roy, Professor - ssr@miami.edu

Dr. Maryann Tobin, Executive Director of Programs - met@miami.edu

Proposed Date for Implementation: Fall 2020

EXECUTIVE SUMMARY:

This proposal establishes a rationale for the development of an interdisciplinary Master of Professional Science degree (MPS) in Urban Sustainability and Resilience program, offered jointly between the College of Arts & Sciences' Department of Geography and Regional Studies and the School of Architecture, with the administration of the degree occurring within the College of Arts & Sciences. The MPS in Urban Sustainability and Resilience will provide graduates with the knowledge, skills and hands-on practical engagement necessary for students working toward contributing to the urban challenges of the 21st century. This program leverages our strategic location, utilizing Miami as an urban lab to explore, analyze and propose solutions to the complex interrelationships among urbanism, sustainability and planning within the metropolitan environment as well comparatively with other locations throughout the hemisphere and the rest of the world. Building upon the College of Arts & Sciences' cross-disciplinary opportunities for students and faculty, the Department of Geography and Regional Studies' strengths in urban geography, environmental studies and medical geography, as well as the School or Architecture's expertise in the study and design of the built environment, students will gain an interdisciplinary understanding of the spatial and temporal transitions involved in pathways toward urban sustainability (focusing on challenges such as health, housing, the environment, crime, and sea-level rise).

UNIVERSITY OF MIAMI
COLLEGE of
ARTS & SCIENCES

Office of the Dean
1252 Memorial Drive
Ashe Building, Suite 227
Coral Gables, Florida 33146
Phone: 305-284-4117
Fax: 305-284-5637
as.miami.edu

To: Tomas Salerno
Chair, Faculty Senate

From: Leonidas Bachas
Dean, College of Arts and Sciences

Subject: New Degree Program:
Master of Professional Science in Urban Sustainability and Resilience

Date: February 5, 2019

Dear Tom,

I am writing to express my full support of the proposal for a new Master of Professional Science in Urban Sustainability and Resilience. On February 4, 2019, the faculty of the College of Arts and Sciences unanimously voted in favor of this new programs, offered jointly by the Department of Geography and Regional Studies and the School of Architecture. This interdisciplinary effort is the result of collegial faculty collaboration and represents a unified mission to provide innovating programming to our students. I am now forwarding the proposal to the Senate for action.

For your convenience, attached you will find a copy of the proposal. If you have any questions, please feel free to contact me.

LGB/mtt

UNIVERSITY OF MIAMI
SCHOOL of
ARCHITECTURE

Office of the Dean
P.O Box 249178
Coral Gables, Fl 33124

Phone: 305-284-5000
Fax: 305-284-5245
www.arc.miami.edu

MEMORANDUM

Date: August 12, 2019

To: Dr. Leonidas Bachas, Dean
College of Arts & Sciences

From: Rodolphe el-Khoury, Dean
School of Architecture

Please allow this memo to confirm our support for the new Master of Professional Science degree in Urban Sustainability and Resilience being proposed jointly by the College of Arts & Sciences' Department of Geography and Regional Studies and the School of Architecture. The School Council approved this program on February 25, 2019.

We are excited about the partnership with CAS and its potential for setting a model for our efforts in interdisciplary education. We also welcome a greatly anticipated program that aligns precisely with our strategic priorities and focus on the challenges facing urban environments.

Thank You

Rodolphe el-Khoury, PhD
Dean

Ph: 305-284-5000
Fax: 305-284-5245
www.arc.miami.edu

UNIVERSITY
OF MIAMI

Department of Geography and Regional Studies
1300 Campo Sano
University of Miami
Coral Gables, FL 33124-2221

January 17, 2019

To: Dr. Leonidas G. Bachas, Dean
College of Arts & Sciences

From: Dr. José Maria Cardoso da Silva, Associate Chair
Department of Geography and Regional Studies

Re: Master of Professional Science in Urban Sustainability and Resilience.

I am writing this memo on behalf of Dr. Doug Fuller, Department Chairperson, as he is also the proposer of the above referenced proposal.

Please allow this memo to confirm that, at a regular meeting in the Fall of 2018, the faculty of the Department of Geography and Regional Studies voted to support the proposal for a Master of Professional Science (MPS) in Urban Sustainability and Resilience.

The MPS in Urban Sustainability and Resilience will be a joint effort between our department and the School of Architecture. Dr. Fuller and Dr. Imelda Moise, with the assistance of Dr. Maryann Tobin from the Dean's Office, have met with Dean el-Khoury and members of his faculty to finalize the details of this proposal. Students will have the option of completing tracks in either sustainability or resilience, with interdisciplinary electives across both schools. The degree will be housed in the Department of Geography and Regional Studies, with revenue shared with the School of Architecture on a per student, per course basis.

We forward this proposal to you for review by the full College of Arts & Sciences faculty.

Sincerely,

José Maria Cardoso da Silva, Ph.D.

UNIVERSITY
OF MIAMI

Department of Anthropology
P O Box 248106
Coral Gables, Florida 33124-2005

Phone: 305-284-2535
Fax: 305-284-2110

January 17, 2019

To: Dr. Leonidas Bachas, Dean
College of Arts & Sciences

From: Dr. Caleb Everett, Chair
Department of Anthropology

Please allow this memo to confirm the support of Department of Anthropology for the new Master of Professional Science degree in Urban Sustainability and Resilience being proposed by the Department of Geography and Regional Studies.

The Department of Anthropology is pleased to offer our electives as part of this program. Students selecting these courses must be the required prerequisites.

We are pleased to participate in this innovative degree program.

Sincerely,

Caleb Everett, Ph.D.

UNIVERSITY
OF MIAMI

Master of Arts in International Administration
1300 Campo Sano Avenue, Suite 215
Coral Gables, Florida 33146

Phone: 305-284-8783
Fax: 305-284-2023
miami.edu/maia

January 17, 2019

To: Dr. Leonidas Bachas, Dean
College of Arts & Sciences

From: Dr. Bradford McGuinn, Director
MAIA Program

Please allow this memo to confirm the support of MAIA program for the new Master of Professional Science degree in Urban Sustainability and Resilience being proposed by the Department of Geography and Regional Studies.

The MAIA program is pleased to offer our electives as part of this program. Students interested in the identification, analysis, and management of complex problems that confront modern institutions may be interested in our courses on Disaster Relief and Humanitarian Aid, as well as Energy Security and Environmental Sustainability. Enhancing the sustainability and resilience course offerings can only strengthen the programs offered to our graduate students and bring additional prestige to the College's catalog of professional preparation programs.

Sincerely,

Bradford McGuinn, Ph.D.

UNIVERSITY OF MIAMI
SCHOOL of EDUCATION
& HUMAN DEVELOPMENT

Office of the Dean
Laura Kohn-Wood, Ph.D.
Dean and Professor
Educational and Psychological Studies

P.O. Box 248065
Coral Gables, FL 33124-2040
Phone: 305-284-3505
Fax: 305-284-3003
www.education.miami.edu

MEMORANDUM

DATE: January 17, 2019

TO: Leonidas G. Bachas
Dean, College of Arts and Sciences

FROM: Laura Kohn-Wood
Dean, School of Education and Human Development

SUBJECT: Letter of Support for the MPS in Urban Sustainability and Resilience

I am writing to express my support for the Master of Professional Science in Urban Sustainability and Resilience proposed by the Department of Geography and Regional Studies in the College of Arts & Sciences.

Our department has agreed to provide elective courses for this interdisciplinary program, as outlined in the proposal. We are pleased to participate in this new degree program.

January 24, 2019

Dr. Maryann Tobin, Executive Director of Programs
College of Arts & Sciences
Via e-mail: met@miami.edu
Cc: J.P. Bardet; E. Andiroglu

Dr. Tobin:

It is exciting to hear about the revised version of the proposal titled as MPS in Urban Sustainability and Resilience. The proposed new program of study includes very relevant focus areas currently addressed in multiple courses and research projects currently offered in Dept. of Civil, Arch. & Environmental Engineering (CAE) which can be instrumental in highlighting the proposed program's strengths and relevance. As such, we would like to support this program while also proposing the following amendments for your consideration.

The content of the proposed program courses is suggested to be amended as:

Core Courses:

- Add CAE 743 - Risk Analysis (3 credits) as a core course option.

Sustainability Track:

- Add CAE 660 – Sustainable Construction (3 credits) as a Track Core Course option (and / or track elective)

Resilience Track:

- Add CAE 744 – Risk and Resilience (3 credits) as a Track Core Course option (and / or track elective)

Add the following courses under **Electives**:

- CAE 632 – Ground-Water Hydrology,
- CAE 681 – Energy Efficient Building Design,
- CAE 661 – Building Information Modeling,
- CAE 665 – Facilities and Operations Management

The CAE courses identified above and expertise of associated faculty can be very beneficial to operationalizing Sustainability and / or Resilience via use of innovative technology transfer concepts applied to 6-credit practicum component of this exciting new program. In addition, the College of Engineering MS in Construction Management Degree Program is currently in process of establishing a new certificate program with focus on "Resilience Benchmarking for Buildings" which can also be coupled with the proposed 6-credit practicum component.

Upon your review of the proposed amendments, please let us know if you may like to meet to discuss further before finalizing the proposal.

Sincerely,

UNIVERSITY OF MIAMI
ABESS CENTER
for ECOSYSTEM
SCIENCE & POLICY

P.O. Box 248203
Coral Gables, Florida 33124

Phone: 305.284.8259
www.abess.miami.edu

MEMORANDUM

Date: January 29, 2019

To: Dr. Leonidas Bachas, Dean
College of Arts & Sciences

From: Dr. Kenny Broad, Director
Abess Center for Ecosystem Science and Policy

RE: Letter of support for the MPS in Urban Sustainability and Resilience

On behalf of the Leonard and Jayne Abess Center for Ecosystem Science and Policy, I am delighted to confirm support of the Abess Center for the new Master of Professional Science degree in Urban Sustainability and Resilience being proposed as a joint effort between the College of Arts & Sciences and the School of Architecture.

The interdisciplinary nature of this program is invigorating, as it coincides with the Abess Center's mission of interdisciplinarity and bridging the gap between important and timely disciplines. Understanding complex relationships between human and physical processes shaping cities and achieving urban sustainability are also relevant themes for our graduate students. As such, we foresee our students being interested in the new program's course offerings. Additionally, we envision our undergraduate ECS students being interested in pursuing this degree upon graduation.

We support this program with great enthusiasm. Should you need any further information, please let us know.

MEMORANDUM

Date: January 28, 2019

To: Dr. Leonidas Bachas, Dean
College of Arts & Sciences

From: Dr. Brian Soden, Associate Dean for MPS Program,
Rosenstiel School of Marine and Atmospheric Sciences

Please allow this memo to confirm our support for the new Master of Professional Science degree in Urban Sustainability and Resilience being proposed jointly by the College of Arts & Sciences' Department of Geography and Regional Studies and the School of Architecture.

RSMAS is pleased to offer electives as part of this program, as space in those courses permits, and we support the initiative of other units to offer professional graduate degrees to students who desire specified training in issues pertaining to sustainability and resilience.

Sincerely,

Brian Soden

MIAMI
BUSINESS SCHOOL

David L. Kelly
Professor of Economics
Academic Director, MS
in Sustainable Business
Co-Chair, Sustainable
Business Research Cluster
University of Miami
Office: (305)284-3725
E-mail: dkelly@miami.edu

Leonidas G. Bachas
Dean, College of Arts and Sciences

February 26, 2019

Dean Bachas:

Greetings. Please allow this letter to confirm support for the Master of Professional Science in Urban Sustainability and Resilience proposed by the Department of Geography and Regional Studies in the College of Arts & Sciences, on behalf of myself, the Miami Business School, and Dean Quelch.

Sincerely,

David L. Kelly

UHealth
UNIVERSITY OF MIAMI HEALTH SYSTEM

UNIVERSITY OF MIAMI
MILLER SCHOOL
of MEDICINE

Date: May 24, 2019

To: Dr. Douglas Fuller, Chair and Senior Associate Dean
College of Arts & Sciences
Department of Geography and Regional Studies

From: J. Sunil Rao, Interim Chair
Department of Public Health Sciences

Subject: Letter of Support for the Master of Professional Sciences in Urban Sustainability and Resilience

I am writing to express my enthusiastic support for the Master of Professional Sciences in Urban Sustainability and Resilience proposed jointly by the Department of Geography and Regional Studies and the School of Architecture.

Our department will be happy to assist however we can to help ensure this degree program proves successful. I do not see any obvious conflict with any of our own current degree programs.

Sincerely,

J. Sunil Rao, Ph.D.,
Interim Chair, Department of Public Health Sciences
Professor & Director, Division of Biostatistics,
University of Miami Miller School of Medicine

Department of Public Health Sciences
Don Soffer Clinical Research Building (DSCRB), 9th & 10th Floors (Locator code R669)
1120 NW 14th Street • Miami, FL 33136
Phone: (305) 243-6312
publichealth.med.miami.edu

UNIVERSITY
OF MIAMI

Assessment and Accreditation
Gables One Tower 1320 S. Dixie Hwy.
Coral Gables, Florida 33146

Phone: 305-284-5120
Fax: 305-284-4929
oaa.miami.edu

MEMORANDUM

DATE: March 13, 2019

TO: Maryann Tobin, Executive Director of Programs
College of Arts and Sciences

FROM: Patty Murphy, Associate Provost for University Accreditation PBM
Office of Assessment and Accreditation

RE: **New MPS in Sustainability and Resilience with 2 Tracks**

On March 11, 2019, the College of Arts and Sciences notified my office of its intent to offer a new Master of Professional Science (MPS) degree program in Urban Sustainability and Resilience with two tracks effective Fall 2020. The new program will be offered jointly by the College of Arts and Sciences and the School of Architecture but the degree will be awarded by the College of Arts and Sciences and the program housed in the Department of Geography and Regional Studies. The new interdisciplinary program is being proposed to utilize the University's strategic location, Miami, to teach students to address the urban challenges of the 21st century.

The proposed MPS program will require successful completion of 36 credit hours that include 12 credit hours in required core courses, 12 credit hours in one of two track areas (Sustainability track or Resilience track), 6 credit hours of approved electives, and a required practicum (6 credit hours).

The program will require the creation of two new courses. The full MPS program curriculum is as follows:

- Required core courses (12 credit hours)
  - ARC 621 Urban Design History and Theory (3 credit hours)
  - ARC 683 An Introduction to Resilient Community Design (3 credit hours)
  - GEG 620 Sustainable Cities (NEW) (3 credit hours)
  - GEG 623 Seminar in Urban Management (3 credit hours)
- Track (students complete one track of 12 credit hours)
  - Sustainability track
    - GEG 661 Urban Geography (3 credit hours)
    - Electives (students complete 9 credit hours from these options)
      - ARC 626 Landscape Architecture Design II (3 credit hours)
      - ARC 628 Historic Preservation (3 credit hours)
      - ARC 640 Tropical Architecture (3 credit hours)
      - ARC 641 Seminar on Town Design (3 credit hours)
      - ARC 685 Sustainable Design in Context (3 credit hours)
      - ARC 690 History of Cities (3 credit hours)

- GEG 622 Urbanization in the Developing World (3 credit hours)
- GEG 643 Population, Sustainability, and Media (3 credit hours)
- GEG 648 Climate Change and Public Health (3 credit hours)
- GEG 661 Urban Geography (3 credit hours)
- IGS 644 Energy Security and Environmental Sustainability (3 credit hours)
- IGS 647 Disaster Relief and Humanitarian Aid (3 credit hours)

- Resilience track
  - ARC 694 GIS in Urban Design Theory and Practice (3 credit hours)
  - Electives (students complete 9 credit hours from these options)
    - ARC 622 History Theory III-Housing, Transport and Infrastructure (3 credit hours)
    - ARC 623 Urban Design and Development Charrette (3 credit hours)
    - ARC 639 Adaptation to Climate Change (3 credit hours)
    - ARC 643 Seminar on Retrofit of Suburbia (3 credit hours)
    - ARC 648 Seminar in Community Development (3 credit hours)
    - ARC 680 Professional Advancement, Internship + Research (PAIR) (3 credit hours)
    - ARC 684 Special Problems (RAD-LAB UM) (3 credit hours)
    - ARC 697 Designing for the Internet of Things (3 credit hours)
    - GEG 636 Sustainable Food Systems (NEW) (3 credit hours)
    - GEG 680 Spatial Data Analysis (3 credit hours)
    - GEG 681 Spatial Data Analysis II (3 credit hours)
    - RED 601 Introduction to Real Estate Development and Urbanism (3 credit hours)
    - RED 650 Complex Real Estate Transactions (3 credit hours)
    - RED 660 Urban Infill, Historic Preservation and Mixed-Use Development (3 credit hours)
- Electives (students select 6 credit hours with approval of faculty advisor)
- Practicum, Design Studio or Project Studio Report (6 credit hours)

The program will not require completion of a master's thesis or a comprehensive exam.

The program will be overseen by two faculty members: Dr. Imelda Moise will oversee the Sustainability track and Sonia Chao will oversee the Resilience track. Both have extensive academic training and research experience in sustainability. Dr. Moise is Assistant Professor in the Department of Geography and Regional Studies. She has a Master of Science and PhD in Geography with a specialization in Health Geography from the University of Indiana—Urbana-Champaign. Sonia Chao is a Research Associate Professor and Director of the Center for Urban and Community Design in the School of Architecture. She has a terminal degree (MSArch) in Architecture—Building Design and Theory from Columbia University. Her teaching and research expertise is in the areas of sustainable architecture and urbanism, resilient design, and historic preservation in the subtropics. In addition, a Faculty Advisory Board with members from the Geography Department and the School of Architecture will provide additional oversight and coordination.

The proposed new program does 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:

- The proposed program meets the SACSCOC requirement of a minimum of 30 credit hours for a graduate program.
- Although two new courses are being created for the program, they represent less than 25% of the program curriculum.
- The program will be taught by existing faculty. No additional faculty are required.
- The program will be coordinated by qualified faculty members, Dr. Imelda Moise and Sonia Chao.
- The University is currently approved to offer the following graduate programs in related areas:
    - Master of Architecture
    - Master of Arts in Geography
    - Master of Real Estate Development and Urbanism
    - Master of Science in Architecture
    - Master of Urban Design
- The majority of the program will not be offered via distance education and, in any case, the University is approved to offer 100% distance education programs.
- The program will be offered on the University's Coral Gables campus.
- The graduate program covers the literature in the field through its required core coursework.
- The graduate program ensures ongoing student engagement in research and/or appropriate professional practice and training experiences through the required practicum, design studio or project studio report.

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
Leonidas Bachas, Dean of the College of Arts and Sciences
Rodolphe el-Khoury, Dean of the School of Architecture
Douglas Fuller, Chair, Department of Geography and Regional Studies
Karen Beckett, University Registrar
Carrie Glass, Executive Director of Student Financial Assistance and Employment

UNIVERSITY OF MIAMI
GRADUATE SCHOOL

Graduate School
P.O. Box 248125
Coral Gables, FL 33124-3220

Phone: 305-284-4154
Fax: 305-284-5441
graduateschool@miami.edu

MEMORANDUM

DATE: April 18, 2019

TO: Tomas Salerno
Chair, Faculty Senate

FROM: Guillermo (Willy) Prado
Dean, Graduate School

SUBJECT: Proposal – New Master of Professional Science in Urban Sustainability and Resilience

The College of Arts and Sciences submitted a proposal to offer a new Master of Professional Science degree program in Urban Sustainability and Resilience with two tracks effective Fall 2020. The proposal was discussed at the meeting of the Graduate Council on Tuesday, April 16, 2019, and was approved by all those present. The Graduate Council would like to see the chair of the oversight committee rotate between the College of Arts & Sciences and the School of Architecture every two of four years (program may determine the exact number). A statement should be added to the proposal to reflect this rotation.

CC: Leonidas Bachas, Dean, College of Arts and Sciences
Douglas Fuller, Chair and Senior Associate Dean, College of Arts and Sciences
Maryann Tobin, Executive Director of Programs, College of Arts and Sciences
Tiffany Plantan, Director of Education, Graduate School
Patty Murphy, Associate Provost for University Accreditation, Office of Assessment and Accreditation

DEGREE PROPOSAL

MASTERS OF PROFESSIONAL SCIENCE IN URBAN SUSTAINABILITY AND RESILIENCE

Proposal jointly by the College of Arts & Sciences and School of Architecture

1. RATIONALE

a. Exact Degree Title

The College of Arts & Sciences' Department of Geography & Regional Studies and School of Architecture seek to offer a Master of Professional Science (MPS) in Urban Sustainability and Resilience.

b. Purpose and Goals of the Master's Degree

The purpose of this interdisciplinary MPS in Urban Sustainability and Resilience program is to provide the knowledge, skills and hands-on practical engagement necessary for students working toward contributing to the urban challenges of the 21st century. This program leverages our strategic location, utilizing Miami as an urban lab to explore, analyze and propose solutions to the complex interrelationships among urbanism, sustainability and planning within the metropolitan environment as well comparatively with other locations throughout the hemisphere and the rest of the world. Building upon the College of Arts & Sciences' cross-disciplinary opportunities for students and faculty, the Department of Geography's strengths in urban geography, environmental studies and medical geography, as well as the School or Architecture's expertise in the study and design of the built environment, students will gain an interdisciplinary understanding of the spatial and temporal transitions involved in pathways toward urban sustainability (focusing on challenges such as health, housing, the environment, crime, and sea-level rise).

The program incorporates additional opportunities for enhanced, flexible student learning, and emphasized building technical competence and leadership skills to provide students with the well- rounded expertise that today's employers demand. Students will gain skills in methodology, including Geographic Information Systems (GIS), urban design, remote sensing, data visualization, and qualitative or quantitative methods. The knowledge acquired by students can contribute to future policies that lead to more sustainable development pathways.

Individual focus within the program will vary based on personal goals. They may include planning for resilient and sustainable cities, negotiating realities and implications for climate change, strategies for evaluating resource use and waste planning in cities, designing green infrastructure, designing sustainable transportation, exploring the links between environment and health, understanding the spatial dimensions of economic inequalities and crime.

This unique program is designed to attract student from diverse backgrounds and will offer scientific and practical insights to those already working in sustainable development or to those with backgrounds in planning, environmental, physical, management or social science. Students will work independently and in teams with a

specific focus on spatial and temporal transitions involved in the development of more sustainable cities and a specialized focus to meet student individual goals. All applications for the MPS in urban sustainability and resilience program will be evaluated based on the relevancy of applicants' prior academic and professional qualifications and aspirations.

UM's interdisciplinary strengths are distributed in its distinct schools, colleges and departments. At the university level, these schools brought together through ongoing research initiatives, fostered even further by President Frenk's new Road Map titled "Problem-based Interdisciplinary Inquiry." At the college level, these strengths will be brought together through the College of Arts & Sciences' Strategic Plan Impact 2015 that focuses on "three overarching initiatives: Investing in People, Re- Imaging the College, and Reaching Beyond Coral Gables." Geography, being a scientific field in the realm of interdisciplinary studies has allowed faculty in the Department of Geography to engage in interdisciplinary collaborations, with positive results. In addition, faculty have taught classes in departments across UM including: Public Health, Engineering, Sociology, International Studies, Biology, Latin American Studies, Geology and Ecosystem Science and Policy. Furthermore, apart from the strengths brought together through the College of Arts & Sciences' Strategic Plan Impact 2015, the program benefits form the partnership with the School of Architecture whose ambition is "to become a hemispheric leader in real world problem-based learning and project-based research while contributing solutions to the challenges facing urban environments locally and globally," as stated in its strategic plan.

c. Motivation and Demand

The MPS in Urban Sustainability and Resilience degree is proposed in response to: **First**, the world has embarked on a more sustainable development trajectory with the implementation of the Sustainable Development Goals (SDG) 2015-2030 and various climate accords; in particular, Goal 11 of the SDGs focuses on making "cities inclusive, safe, resilient and sustainable." **Second,** the opportunity to take advantage of existing expertise at University of Miami (UM), and a lack of existing Master's programs in South Florida that uniquely integrate urbanism, sustainability, and planning. Therefore, as a nationally ranked research institution, this places UM in a unique position to be the only program in South Florida to engage in the understanding of urban sustainability. **Third,** the College of Arts & Sciences' Strategic Plan- Impact 2025 Goal B1 calls for cross-disciplinary opportunities for students and faculty to collaborate on addressing society's most pressing, challenges through transdisciplinary pedagogical and scholarly endeavors. Undeniably, UM researchers have access to an important living laboratory due to UM's unique geographical position (gateway city to the Americas), a coastal city that is leading the way in facing challenges similar to what a number of low-lying coastal cities face around the world will encounter. The City of Miami participates in the Rockefeller 100 Resilient Cities program and the Southeast Florida Climate Compact has been heralded as a model not just for the country but also for the world. **Fourth**, the South Florida environment is a microcosm of the challenges facing global multi-ethnic cities, with more than half the population foreign-born. Miami was also an

initial focal point for a 2016 Zika virus outbreak and its urban sprawl has resulted in major densification and transportation challenges, and it is in the midst of a housing affordability and sea rise crises. This living laboratory can be utilized for the exploration and analysis of complex interrelationships between urbanism, sustainability and planning (e.g., climate change, transportation, health/well-being, crime, vulnerability and resilience); and to propose solutions to these urban challenges.

With the exception of a graduate certificate at USF, there are no existing Master's program in the United States (US) that focus on the intersection between urbanism, sustainability, design and planning. The most similar programs include Xavier University's Master of Arts in Urban Sustainability and Resilience, Central Connecticut State University and University of South Florida's Master of Arts in Global Sustainability. Also, Long Island University's Master of Science in Environmental Sustainability, Depaul University's Master of Arts in Sustainable Urban Development, George Washington University's Sustainable Urban Planning Master of Professional Studies and Indiana University - Purdue University Indianapolis' Master of Arts in in Urban Sustainability. Possible career paths as indicated on these program websites include infrastructure and sustainability consulting, environmental and urban consultancy, city or urban governance and planning, policy analysis and development, corporate social responsibility, environmental management and management systems, sustainability NGO's and PhD Study.

The MPS in Urban Sustainability and Resilience program will provide excellent preparation for employment with local, regional and international organizations in areas of international development, business, government, humanitarian assistance and planning. The local significance of demographic, environmental, economic and social transitions in South Florida provides an immediate local market for careers with county and municipal governments, urban planning and design companies, environmental and civil engineering consulting firms, local, multilaterals and bilateral international NGOs, investment banks and consulting companies working with international development. As urban environments increasingly continue to be affected by climate change (e.g., intensifying hurricanes, vector-borne diseases, access to fresh water, disruptions in the food supply chain, and coastal flooding), there is increasing demand in both the private and public sectors for graduates with interdisciplinary training that integrate urbanism, sustainability and planning. There has been an above-average expected job growth average (1%) in the environmental fields between 2014 and 2024 and the projections are based on the heightened interest of the public in hazards caused by the environment and population growth. In addition, in 2015, President Obama's administration launched a new "Smart Cities" Initiative to help communities tackle local challenges and improve city services, while across the country, mayors, city planners, legislators, agencies, tech companies and entrepreneurs gather each year to share thoughts and plans on how to bring cities into the present, and how to propel cities into the future.

The department will work with the School of Architecture internship program and the College of Arts & Sciences internship coordinator (who currently runs a successful placement program with institutions and organizations) to facilitate practicum and

eventual employment opportunities for students with skill set developed by the MPS in Urban Sustainability and Resilience program. The department along with the School of Architecture internship program and the College of Arts & Sciences internship coordinator will conduct a survey each summer with placement agencies for input regarding in-demand skills sets in this rapidly evolving field in order to adjust curriculum and learning outcomes accordingly for the ensuing year. Additional research regarding the employment opportunities of graduates with this degree is attached as Appendix D.

2. CURRICULUM

a. List the major division(s) of the discipline in which graduate degree work will be offered

The Department of Geography and Regional Studies and the School of Architecture will jointly offer the MPS in Urban Sustainability and Resilience. The College of Arts and Science, administered by the Office of Interdisciplinary and Professional Studies, will issue the degree. The proposed coursework will provide an advanced understanding of the complex relationships between human and physical processes shaping cities and a focus on the challenges of achieving urban sustainability, regardless of the student first degree's discipline.

b. Description of the proposed program.

The MPS in Urban Sustainability and resilience degree is designed to allow students to pursue advanced training in specific STEM disciplines, while developing workplace skills highly valued by employers. MPS degrees are essentially non-thesis MS degrees that prepare graduates for careers in government, non-profit, and business sectors by combining content knowledge with essential workplace skills, such as writing, leadership, and communication. Most MPS programs require a final project or internship experience, in lieu of an academic thesis.
The MPS initiative began in 1997 with funding from the Alfred P. Sloan Foundation to support the establishment of programs in the natural sciences and mathematics at research institutions (Council of Graduate Schools, 2011). A Sloan Foundation grant to the Council of Graduate Schools (CGS) extended the MPS initiative to master's-focused institutions. In 2006, CGS assumed primary responsibility for supporting and expanding the MPS degree, with the goal of making it a regular feature of U.S. graduate education. As of September 2013, 302 programs from 134 institutions were recognized as MPS degrees, including several programs at the University of Miami's Rosenstiel School of Marine and Atmospheric Science.

3. REQUIREMENTS

a. Prerequisites.

- ☐ A completed Bachelor's degree in an appropriate field from ab accredited institution.
- ☐ A minimum overall undergraduate grade point average of 3.0 (on a 4.0 scale).

- A score of at least 80 on the TOEFL for international students/
- GRE minimum score of 297 or higher. (The program may waive GRE requirements GRE based on the applicant's years of experience and the quality of experience or allow for equivalent exam substitutions, e.g. LSAT or GMAT).
- Three current letters of recommendations.
- A personal statement of academic and professional goals.

b. Courses.

Students will complete 12 core credits, 12 credits in a track, 6 elective credits, and 6 credits of their practicum for a total of 36 credits.

Core Courses:

GEG 620—**Sustainable Cities (New Course to be developed and taught by Dr. Han Li)** This course introduces graduate students to the emerging field of urban sustainability from multiple an interdisciplinary perspective. The purpose of this course is to prepare its students to analyze, assess and critically evaluate urban policies that seek to address the sustainability issues and transitions.

GEG 623— **Seminar in Urban Management**
Identification of and responses to urban problems in large cities in European and Latin American metropolitan areas. Emphasis is on demographic, cultural/ethnic, service-provision, environmental, transportation, and land-use problems. Approach is via case studies, theory applications, and planning practicalities.

ARC 621—**Urban Design History and Theory**
Survey of housing theories and projects with emphasis on morphological context, typology and composition - focus on topics of modernity. Part II: Introduction to thoroughfare design and walkability principles; description of urban, suburban, rural and regional infrastructure.

ARC 683—**An Introduction to Resilient Community Design**

Group or individual investigations of significant architectural issues, offered by special arrangement only.

Track options:

Sustainability Track

*Track Core Course (**3 credits**):*

GEG 661—Urban Geography
An introduction to the essential elements about the growth and development of cities. Review of the challenges of urbanization and urban sustainability in the contemporary period.

*Two specialized track electives (choose **9 credits** from this list):*

ARC 626— **Landscape Architecture Design II**
Analysis and design of landscape spaces. Topics include ecological principles, landforms and plant materials.

ARC 641—**Seminar on Town Design**
Introduction to the lexicon of urbanism; analytical presentations of the concepts of: region, town, neighborhood, corridor, district, and building type; inter disciplinary presentations, review, and criticism of current town and urban design projects.

ARC 685—**Sustainable Design in Context**
Group or individual investigations of significant architectural issues, offered by special arrangement only.

ARC 628. Historic Preservation. Basic design principles for the rehabilitation of historic buildings. Evaluating character-defining details; significance analysis; context of setting issues within historic districts; applying the Secretary of the Interior's Standards f or rehabilitation.

ARC 640. Tropical Architecture. The course will comprise a discussion of tropical architecture and the theme of tropicalism. Course work will include research and documentation in drawings of selected case studies.

ARC 690—**History of Cities**

Historical overview of the origin of cities and the development of cities in the East, West, and New World. Focus on the nature of the industrial revolution and the development of the industrial city and contemporary urban settlement

GEG 622— **Urbanization in the Developing World**
Urbanization in the Developing World: Patterns and processes in large cities in the developing world are examined.

GEG 643—**Population, Sustainability, and Media**
Seminar in Urban Management: Identification of and responses to urban problems in large cities in European and Latin American metropolitan areas. Emphasis is on demographic, cultural/ethnic, service-provision, environmental, transportation, and land-use problems.
Approach is via case studies, theory applications, and planning practicalities.

GEG 648—**Climate Change & Public Health**
The mechanisms by which climate change adversely affects human health and the policy options for mitigating our exposure.

IGS 644 – **Energy Security and Environmental Sustainability**
The importance of energy and the mitigation of climate change in formulation of country strategies, advancement of national interests and shaping of the international system will be stressed.

IGS 647 - **Disaster Relief and Humanitarian Aid**
This course examines the management of disasters issuing from natural causes. It is focused primarily on the theory and practice of response.

Resilience Track

*Track Core Course (**3 credits**):*

ARC 694— **GIS in Urban Design Theory & Practice**
Exploration of Geographic Information Systems (GIS) in urban design. Principles of GIS and their application to spatial analysis, data management and visualization.

*Two specialized track electives (choose **9 credits** from this list):*

ARC 622—**History Theory III- Housing, Transport and Infrastructure**
Advanced survey of urban design theories in print and practice - emphasis on issues of modernity. (Seminar format)

ARC 623—**Urban Design and Development Charrette**
Introduction to planning and public participation methods. Design workshop in collaboration with students in the master in Real Estate and Urbanism program. (Some travel may be required.)

ARC 639— **Adaptation to Climate Change**
The course is an elective seminar that introduces students to the phenomena and the related discussion on the topic of climate change. With an emphasis on human response, the course reviews current scientific evidence, and the potential mitigation of emissions and other causal actions, followed by study of the adaptation required by changing conditions.

ARC 643—**Seminar on Retrofit of Suburbia**
Introduction to the critical reconstitution of the city; theory and history of the concepts of revitalization and redevelopment; presentations, review, and criticism of current case studies.

ARC 648—**Seminar in Community Development**
Study of the contemporary context for the development of the physical environment. Examination of public, private and third sector implementation of building and community design. Format: guest speakers, readings, discussions, and seminar.

ARC 680—**Professional Advancement, Internship + Research (PAIR)**
Research Component of PAIR program. Student, host office and faculty collaboratively develop a focused, in-depth research project related to the tasks the student is completing as part of the Internship Component of the PAIR program. Application and PAIR committee acceptance required prior to enrollment.

ARC 684— **Special Problems (RAD-LAB UM)**
Group or individual investigations of significant architectural issues, offered by special arrangement only.

ARC 697—**Designing for the Internet of Things**
This course examines how current research and development in embedded computation bears on architecture, landscape, and urbanism. Students will explore the implications and impact of ubiquitous computing in its potential to change the way we conceive, construct, inhabit and interact with our buildings, landscapes, and cities.

RED 601—**Introduction to Real Estate Development and Urbanism**
Fundamentals of real estate development of urban places, including the many challenges of the development process such as analyzing market sectors and development opportunities, comprehending the development context of regulation, public policy and politics, raising investment capital, assembling land, program form valuation, building types, construction management, marketing, and sales.

RED 650—**Complex Real Estate Transactions**
Real estate transactions and deal structuring from the development perspective. Using the case study method, the course explores the key components and the disciplines needed for successful real estate transactions and projects.

RED 660—**Urban Infill, Historic Preservation & Mixed-use Development**
Builds students' competencies for infill and redevelopment practice focusing on: mixed-use development, transit oriented development, barriers and solutions for urban infill development, urban site analysis, repositioning of urban land, vacant and underutilized properties, long-term land leases, tax incentives, historic preservation, public-private partnerships, business improvement districts, tax increment financing, community (re)development districts, parking strategies, and urban housing types.

GEG 636— **Sustainable Food Systems (New Course to be taught by Dr. Doug Fuller)** Examines the social, economic and environmental dimensions of agriculture, the emerging global challenges revolving climate change, resource depletion, and various movements within agriculture.

GEG 680— **Spatial Data Analysis**
The use of basic methods or quantitative analysis for spatial data, including

basic descriptive and inferential statistics and special techniques for spatial data.

GEG 681— **Spatial Data Analysis II**
Social and environmental science applications of spatial statistical analysis illustrated with data and numerical (simulation experiments) examples employing interactive software. This course's focus is on spatial auto correlation.

c. Examinations
No comprehensive examinations are required.

Students will undertake a 6-credit practicum, design studio or project studio as their completion requirement. Over the summer, students will submit a preliminary draft of the practicum, design studio or project studio report evaluated for summer grading.

4. STUDENTS

During the first year of the program, we anticipate three to five students. In its second year, the program anticipates doubling this number. By year three, an estimated seven to ten MPS in Urban Sustainability and Resilience students is expected to enroll in the program. As the only program of this kind in Florida, the MPS in Urban Sustainability and Resilience anticipates immediate growth that will offset the cost of both faculty members and from year three onward.

We believe that the intellectual and motivational pieces are in place at UM for creating a to-tier, international recognized graduate program in urban sustainability and resilience that combines urbanism, sustainability, design and planning. Essential elements for the success of the proposed program will include tailored and targeted recruitment, post-degree job placement and other resources. Below is a brief outline of the plan to create the graduate program (see details in the remaining sections of the proposal).

Recruiting of students will take place via multiple recruiting efforts. ***First***, through the graduate program director, who will develop ongoing collaborative relationships with local, national and international experts in the field (e.g., academic associations). ***Second***, through the Department of Geography and School of Architecture faculty networks, many of whom are involved in large, multi-institutional, interdisciplinary research activities that involve graduates. ***Third***, through targeted promotion of the program at top-ranked undergraduate departments in related fields and agencies who may be potential hires of our students. ***Fourth***, from within the pool of finest UM undergraduates with related degrees of interest.

Completion of the MPS in Urban Sustainability and Resilience degree will take three to four semesters. The MPS in Urban Sustainability and Resilience degree students will be required to take three semesters of course work, which includes four core courses, three focus area courses, two selected electives, and one

semester of practicum or design studio. A practicum report or design studio will be required at the completion of the program. Students have the option to opt out of the practicum and instead take an additional six elective credits. As part of the effort to make SDG 11 a reality and to increase the political around its implementation, key stakeholders (including governments, high-level representatives of the United Nations System, civil society, philanthropy, and private sector leaders representing critical constituencies and sections of society) are increasingly bringing energy and attention to the importance of cities in the context of sustainable. This means that the Department of Geography and School of Architecture's MPS in Urban Sustainability and Resilience degree students will be attractive candidates for city, international development, business, government and humanitarian sector positions. In order to assure high quality of the MPS in Urban Sustainability and Resilience program, a formal evaluation process will be in place from inception.

A consumer satisfaction survey of our students' opinion about the program and feedback regarding student progress toward the MPS in Urban Sustainability and Resilience degree will be gathered each end of semester. All MPS in Urban Sustainability and Resilience degree students will take the three core courses, a practicum and all electives selected based on each student's personal interests and career aspirations. Each student will have a primary advisor based on his/her field of interest.

Sample schedule:

Semester	Cr.	Course Description	Department and #
Year 1, Fall	3	Sustainable Cities	**GEG 620**
	3	Urban Design History and Theory	**ARC 621**
	3	Elective	
Total	**9**		
Year 1, Spring	3	Seminar in Urban Management	**GEG 623**
	3	An Introduction to Resilient Community Design	**ARC 683**
	3	Elective	
Total	**9**		
Year 2, Fall	3	Track Core Course	
	3	Track Elective	
	3	Track Elective	
Total	**9**		
Year 2, Spring	3	Track Elective	
	6	Practicum, design studio or project studio	**GEG 810 or ARC 609-610**
Total Credits	**36**		

Learning Outcomes Assessment Plan (see attached).

At the end of the MPS in Urban Sustainability and Resilience program practicum or design studio, the Graduate Studies Committee will assess the student achievement of the Department of Geography and SoA learning outcomes as follows:

Outcome 1. Through the advanced understanding of the concepts and theories of both Sustainability Science, Design, Planning and Geography, students will be able to select and use advanced tools and methods to measure and assess synergies and trade-offs among governance, environmental conservation, economic prosperity, and social inclusion.
Assessment Measure 1: Students will have advanced understanding of the concepts and theories associated with Sustainable Development, Geography, Resilience and Planning.

Assessment Measure 2: Students will demonstrate capacity to select and use advanced tools and methods to measure and assess synergies and trade-offs among governance, environmental conservation, resilience, economic prosperity, and social inclusion.

Learning Outcome 2: Students will be able to translate research on sustainability development, resilience and geography into policies and programs that seek to solve some of the recurrent urban problems.

Assessment Measure 1: Students will be able to translate research on sustainable development, resilience and geography into the design of modern urban policies and programs.

Assessment Measure 2: Students will be able to translate research on sustainable development, resilience and geography to implement and evaluate modern urban policies and programs.

5. RESOURCES

a. Assessment of Library Holdings:
A UM library collection survey was conducted with the geography, maps, and communication librarian, Terri Robar. Most journals, books and e-readings are already available through UM's collection. Materials that are not present in the library's collection have been confirmed to be available through interlibrary loan, and any future vital required texts will be requested through the head of acquisitions.

b. Physical Resources: Existing Facilities, Equipment, and Space:

The GIS Laboratory (Campo Sano 201)
The Department of Geography has a dedicated GIS laboratory with 30 Dell Precision Workstations, 42-inch printer, 20 WAAS-capable Garmin GPS receivers. Software includes SAS, ArcMap, ERDAS Imagine, Microsoft Office, ARB, GeneScan, Arc/Info, Arc/GIS, IDRISI, R, Microsoft Office Enterprise 2013 suite and Acrobat XI Pro. Staffed in the GIS Lab is a full-time GIS manager who

will also be available for the students.

The Thomas Murphy Design Studio Building
The Thomas P. Murphy Design Studio Building is LEED-certified and includes studios to accommodate approximately 120 students. It includes 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. The facility occupies about 20,000 square feet, which includes indoor and outdoor jury areas where students present their final projects before esteemed peers and faculty.

The RAD Lab
RAD (Responsive Architecture and Design) is a lab based in the School of Architecture lead by Dean Rodolphe el-Khoury and is open to faculty and students as a platform for collaborative work. RAD 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 and wireless connectivity. Projects at RAD-UM develop models for digitally enhanced environments that are better equipped to handle persistent and emerging challenges in the areas of healthcare, building technology and sustainability. The projects are geared for multi-disciplinary collaboration and for potential development in partnership with industry. RAD also provides educational services with courses taught by el-Khoury and Lab Supervisor Christopher Chung, as well as workshops that build technical skills for the use of cutting-edged digital technology. RAD also supplements the school's IT and digital fabrication infrastructure with equipment for rapid prototyping and digital electronics available to faculty and students.

Interdisciplinary Centers and Resources:

Students in the MPS in Urban Sustainability and Resilience program will have the opportunity to become involved with these and other centers at UM. Benefits to students include: 1) having unique opportunities and resources that will strengthen their overall experience at UM. 2). Interact with other peers and faculty from other departments, which will also have an effect on the Department of Geography and Regional Studies and the School of Architecture's core activities and have a net overall effect of broadening our program. In addition, our undergraduate students will benefit greatly from this new diversification of research directions, visiting speakers and events. Below are a list of existing programs and centers that are available to support students in this program:

Arts and Sciences Program for Internship-Related Experiences (ASPIRE)
Given that, students in the MPS in Urban Sustainability and Resilience program will be required to complete a practicum, design studio or project studio, it is critical to collaborate with an already established program focused on enhancing, facilitating, and promoting internships for the College of Arts & Sciences. ASPIRE is well positioned to place student with agencies, communities, and organizations in Miami, nationally, and worldwide as they work to match students in educationally enriching internships. ASPIRE internships offer students an unparalleled opportunity: (1) to partner with an agency/organization approved by faculty; (2) to participate in projects

closely tied to academic curriculum; and (3) to apply critical-thinking, data analysis, leadership, methodological, and theoretical skills to the scope of applied work

The Centre for Urban and Urban Design (CUCD)
The CUCD was founded in 1992 at the School of Architecture 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. 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. It promotes a collaborative, interdisciplinary approach that supports creation, preservation and retro-fitting of resilient / sustainable communities and buildings.

The Center for Computational Science (CCS)
The Center for Computational Science actively engages in research to solve the complex technological problems of modern society. They provide a framework for promoting collaborative and multidisciplinary activities across UM and beyond, and strive for excellence in research, teaching, and service, covering the fundamental and applied aspects of computational science and smart cities concepts which will be useful for MPS in Urban Sustainability and Resilience students working with big data and those interested in smart cities concepts.

The Abess Center for Ecosystem Science (ECS) and Policy
The ECS program provides students with a broad background in environmental issues from a variety of perspectives, along with in-depth education in an area of specialization. Students in the MPS in Urban Sustainability program interested in environmental issues will be able to take courses from ECS, which emphasizes integration of science and policy approaches to real- world environmental issues. This will give students both the theoretical background and technical skills to pursue environmental careers in, teaching and research, as well as for careers in government and private industries concerned with the environment.

Office of Civic and Community Engagement
The Office of Civic and Community Engagement supports engaged scholarship throughout the University and the larger South Florida community. This office coordinates existing University- wide efforts that promote community partnerships, working with the Butler Center for Volunteer Service and Leadership Development to promote community service among students and link those experiences to experiential learning, and creating new initiatives that bring multiple schools and disciplines together to work on shared community-based projects.

Miami Housing Solutions Lab
The Miami Housing Solutions Lab was created by the University of Miami's Office of Civic and Community Engagement (CCE) to provide resources, tools, and data related to affordable housing and community development in the Miami metro area. This platform provides community groups, planners, policymakers, and affordable housing developers with information on local housing needs as well as housing policies that prevent displacement and promote affordable housing.

c. Additional faculty:

This joint degree program is built on courses that are in existence and already offered by the Department of Geography and Regional Studies and the School of Architecture and does not expect to request any additional faculty in the near future.

The Faculty Advisory Board will consist of Imelda Moise, Doug Fuller, and Richard Grant from Geography and Sonia Chao, Elizabeth Plater-Zyberk and Allan Shulman from Architecture. The Faculty Advisory Board along, with an administrative staff member, will comprise the graduate committee and will review all applications and make recommendations regarding admission. Subject to the oversight of the Department of the Geography Chair and the Dean of SoA, the Advisory Board will also advise on the selection of course work and for setting academic policies for the program. This will be in consultation with all Geography and Architecture faculty and policies established by the UM graduate school. The chair of the Advisory Board will rotate between the College of Arts & Sciences and the School of Architecture every two years. The Department of Geography faculty involved in the program's course teaching and program participation include Douglas Fuller, Ira Sheskin, Richard Grant, Harold Wanless, Jose Silva, Shouraseni Sen Roy, Justin Stoler, Imelda Moise and Han Li. Faculty from the school of Architecture include Sonia R. Chao, Allan Shulman, Charles Bohl, Rodolphe, el-Khoury, Eric Firley, Jean-Fraçois Lejeune, Joanna Lombard, Christopher Meyer, Armando Montero, Elizabeth Plater-Zyberk, Mark Troen, and Carie Penabad. Imelda Moise will serve as the Program Director and Lead Advisor for the Sustainability Track. Sonia Chao will serve as Lead Advisor for the Resilience Track. Their CVs are attached as Appendices B and C.

d. Budget:

The program is designed to be self-supporting through those tuition revenue returns. Start-up expenses will be provided by the Dean's Office of the College of Arts & Sciences (A&S) reimbursed once tuition revenue has been received. Revenue will be returned to the A&S and the SoA by student, by course. No new personnel will be needed to staff this degree. Administration, recruitment, and marketing will take place through the A&S' Office of Interdisciplinary and Professional Studies.

6. COMPARISONS

a. Comparable Programs

Compare the proposed program at the University of Miami with five high-quality, established programs at comparable universities. In the comparisons, include only the sections and subsections from items #1 through #7 above that are appropriate

The proposed interdisciplinary MPS in Urban Sustainability and Resilience program is unique, comparing favorably with other Urban Sustainability, Global Sustainability, Sustainable Cities, Sustainable Urban Development and Urban

Sustainability and Resilience programs, tying together issues of urbanism, society, design and planning, and in a way that does not yet exist in South Florida. It is comparable to other Master's program in terms of curricular structure and requirement, anticipated time to graduate, and opportunities for diverse learning outcomes and professionalization (e.g., hands-on practicum). The proposed graduate program further provides a cross-disciplinary integration, not found in any other program, which includes dynamic and complex links between urbanism, sustainability, and planning studies. Compared below in detail to the proposed Department of Geography and SoA Master's Program are five established programs. These five programs at five US and international universities span a range of approaches to either the corporate sustainability focus degree, sustainable development focus degree, urban sustainability and resilience degree focus or sustainable cities and leadership degree focus, with respect to the diversity of their focal areas, programmatic flexibility, departmental/disciplinary integration, and locally/regionally relevant research-education orientation. Through its degree track, the proposed MPS in Urban Sustainability and Resilience program builds urbanism, sustainability, planning and societies in a systematic manner, building on nationally and international recognized strength of its faculty, UM, the Department and School's connections to other UM departments, schools and colleges. Furthermore, the program facilitates research and training in locally relevant urbanism and sustainability topics, building strong opportunities for hands-on experiences, networking opportunities, and faculty and student research. In doing so, the proposed program aims at for both flexibility and rigor via cross-disciplinary concepts and theories with real world problems and solutions in core and elective courses.

UNIVERSITY OF LEEDS, MSc Sustainable Cities
AALBORG UNIVERSITY, MSc Engineering Sustainable Cities
INDIANA UNIVERSITY - PURDUE UNIVERSITY INDIANAPOLIS, MPA Urban Sustainability
XAVIER UNIVERSITY, MA Urban Sustainability
and Resilience UNIVERSITY OF SOUTH
FLORIDA, MA Global Sustainability

UNIVERSITY OF LEEDS, School of Earth
and Environment Tracks: na

https://courses.leeds.ac.uk/i429/sustainable-cities-msc

Degree (s)/Tracks	Coursework Requirement	Coursework Time Frame	Internship/ Practicum	Thesis
Master of Science Sustainable Cities	**Overall:** 180 credits **Core:** Cities and Sustainability	12 months full time	No	Research Project and Leadership for Sustainability

	Skills for Urban Sustainability City Systems: Energy City Systems: Housing City Systems: Mobility City Systems: Natural Systems			
	Research Project and Leadership for Sustainability			

AALBORG UNIVERSITY, Department of

Development & Planning Track: Sustainable Cities

https://www.en.aau.dk/education/master/sustainable-cities/academic-content/

Degree (s)/Tracks	**Coursework Requirement**	**Coursework Time Frame**	**Internship/ Practicum**	**Thesis**
Master of Science Engineering	**Overall:** 30 credits **Core:** Tools and approaches to sustainable development Challenges and planning for sustainable cities Theories of science and research designs	4 semesters	Internship, study abroad or "prolonged project period	Yes

	Politics, planning and governance Systems and structures of the city Economic, social and environmental impact assessment			

INDIANA UNIVERSITY - PURDUE UNIVERSITY INDIANAPOLIS, School of Public and Environmental Affairs

Tracks: Environmental Policy and Sustainability, policy analysis, non-profit management, public management and urban affairs

https://spea.iupui.edu/academics/graduate-degrees/mpa/concentrations/environmental-policy-and- sustainability.html

Degree (s)/Tracks	**Coursework Requirement**	**Coursework Time Frame**	**Internship/ Practicum**	**Thesis**
Master of Public Affairs Environmental policy and sustainability concentration	**Overall:** 39 credits for the MPA which include 21 credits for this concertation **Core for concentration:** Public management Public policy process Seminar in environmental policy and sustainability	2 to 4 years with full-time and part-time options	Capstone	Not clear

	Environmental policy analysis Unban sustainability Policy finance and budgeting Application of GIS			

XAVIER UNIVERSITY,

Tracks: na

https://www.xavier.edu/urban-sustainability-and-resilience/

Degree (s)/Tracks	Coursework Requirement	Coursework Time Frame	Internship/ Practicum	Thesis
Master of Urban Sustainability	**Overall:** 39 credits for the MPA which include 21 credits	2 years	Yes	Not clear
and Resilience	for this concertation **Core for concentration:** Not specified			

UNIVERSITY OF SOUTH FLORIDA, Patel College of Global Sustainability

Tracks: Sustainability policy, sustainable business, climate change & sustainability, entrepreneurship, food sustainability & security, sustainable energy, sustainable tourism, sustainable transportation, water sustainability

https://www.usf.edu/pcgs/ma-program/concentrations.aspx

Degree (s)/Tracks	Coursework Requirement	Coursework Time Frame	Internship/ Practicum	Thesis
Master of Global Sustainability	**Overall:** 33 credits	2 years	Yes	Internship or Capstone project

	Core: Concepts and Principles of Sustainability Economics and Finance for Sustainability Systems Thinking: The Key to Sustainability Climate Change Adaptation and Mitigation			

Appendix A

Potential Course Elective List (6 credits from this list)

Geography

For students interested in human-environment interactions, health and medical geography, and globalization and urban change:

GEG 603. Designing and proposing geographic research projects based upon a critical reading of the geographical literature. Students will prepare a master's thesis (master's students) or dissertation (doctoral students) project proposal.)

GEG 610. Survey Research Methods: The use of survey research including the choice of a survey mechanism, sampling, questionnaire design, survey logistics, survey analysis, and reporting of results.

GEG 612. GIS for Health & Environment: Not listed (GEG 412: This course provides practical experience in using spatial technologies to address issues of health and environment. This course will provide an introductory level approach to using the ArcGIS software, so even if you have never used it, you can learn what you need. Lectures, discussions, readings and guest speakers will provide content and background. A final project will allow you to explore your own interests.

GEG 622. Urbanization in the Developing World: Patterns and processes in large cities in the developing world are examined.

GEG 643. Population, Sustainability, and the Media: Explores opposing views of population growth and environmental sustainability through the media and cinema: contrasts "Doomsters" who believe population growth and resource consumption threaten human survival and pro-growth "Boomsters" who believe human ingenuity and technology will continue to allow humankind to prosper.

Architecture

For students interested in urban design, social integration and economic sustainability:

ARC 601. Introduction to Urban Design (with instructor approval). Introduction to urban principles, documentation, lexicon of urbanism, urban codes, and architectural guidelines

International Administration

For students interested in the identification, analysis and management of the complex problems that confront modern institutions:

IGS 644. Energy Security and Environmental Sustainability: For long energy has been one of the major factors in formulating countries' strategies, shaping international politics and defining security. Recent economic slowdown and revolution of unconventional oil and gas have reshaped global geopolitical landscape. This course will examine the intersection between energy, environmental sustainability, politics and international security. It will take energy security as a starting point and will explore how states meet

their energy security and environmental sustainability needs and what implications this process has globally. This course will examine the concepts of environmental sustainability and energy security, stressing the importance of energy and mitigation of climate change in formulation of country strategies, advancement of national interests and shaping of the international system.

IGS 647. Disaster Relief and Humanitarian Aid: This course examines the management of disasters issuing from natural causes. It is focused primarily on the theory and practice of response. At the center of this investigation is a difficult question: how to help? The answers are not obvious. Through the vocabularies of practitioners and the frameworks offered by academic literature, we will explore the ways in which responders respond, the lessons learned and the best practices that have emerged in the field of disaster response and humanitarian intervention.

Anthropology

For students interested in the anthropology of sustainability:

APY 602. Advanced Seminar in Cultural Anthropology. The application of the anthropological perspective, data collection and analyses methods, and theoretical foundations of traditional cultural anthropology to understanding and working on solving human problems in the modem world. Topics include the design, conduct, and application of modem ethnological methods to research venues in business, governmental/NGO agencies, conflict studies, natural disasters, medical, globalization and financial organizations.

APY 612. Advanced Medical Anthropology. Applications of theories and methods of medical anthropology to problems in human health and disease.

Civil, Architectural and Environmental Engineering

For students interested in the design, construction, and operation of the built environment and protection of the natural environment:

CAE 632. Ground Water Hydrology

CAE 642. Emerging Technologies in Design and Construction

CAE 660. Sustainable Construction. Drivers and foundations of sustainable construction. Principles of sustainable construction: integrated planning and design life-cycle view of projects, resource selection and optimization, protection of the natural environment, toxics and pollutants elimination, durability and quality. Green building assessment initiatives, green building policies, and code impacts. Evaluation of the environmental impacts of construction operations. Innovative design and construction practices. Economic viability. Subtropical and coastal issue and opportunities. Case studies.

CAE 661. Building Information Modeling

CAE 666. Facilities and Operations Management.

CAE 681. Energy-Efficient Building Design: Concepts and methods of energy-efficient and environmentally friendly building design. Topics include energy and sustainable

design strategies, climate, passive and active solar design, passive cooling systems, daylighting, and computer simulation of energy flows in buildings. A quantitative understanding of energy fundamentals, examples from practice, and design exercises using computer simulation programs are emphasized.

CAE 743. Risk Analysis. Probabilistic risk assessment, Poisson processes, Bayesian methods, fault trees, contaminant transport models, and dose-response relationships for assessment of natural and technological risks.

CAE 744. Risk and Resilience. Introduction to Risk Management, and Resilience. Topics include Hazards Risk Management, Risk Management for the Private Sector, Hazard Risk Management Approach, Mitigation Planning, Forming Partnerships and Involving the Public, Establishing Context for Risk Management, Identifying Hazards. Scope Vulnerability and Understand Capacity, Analyze and Assess Risk, Identify and Assess Risk Reduction Measures, Financing Risk Reduction.

CAE 780. Indoor Environmental Modeling. Prediction of indoor environment using computational fluid dynamics techniques. Advanced topics in thermal comfort and indoor air quality. Basic concepts of turbulence modeling and numerical methods for natural, forced, and mixed convection and jet flows indoors. Simulation of air velocity, temperature, and contaminant concentrations in buildings.
Comparison of the simulated results with measured data.

Public Health

For students interested in epidemiology, public Health and urban health:

EPH 640. Urban Environment and Public Health Where we live, where we work, where we go, and how we get there may all affect our behaviors and ultimately our health and well-being. This course examines the urban environment - in particular, those aspects of urban/suburban/semi-rural environments created by humans. This includes how homes, neighborhoods, cities and regions impact public health challenges such as obesity, chronic disease, mental health, infectious disease, and injuries. This course will teach students to translate scientific findings to design healthy communities, and develop interventions to promote urban health. Students will learn how to map neighborhood characteristics such as food outlets, parks and walkability, and to develop recommendations for policymakers.

EPH 646. Climate and Health: There is an intricate relationship between climate and health. Climate changes directly affect health and well-being but also mediate the effects of socio-physical and biochemical changes in the environment on health and well-being. This course will help students unravel this intricate relationship between climate and health. A range of topics will be covered including: a) the etiology of disease with respect to climate change, b) shifting burden of disease and disability

with respect to changing climate and climate-mediated changes in the environment, and c) application areas of climate-health linkages: unintentional injuries and climate change, vector-borne disease and climate change, heat-related mortality, disease of metabolic syndrome and climate change, cardiopulmonary, allergy and immunology disease due to bioaerosols and air pollution.

EPH 648. Climate, Cool Cities, Healthy Communities: In the current era of climate change and rapid urbanization, an understanding of the impacts of urban design, planning and policies on climate and human health in urban and suburban areas is critical. Drawing on diverse disciplinary perspectives, including public health, architecture, planning, and public policy and government and non-profit sectors, the course provides students with the ability to comprehend, synthesize, communicate, and apply evidence-based urban design principles in relation to current and future challenges of climate and health. Additionally, in accordance with the adage, "Think globally, act locally," students will have the opportunity to interact with local experts who will share their knowledge of national and international policies and programs in the area of urban design, climate and health – while applying their learning to measure current challenges and inform policies of climate and health in the urban/suburban localities.

<u>The Rosenstiel School of Marine and Atmospheric Science (RSMAS)</u>

For students interested in environmental impact, assessment science, and policy:

ATM 614. Weather and Climate: This course will cover the structure, physics, dynamics and thermodynamics of the atmosphere; including weather analysis, weather forecasting, climate and climate change. Contemporary topics covered in this class will include global warming, the ozone hole, hurricanes, thunderstorms and other severe weather phenomena.

ATM 653. Climate Change (math and physics pre-requisites required): Overview of the physical processes, which regulate the earth's climate and response to forcing.

MES 602. Economics of Natural Resources: Course brings together the approaches of natural resource and environmental economics to provide a comprehensive overview of the economics of national, international, and global environmental problems. A unifying theme throughout the course is the concept of sustainable development, defined as maximizing the net benefit to economic development while maintaining the services and quality of natural resources over time. Economic reasoning is used to examine the causes and consequences of environmental and resource problems and measures for dealing with them.

MES 610. Environmental Planning and the Environmental Impact Statement: Course takes a broad view of environmental planning and analysis while focusing specifically on the preparation of environmental impact statements. Statutory requirements and procedures at the federal level are examined. Judicial opinions are studied that reflect environmental disputes and controversies. The course also considers some of the substantive requirements of environmental impact analyses such as the assessment of physical and biological environment and socioeconomic impacts.

MES 618. Coastal Zone Management: Development of a framework for formulation and

assessment of coastal zone policy. Analysis of issues and conflicts in coastal zone management (CZM), such as: zoning and planning, coastal and beach protection, ecosystem protection, the federal flood insurance program, adaptations to sea level rise, coastal pollution from land-based sources, and tourism impacts.

MES 620. Environmental Law: An introductory course focusing on environmental problems. The study of Regulatory legislation, common law, and administrative law. Topics include toxic substances, air and water pollution, and habitat and species protection.

MES 633. Decision Analysis, Natural Hazards and Catastrophes: This course addresses the behavioral factors (cognitive biases, heuristics, risk perception, social influences, and experiences) that together help explain why people tend to underprepare for potential natural and man-made disasters.
Implications for science communication and public policy are emphasized.

MES 714. Population Modeling, Risk Assessment, and Management: Mathematical and computer- intensive models of exploited populations fish, shell fish, marine mammals, and sea turtles. Stock production (surplus production), structured analytical yield (yield-per-recruit and age-size structured assessments), stock and recruitment, simulation modeling, adaptive control theory, risk assessments, and decision theoretic analyses are discussed. Techniques of management, concepts of resource allocation, and fishery management institutions with case studies are also included. Lecture and computer-based laboratory.

MES 720. Coastal Law and Policy. Course examines the authority of different levels and agencies of government to make decisions affecting the coastal zone. Course also explores the coastal problems of shoreline use and development, uses of water areas and the seabed, and the related questions of environmental protection.

RSM 613. Statistical Modeling of Extreme and Rare Events: The course will focus on rare events and extreme values observed in nature. In particular, students will learn: advanced statistical methods of data analysis, as well as concepts of probability and predictability; statistical modeling of rare and extreme events; and applications of these advanced techniques to real atmospheric and oceanic data.

RSM 620. Climate and Society: This course is designed to provide students from different disciplinary backgrounds with an overview of physical processes, general concepts and policy debates surrounding climate issues.

Educational and Psychological Studies

For students interested in mobilizing communities for action

EPS 623. Development & Change in Community Organizations: Theory & Practice: This course focuses on the unique role of non-profit, community-based organizations in promoting human and community development. Students will engage in an analysis of the range of functions that organizations serve and the various organizational strategies used in community settings.

EPS 625. Program Evaluation: Terminology, models, standards, practices, and common

problems associated with program evaluation in Educational and Social Service settings. Prerequisites: EPS 670 and 553 or equivalents.

EPS 716. Qualitative Methods II: Interviews and Content Analysis: Sociological and oral history interview methods, including methodological issues, computer-based coding, decoding, and interpreting data. Visual and text-based content analysis, scoring schemas, and inter-rated reliability are covered.

EPS 732. Community Based Participatory Action Research: The purpose of this course is to introduce students to several traditions of community based participatory action research (CBP AR). CBP AR is carried out in collaboration between academic researchers and members of communities, and involves an iterative process of developing research questions, designing methods, implementing data collection, interpreting results, and often developing interventions. Students will begin by reviewing different intellectual traditions in participatory research including Community Based Participatory Research (CBPR), Participatory Action Research (PAR), Critical PAR and others. We will also stress the ways that participatory research has developed within the traditions of Community Psychology, such as Ecological Inquiry and Participatory Evaluation. While all these three traditions are related and overlapping, students will be encouraged to critique and contrast these approaches.

UNIVERSITY OF MIAMI
CURRICULUM VITAE

IMELDA K. MOISE, PhD., MPH

1. Date: January 31, 2019

PERSONAL

2. Name:	Imelda K. Moise
3. Home Phone:	786-452-7395
4. Office Phone:	305-284-2360
5. Home Address:	5750 SW 56 Ter., Miami, FL 33143
6. Current Academic Rank:	Assistant Professor
7. Primary Department:	Geography and Regional Studies
8. Secondary Appointments:	Public Health Sciences / International Studies
9. Citizenship:	U.S.
10. Visa Type (if non-citizen):	N/A

HIGHER EDUCATION

11. *Institutional:*

Doctor of Philosophy, Geography **(Health Geography Specialty)**, December 2012
Dissertation: Health risk differentials: implications of neighborhood conditions on various health outcomes in New Orleans, 2004-2009
University of University of Illinois at Urbana-Champaign (UIUC), Department of Geography and Geographic Information Science, Urbana, IL

Master of Public Health, January 2015
University of Illinois at Springfield, Department of Public Health College of Public Affairs & Administration, Springfield, IL

Master of Science (Health Geography Specialty), May 2007
Thesis: Applications of geospatial analysis to surveillance data: A spatial examination of HIV/AIDS prevalence in Zambia
University of University of UIUC, Department of Geography and Geographic Information Science, Urbana, IL

Bachelor of Arts, (with honors) Geography, June 2005
Honors Thesis: The great flood of 1997: An examination of landowner perceptions in the Applegate Valley.
University of Oregon College of Arts and Sciences, Eugene, OR
Double Major: Environmental Studies

Certificate Program in Geographically Weighted Regression (GWR), June 2010
University of Santa Barbara, Santa Barbara, CA

Certificate in Geographic Information Systems (GIS), University of Oregon, Eugene, June 2005
University of Oregon College of Arts and Sciences, Eugene, OR

12. *Non-Institutional:*

American Evaluation Association Fellowship, Culturally Responsive Evaluation, Theory and Practice Training, 2016-2017
American Evaluation Association, Washington, DC

Certificate Program in Technology for M&E Course, Online — Sep 2016

Certificate Program in Net-Mapping, an interview-based mapping tool, World Bank, Washington, DC — May 2015

13. *Certification, licensure*:

N/A

EXPERIENCE

14. *Academic:*

Assistant Professor, Geography
Department of Geography & Regional Studies College of Arts and Sciences,
University of Miami, FL. — Aug 2015-Present

Assistant Professor (Secondary Appointment), International Studies,
Department of International Studies College of Arts and Sciences,
University of Miami, FL. — Dec 2018-Present

Assistant Professor (Secondary Appointment), Public Health Sciences,
Department of Public Health Sciences
University of Miami Miller School of Medicine, FL. — Dec 2016- Present

Faculty Affiliate,
Leonard and Jayne Abess Center for Ecosystem Science and Policy,
University of Miami, FL. — Apr 2016-Present

15. *Non-Academic*:

Consultant, World Fish, Zambia, Aquaculture Consultant- **Wrote an "integrated** aquaculture in Northern Zambia **manual."** — summer 2016

Consultant, Nigeria Maternal and Child Survival Program, reviewing and editing Catchment Routine Immunization maps. — summer 2018

M&E/GIS Senior Advisor, John Snow Inc., International Division, Washington DC — Aug 2013-Aug 2015

- **USAID|DELIVER & USAID funded MEASURE EVALUATION**
  Projects: Strengthen capacity in supported LMIC to improve health outcomes, performance and systems; and finding synergies for M&E and GIS work
- **USAID|DELIVER PROJECT/Supply Chain Management System (SCMS)**
  Project: Improve health outcomes in supported LMIC by increasing the availability of health supplies and providing high-level assessment of the supply chain maturity and performance across supply chain functional areas.
- **Quality Improvement Learning Collaborative Coordinator**, Healthy Start Project
  Project: Develop performance measures for the national Healthy Start Project

Research Program Specialist 2008- Aug 2013
Center for Prevention Research and Development,
University of Illinois at Urbana-Champaign, IL
Roles and Projects:

- **M&E Coordinator and Recruiter**, Illinois Youth Survey, a biennial self-report survey administered in schools settings. Gathered information about a variety of health and social indicators including substance use patterns and attitudes of Illinois youth.
- **Evaluator, Illinois Department of Human Services (IDHS)' Chicago Healthy Start** Initiative, a federally funded program. Used outcome-based evaluation to improve health disparities and at risky drinking among project low income pregnant women
- **Evaluator**, IDHS' **Partnership for Success Grant**. Used outcome-based evaluation to build capacity for substance abuse prevention with a focus on underage drinking.
- **M&E Advisor, IDHS' Maternal, Infant, and Early Childhood Home Visiting program**, worked with communities and agencies to strengthen and improve programs and activities under Title V and contributed to the development of the MIECHV Strategic Plan, a plan that emphasizes a continuous quality improvement (CQI) adopted by the state of Illinois.
- **Evaluator, IDHS' Alcohol Screening and Intervention Program**. Evaluated implementation and integration of alcohol screening and Brief Intervention within **Illinois'** Special Supplemental Nutrition Program for Women, Infants, and Children Program before scale up.
- **Researcher**, SAMHSA Illinois Prevention Framework State Prevention Enhancement Grant, worked with providers to enhance **the state's substance abuse data infrastructure.**
- **Researcher, Illinois Children's Mental Health Partnership**. Used mixed data collection methods -- key informant interviews, surveys, participatory observations and focus groups to **tell the Partnership's story** (evolution, membership, successes, challenges and funding streams).

Research Assistant Sep 2001- Jun 2002
Oregon Research Institute,
Eugene, OR
Project: Conducted the Oregon Healthy Teens survey, a biennial survey collecting data among 8th and 11th graders statewide to understanding human behavior and improving the quality of human life.

Fisheries Technical Trainer/Counterpart, Aug 1996- Sep 2001
US/Zambia Peace Corps/Department of Fisheries,
Kitwe, Zambia
Project: Rural Aquaculture Project- promote integrated agriculture and train rural extension agents in all aspects of fisheries and fish farming to improve the fishing fraternity and rural livelihoods.

16. *Military*:

Not applicable

PUBLICATIONS

17. *Books and monographs published:*

Books:

1. Kalipeni E., Iwelunmor J., Grigsby-Toussaint D and **Moise IK**, Eds. **2018**. Public Health, Disease and Development in Africa (Geographies of Health Series). UK: Routledge.

Book Chapters:
*Indicates supervised undergraduate student and #supervised graduate student

1. **Moise IK.**, Zulu CL., Fuller DO and Beier JC. **2018**. *Persistent barriers to implementing efficacious mosquito control activities in continental United States: Insights from vector control experts*. In: From Local to Global Impact of Mosquitoes. Eds. Hanem Fathy Khater. InTechOpen.

2. Kalipeni E., Iwelunmor J., Grigsby-Toussaint D and **Moise IK. 2018.** Introduction: *Africa's epidemiologic transition of dual burden of communicable and non-communicable diseases*. In: Public Health, Disease and Development in Africa. Eds. Kalipeni E, Iwelunmor J, Grigsby-Toussaint D and **Moise IK**. Routledge, Chapman & Hall, Inc.

3. **Moise IK.**, De Joya E*., Zulu LC., Grigsby-Toussaint DS and Kalipeni E. **2018.** Chapter 4: *Progress towards combatting HIV/AIDS in Africa*. In: Public Health, Disease and Development in Africa. Eds. Kalipeni E, Iwelunmor J, Grigsby-Toussaint D and **Moise IK**. Routledge, Chapman & Hall, Inc.

4. Jayati Ghosh., **Moise IK** and Kalipeni, E. **2017**. Chapter 11: *Regional integration and relationship with different forms of foreign direct investments in Southern Africa*. In: Advances in Geoeconomics. Eds. Joseph Mark Munoz. London and New York: Routledge. Pages 151-158.

5. **Moise IK.,** Kalipeni E and Zulu LC. **2014.** Chapter 7: *Analyzing geographical access to HIV sentinel clinics in relation to other health clinics in Zambia*. In: Perspectives in Medical Geography: Theory and Applications for Librarians. Eds. Amy J. Blatt. London and New York: Routledge. Pages 114-186.

18. *Juried or refereed journal articles and exhibitions:*
Indicates undergraduate and # graduate student Mentee

1. Rund SSC., **Moise IK.**, Beier JC and Martinez ME (**in press**). Rescuing troves of hidden ecological data to tackle emerging mosquito-borne diseases. *Journal of the American Mosquito Control Association*. **2014 IF: 1.15**

2. **Moise IK.**, de Joya E*., Caplan B*., Rodriguez VJ., Butts S., Chisembele M., Weiss SM., Jones DL and Alcaide ML (**2019**). **Adolescent and young adult couples' views of intravaginal practices: a focus group** analysis. *International Journal of Women's Health:* 2019 (11):49-56. **2015 IF: 2.68**

3. **Moise IK. 2018**. Causes of morbidity and mortality among neonates and children in post-conflict Burundi: A cross-sectional retrospective study. *Children- Open Access Journal of Pediatrics;* 5 (125): 125. DOI: 10.3390/children5090125.

2. **Moise IK.,** Kangmennaang J#., Hutchings TCSG#., Sheskin IM and Fuller DO. ***2018***. Perceptions of Zika virus risk during 2016 outbreak, Miami-Dade County, Florida, USA. *Emerging Infectious Diseases*; 24(7):1379-1381. https://dx.doi.org/10.3201/eid2407.171650. **2017 IF: 8.22**

3. **Moise IK.**, Riegel C and Muturi EJ. **2018**. Environmental and social factors influencing *Cx. quinquefasciatus* densities in post-Katrina New Orleans, 2006-2009. *Parasites & Vectors, 11 (249):* DOI: 10.1186/s13071-018-2833-5. **2015 IF: 3.62.**

4. Fernandes JN#., **Moise IK.**, Maranto GL and Beier JC. **2018**. Revamping mosquito-borne disease control to tackle future threats. *Trends in Parasitology;* 34(5):359-367. **2015 IF: 7.295.**

5. Ajelli M., **Moise IK.**, Hutchings TCSG#., Brown SC., Kumar N., Johnson NF and Beier JC. **2017**. Host outdoor exposure variability affects the transmission and spread of Zika virus: Insights for epidemic control. *PLoS Neglected Tropical Diseases*, 11(9):e0005851. https://doi.org/10.1371/journal.pntd.0005851. **2015 IF: 3.948.**

6. Muturi EJ., Donthu RK., Fields CJ., **Moise IK** and Kim Chang-Hyun. **2017**. Effect of pesticides on microbial communities in container aquatic habitats. *Scientific Reports*; 7(44565); DOI: 10.1038/srep44565. **2015 IF: 5.228**

7. **Moise IK.**, Verity JF* and Kangmennaang J#. **2017**. Identifying youth-friendly service practices associated with adolescents' use of reproductive healthcare services in post-conflict Burundi: a cross-sectional study. *International Journal of Health Geographics;* 16(2); DOI: 10.1186/s12942-016-0075-3. **2014 IF: 3.386**

8. **Moise IK** and Ruiz OM. **2016**. Hospitalizations for substance abuse disorders before and after Hurricane Katrina: Spatial clustering and area level predictors, New Orleans, 2004 and 2008. *Preventing Chronic Disease* 13 (E): DOI: http://dx.doi.org/10.5888/pcd13.160107. **2014 IF: 2.123**

9. **Moise IK.**, Kalipeni E., Jusrut P and Iwelunmor JI. **2016**. Assessing the reduction of infant mortality rates in Malawi over the 1990-2010 decades. *Global Public Health;* DOI 10.1080/17441692.2016.1239268. **2015 IF: 1.978**

10. **Moise IK** and Mulhall PF. **2016**. Providers' perspectives on case management of a Healthy Start Program: A qualitative study. *PLOS ONE* 11(5): e0154668. DOI: 10.1371/journal.pone.0154668. **2015 IF: 3.54**

11. **Moise IK** et al. **2016**. Evaluation of geospatial methods to generate subnational HIV prevalence estimates for local level planning, (The Subnational Estimates Working Group of the HIV Modelling Consortium, including **Moise IK**). *AIDS* 30:1467–1474. Full author listing is accessible at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4867979/pdf/aids-30-1467.pdf. **2014 IF: 5.554**

12. **Moise IK.,** Roy SS., Nkengurutse D and Ndikubagenzi J. **2016**. Seasonal and geographic variation of pediatric Malaria in Burundi: 2011 to 2012. *International Journal of Environmental Research and Public Health*: 13(4): 425; DOI: 10.3390/ijerph13040425. **2015 IF: 2.035**

13. **Moise IK.**, Green DL., Toth J and Mulhall PF. **2014**. Evaluation of an authority innovation-decision: Brief alcohol intervention for pregnant women receiving women, infants, and children services at two Illinois health departments. *Journal of Substance Abuse and Misuse*, 49(7):804-812. **2014 IF: 1.996**

14. Grigsby-Toussaint DS and **Moise IK**. **2013**. Neighborhood deprivation and availability of culturally specific African-American and Latino fruits and vegetables in five small central Illinois cities. (2013). *Open Journal of Preventive Medicine,* 3(2): DOI: 10.4236/ojpm.2013.32028. **2015 IF: 1.16**

15. **Moise IK.**, Brown KS., Riegel C., Kalipeni E and Ruiz MO. **2013**. Geographic assessment of unattended swimming pools in post- Katrina New Orleans, 2006-08. *Annals of the Association of American Geographers*, 103(5):1160-1175. **2015 IF: 2.756**

16. **Moise IK** and Kalipeni E. **2012**. Applications of geospatial analysis to surveillance data: a spatial examination of HIV/AIDS prevalence in Zambia. *GeoJournal*, 74 (4):525-540. **2015 IF: 1.06**

17. Grigsby-Toussaint DS., **Moise IK** and Geiger DS. **2011**. Observations of food marketing targeted to youth in the retail food store environment. *Obesity,* 19(9):1998-1038. **2016 IF: 3.614**

18. **Moise IK.,** Zulu CL and Kalipeni K. **2011**. Analyzing geographical access to HIV sentinel clinics in relation to other health clinics in Zambia. *Journal of Map and Geography Libraries*, 7(3): 254-281. ***2015 IF: 0.36***

19. Grigsby-Toussaint DS., Zenk SN., Odoms-Young A., Ruggiero L and **Moise IK. 2010**. Availability of commonly consumed and culturally specific fruits and vegetables in African-American and Latino neighborhoods. *Journal of the Academy of Nutrition and Dietetics*, 110(5): 746-752. **2013 IF: 2.444**

20. **Moise IK** and McDowell P. **2010**. The great flood of 1997: An examination of landowner perceptions in the Applegate Valley. *McNair Research Journal*, University of Oregon. **IF: na**

Juried or refereed journal articles (under review)
**Indicates UM undergraduate and # indicates graduate student*

1. **Moise IK**. Traumatic unintentional injury hospitalizations of positive and negative blood alcohol levels among 10 to 24 year olds, Chicago, 2006-2015. *AJPM.*
2. **Moise IK**., de Joya E*., Vinicius O. Silva*., Moise V*., Farmer D Bertrand and Orantia A. Patient-level factors are more salient than a legislation prohibiting minors in bars in predicting unintentional injury hospitalizations. *BMC Public Health.*
3. Kangmennaang J#., Diana Grigsby and **Moise IK**. "**Overweight and Obesity among Zambian Women: Examining drivers for changes in nutrition from 2002 to 2014.**" *Journal of Women's Health*.
4. Sallam M., Claudia R and **Moise IK**. Spatial Distribution and characteristics of illegal tire dumping systems and its influence on *Ae. albopictus* and *Culex quinquefasciatus* breeding in New Orleans.
5. Dougherty L, Abdulkarim M, Mikailu F, Tijjani U, Owolabi K, Naiya A, Abdullahi A, Hadiza and **Moise IK**. "Moving from Routine Immunization Paper Maps to Digital Maps: Insights from the Maternal and Child Survival Program in Nigeria." *BMJGH*

Refereed Articles (in preparation)

1. Swift S#., Fuller DO and **Moise IK**. Cesarean births and maternal region of birth in Florida: A 10-year retrospective study of birth records. *PLOS ONE*
2. Huang Q., Fuller DO and **Moise IK**. Assessing mosquito abundance immediately before and after Hurricane Irma, Miami-Dade County, 2017
3. **Moise IK.**, Georges E*., Schaum K*., Xue Rui-De., Fuller DO and Beier JC. Capacity of local taxing districts, county and city mosquito-control agencies to conduct surveillance, prevention and control of Zika virus in Florida. *Emerging Infectious Diseases.*
6. **Moise IK.,** Hu T and Mortensen K. "**Assessing network adequacy in mandatory Medicaid managed care in Florida.**" *Journal TBD.*
4. Masood R, Spika S, Ramaprasad R, Kalipeni E and **Moise IK.** "**Health interventions implemented in post-disaster South Asia: A scoping review.**" *Implementation Science.*

19. *Other works, publications and abstracts:*
**Indicates undergraduate, # graduate student Mentee*
    1. **Moise IK.** "**Making meaning of models – How spatial views of vectors and diseases inform public health.**" Presented at the URISA GIS-Pro & CalGIS 2018 Annual Meeting, October 9 to12, 2018, Palm Springs, CA.
    2. Evan de Joya* and **Moise IK**. "**Assessing alcohol use, sleep, and anxiety during pregnancy among women attending antenatal care in Zambia: A pilot study.**" Presented at the AAG Annual Meeting, April 10 to 14, 2018, New Orleans, LA.
    3. **Moise IK** and Claudia Riegel. "**Household survey of mosquito larval production containers: A pilot study of an integrated mosquito control program in Monte Verde, Honduras.**" Presented at the AAG Annual Meeting, April 10 to 14, 2018, New Orleans, LA.
    4. Samuel Swift#., Fuller DO and **Moise IK**. "**Unnecessary caesarian section births, mother's origin and other maternal characteristics: Florida, 2005-2015.**" Presented at the Council of State and Territorial Epidemiologists (CSTE), June 10 to 14, 2018, West Palm Beach, FL.
    5. DelaCruz J., Henly N., Hall-Byers N and **Moise IK.** "**Exploring the intersection between social determinants of health and culturally responsive evaluation.**" Presented at the American Evaluation Association Annual

Meeting, November 6 to 11, 2017, Washington, DC.

6. Mortensen Karoline., Hu Tianyan and **Moise IK**. "**Assessing network adequacy in** mandatory Medicaid **managed care in Florida**". Presented at the 12th World Congress of the International Health Economics Association Annual Meeting, July 7 to 11, 2018, Boston University, MA.
7. **Moise IK**. "**Geographical analysis of neighborhood domestic violence** offenses on birth outcomes among Medicaid women in Miami-**Dade County**". Presented at the AAG Annual Meeting, April 5 to 9, 2017, Boston, MA.
8. Samuel Franco* and **Moise IK**. "**Mapping intra**-district malaria risk using high resolution Landsat satellite **imagery: a case study of post conflict Burundi**". Presented at the AAG Annual Meeting, April 5 to 9, 2017, Boston, MA.
9. Evan de Joya* and **Moise IK**. "**A geographic analysis of adolescent alcohol**-related trauma hospitalizations and neighborhood correlates, Cook County, Illinois, 2010-2015." Presented at the AAG Annual Meeting, April 5 to 9, 2017, Boston, MA.
10. Hutchings TCSG#, Sheskin I, Fuller DO and **Moise IK**. "**Assessing Zika**-related knowledge, attitudes, and practices (KAP) among Miami-Dade **residents**", Poster presented at the AAG Annual Meeting, April 5 to 9, 2017, Boston, MA.
11. **Moise IK. 2017**. MSI Fellowship Week: Using geographic thinking to understand a wide range of SDOH and identification of at-risk groups in affected communities. AEA365, A Tip-a-Day by and for Evaluators. The American Evaluation Association. Accessed on January 20, 2017: http://aea365.org/blog/msi-fellowship-week-using-geographic-thinking-to-understand-a-wide-range-of-sdoh-and-identification-of-at-risk-groups-in-affected-communities-by-imelda-k-moise/.
12. Romero Hilda BM., **O'Leary Brendan, Moise IK** and Horan William. "**Establishment of an integrated mosquito control program in Monte Verde, Honduras.**" Poster Presented at the 7th International Society for Vector Ecology (SOVE) Congress, October 1 to 7, 2017, Palma of Mallorca, Balearic Islands, Spain, Italy.
13. Verity Jaclyn F*., Sen Roy S and **Moise IK**. "**Neighborhood factors associated with low**-risk cesarean births in Miami Dade County, Florida, 2009-**2014**." Poster Presented at the AAG Annual Meeting, April 5 to 9, 2017, Boston, MA.
14. Hutchings TCSG#., Sheskin I., Fuller DO and **Moise IK**. "**Assessing Zika Virus Knowledge, Attitudes, and** Practices among Miami-**Dade County Residents**, Florida, 2016". Presented at the 2nd International Zika Conference and Workshop, March 29 to 31, 2017, Washington, D.C.
15. **Moise IK** and Nsonga A. **2016**. A manual for integrated fish-crops-livestock and forestry innovation systems in Northern Zambia. WorldFish. Accessible at: http://aquaticcommons.org/20959/1/2016-15.pdf.
16. **Moise IK** and Sen RS. **2016**. Warming and increased rainfall are changing malaria hotspots in the highlands of Burundi. Atlas of Science. Accessed on October 2, 2016: http://atlasofscience.org/warming-and-increased-rainfall-are-changing-malaria-hotspots-in-the-highlands-of-burundi/#more-16251.
17. **Moise IK.**, Kalipeni E and Grigsby-Toussaint D. "**Progress towards combating the HIV/AIDS pandemic in** Africa." Presented at the Race, Ethnicity & Place VIII Conference, September 21 to 23, 2016, Kent State University, Kent, Ohio.
18. Kalipeni E., Zulu CL., **Moise IK**, Sanogo YO, Muturi EJ, Iwelunmor J. "**Examining the impact of** environmental change on vector borne diseases in Southern Malawi: The case of Malaria in the Blantyre **Fuelwood Project Area**," Presented at the 14th IFEH World Environmental Health Congress, May 3 to 6, 2016, Lilongwe, Malawi.
19. **Moise IK** and Verity JF. "**A retrospective study examining the geographic variation in availability of youth-**friendly contraceptive services in post-conflict Burundi." Presented at the Epidemiology Congress of the Americas, June 21 to 24, 2016, Miami, FL.

20. **Moise IK.** "Spatial Dimensions and impact of rural-urban migration on nutritional status and low birth weight in Benue State, Nigeria," Presented at the AAG Annual Meeting, March 29 to April 2, 2016, San Francisco, CA.
21. **Moise IK.**, Bisore S., Rwantabagu JP., Munezero F., Hassan A., Gashubije L., Nkindiyabarimakurinda S and Ly M. "A Partner mapping exercise to inform aid coordination and management for health system strengthening in Burundi." Presented at the Health in Africa Post MDGs meeting, May 22 to 29, 2015, University of Illinois at Urbana-Champaign, IL.
22. **Moise IK.,** Cunningham M and Inglis A. **2015**. Geospatial analysis in global health M&E: a process guide to monitoring and evaluation for informed decision-making. Accessible at: http://www.cpc.unc.edu/measure/publications/ms-14-98.
23. Zulu L., **Moise IK**,. Shortridge A., and Kalipeni E. "Generating district level estimates of HIV prevalence using GIS: A comparative analysis of ANC data and DHS data for Malawi, 1994-2010." Presented at the Spatial Conference, November 19 to 20, 2014. University of Witwatersrand, Johannesburg, South Africa.
24. Aronovich D., Hatch B., Inglis A., Cunningham M., Block Ariella and **Moise IK**. "Near-real-time tracking of health outcomes using logistics management information systems." Presented at the 7th Global Health Supply Chain Summit (GHSCS), November 17 to 19, 2014, Copenhagen, Denmark.
25. **Moise IK** and Mulhall PF, (2013, Apr 17-18). "Geographic accessibility to prenatal care, need and utilization among low income mothers in Chicago, Illinois." Presented at the Illinois GIS Association Spring Conference, April 17 to 18, 2013, University of Illinois at Urbana-Champaign, IL.
26. **Moise IK.,** Kalipeni E and Ghosh J. **2012. Cover page**: "A third world perspective on GIS applications in health: the case of **Zambia's HIV/AIDS surveillance data.**" Computer Science of India Communications, (CSI) Knowledge Digest for IT community. Accessible at: http://citeseerx.ist.psu.edu/viewdoc/download?

20. *Other works accepted for publication:*

    None

PROFESSIONAL

21. *Funded Research Performed*:

ONGOING

Grant #: U01CK000510-01, Beier JC (PI, UM subcontract).
Agency: The Centers for Disease Control and Prevention (CDC)
Title: Southeast Regional Center Of Excellence in Vector-Borne Disease: The Gateway Program
Role: Co-Investigator (5.0% effort per year)
Description: This is a five-year CDC funded project to investigate *Aedes* Vector Ecology and Arbovirus Infection Rates in Miami-Dade County Urban Environments
Project Period: 12/30/2016-12/29/2021
Total Award: $200,000

Grant #: 74738, Moise (PI).
Agency: Robert Wood Johnson Foundation (RWJF)
Title: Examining Individual Predictors Alcohol-Related Trauma Hospitalizations of Young People and the Impact of Local Liquor-Related Ordinances
Role: Principal Investigator (25.0% effort per year)
Description: This is a one-year New Connections award for early career researchers to examine the measureable impact of existing local alcohol ordinances on population health, particularly the causes and contexts of alcohol-related hospitalizations among young people in Illinois
Project Period: 09/01/2017-05/30/2019
Total Award: $50,000

Grant #: n/a, Moise (PI).
Agency: U-LINK (University of Miami's Laboratory for INtegrative Knowledge Interdisciplinary Research)
Title: Leveraging Untapped Opportunities in Place and Time: A Community-Based Child Well-Being Collaborative to Address Early Learning Gaps
Role: Principal Investigator (10.0% effort in Phase I)
Description: Develop a cross-sector data integration tool to advance the study of (a) neighborhood resources (b) children's experiences, and (c) social/behavioral, and educational outcomes.
Project Period: 01/01/2019-8/15/2019
Total Award: $40,000

Grant #: NGS-53897R-18, Wilson (PI).
Agency: National Geographic
Title: Land Use, Microclimate & Water Quality Nexus: Implications For Human Health In The Rokel-Seli River Basin, Sierra Leone
Role: Co- Investigator (10.0%)
Description: This is 11-month project explores the potential implications of land use and climate changes on water quality and human health.
Project Period: 01/12/2018-11/30/2019
Total Award: $30,000

COMPLETED

Grant #: n/a, Moise (PI).
Agency: University of Miami, Provost Research Award
Title: Adolescent Views of and Preferences for Contraceptive Use and Uptake
Role: Principal Investigator
Description: This is seed assessed adolescents' contraceptive views, decision-making process and preference
Project Period: 01/06/2017-05/31/2018
Total Award: $16,980

Grant #: n/a, Moise (PI).
Agency: University of Miami, Provost Research Award
Title: Factors Influencing Early Childhood Eating Behaviors and Weight in Low-Income Children Ages 0-5: A Participatory Mixed Methods Study
Role: Principal Investigator
Description: Assessed factors that affect early childhood eating behaviors and weight in low-income children.
Project Period: 06/01/2016-05/31/2017
Total Award: $14,700

PENDING

Grant #: R01HL147156, Brown (PI).
Agency: National Institutes of Health / National Institute of Heart, Lung & Blood (NIH/NHLBI).
Title: Neighborhood Greenness & Cardiometabolic Health among Hispanics in the HCHS/SOL Study
Role: Co- Investigator (Effort: 0.45)
Description: Examines the relationship between green space and cardiovascular risk (stroke, and cognition).
Project Period: 04/01/2019-03/31/2022
Amount Requested: $2,106,207 (equal to $1,596,675 in direct costs)

Grant #: 4204585, Caban-Martinez A (PI).
Agency: NIOSH, R01
Title: Mosquito Related Health and Safety Risks to Outdoor Construction Site Workers
Role: Co- Investigator (Effort: 2.0 calendar months – 20% per year).
Description: This 4-year study investigates the role of construction job sites as favorable environments for vector mosquitoes and assess the associated health risks to outdoor construction workers

Project Period: 07/01/2018-06/30/2023
Amount Requested: $2,000,837
Grant #: Thriving Communities Grants 5, Lewis (PI).
Agency: NASM,

Title: Ecological Dimensions of Human Health Risk and Wellbeing in New Orleans
Role: Co- Investigator (Effort: 2.0 calendar months – 20% per year).
Description: This 3-year study to explicate how infrastructure and landscape management implicated in vector species abundances and distributions
Project Period: TBD
Amount Requested: TBD (Total Funding Available: $10 million)

Grant #: n/a, Moise (PI).
Agency: University of Miami, Provost Research Award
Title: **Cultural Adaptation of Screening and Brief Intervention for "Risk Drinking" During Pregnancy in Prenatal** Care in Zambia: A Pilot Randomized Trial
Role: Principal Investigator
Description: Utilizes community based participatory research methods to adapt a culturally developed BI to pregnant women receiving prenatal care services in Zambia, and will engage key stakeholders in the development, delivery of the intervention and identification of service systems and resources..
Project Period: 06/01/2019 – 05/31/2020
Total Award: $17,000

UNDER PREPARATION

Grant #: R34, Alcaide (PI).
Agency: NIH
Title: Reducing HIV Risk through Changing Intravaginal Practices among Young Zambians
Role: Co- Investigator (Effort: TBD).
Due Date: May 10, 2019
Amount Requested: TBD

NOT FUNDED

Grant #: AI141503-01, Beier (PI)
Agency: NIH R01
Title: Risk Profiles for Mosquito-Borne Diseases in Urban Miami
Role: Co- Investigator (Effort: 2.0 calendar months – 20% per year)
Description: The project goal is to construct unique neighborhood level *Aedes*-transmitted disease risk profiles.
Project Period: 09/01/2018-08/31/2024
Amount Requested $3,449,506
Grant #: HRSA-18-072, Moise (PI)
Agency: The Health Resources and Services Administration (HRSA), Maternal & Child Health Bureau
Title: Examining Individual and Social Determinants of Medically Unnecessary Cesarean Births in Florida
Role: Co- Investigator (Effort: 2.0 calendar months – 20% per year)
Description: Evaluate maternal determinants and cesarean births among women of reproductive age in Florida
Project Period: 09/01/2018-08/31/2024
Amount Requested: $98,636 (one year), resubmitted, initially scored 86/100 but scored 66 on resubmission

Grant #: n/a, Alcaide (PI)
Agency: NIH R34
Title: Pre-Exposure Prophylaxis for Young Women in Rural South Africa
Role: Co- Investigator (Effort: 2.0 calendar months – 20% per year)
Description: Design and test a couples-based intervention to increase acceptability, uptake and adherence to PrEP (oral TDF/FTC) during pregnancy and postpartum among HIV uninfected (HIV-) young women (18 – 24 years) with HIV infected (HIV+) partners (serodiscordant couples).
Project Period: 09/01/2018-08/31/2024

Amount Requested: $605,272

Grant #: n/a, Beier (PI)
Agency: Florida Department of Health (FDOH)
Title: Zika Research Grant Initiative: Breaking the Spread of Zika Virus In Florida
Role: Co- Investigator (Effort: 2.0 calendar months – 20% per year)
Description: The project goal is to investigate how fundamental information on local mosquito vector ecology and vector competence can be used to establish a firm basis for field-testing current and novel vector control tools to more effectively control Zika vectors in urban environments and stop the spread of Zika in Florida..
Project Period: TBD
Amount Requested $2,174,366

22. *Editorial responsibilities*:

Technical Advisory Boards

- URISA (Urban and Regional Information Systems Association) Professional Education Committee Social Justice Workgroup, **2018**
- Vector Control and Surveillance Advisory Workgroup, National Association of County and City Health Officials (NACCHO), **2018-present**
- Master of Public Health Advisory Committee, University of Illinois Springfield, **2018-present**
- The African Geographical Review New Associate Editor Search, Africa Specialty Group (ASG) American Association of Geographers (AAG), **2018**
- Establishing an Integrated Mosquito Control Program, Operational Blessing Honduras and Honduras Ministry of Health, Monte Verde, Honduras, **2017**
- Electoral Committee Member, ASG, AAG, **2017**
- Symposium Committee, URISA's GIS and Health Symposium, **2016**
- Technical Consultation on Methods for Generating Sub-National Estimates of HIV Epidemiology to Support Country Programme Planning and Evaluation, UNAIDS Reference Group of Estimates, Modelling and Projections and UNAIDS Hotspot Taskforce, **2014**.

Experts Reviews

- JSciMed Central-Annals of Nursing and Practice. External Thesis Reviewer, "A thesis submitted to the school of public health university of Gonder, in partial fulfillment of the requirements for the **degree of master's in reproductive health," 2017, Jun**
- **NSF's Geography** and Spatial Sciences Program Proposal reviewer, **2017**
- American Evaluation Association (AEA), MSI Fellowship Program, **2017**
- Journal of the International AIDS Society (abstract reviewer) Conference, **2011**

Editorial Journal Service

- Academic Editor, *PLOS ONE*, **2017-present**
- Handling Editor, *PLOS ONE* and *PLOS Medicine*, **2019**
  "Maternal and Child Nutrition"

Peer Review Journal Service

- Travel Behaviour and Society, **2018**
- Canadian Journal of Infectious Diseases and Medical Microbiology, **2018**
- Acta Tropica, **2018**
- Entomologia Generalis, **2018**
- International Journal of Adolescent Medicine and Health, **2018**
- Preventing Chronic Disease, **2018**
- International Journal of Environmental Health Research, **2017x2**
- PLOS ONE, **2017x2, 2018**
- Social Science and Medicine, **2017x2**
- Scientific Reports,**2017**
- Climate Change, **2017**
- International Journal of Health Policy and Management (IJHPM), **2016, 2017**

- Journal of Nursing Management, **2016, 2017**
- Children, an Open Access Pediatrics Journal from MDPI, **2016**
- Journal of Substance Use and Misuse, **2013**
- International Journal of Environmental Research and Public Health (IJERPH), **2013, 2017**
- African Geographical Review, **2013, 2014**

Peer Review Other

- Florida Mosquito Control Association Dodd Short Courses CDC CoE Training Fellowship, **2017, 2018**
- Evaluation Plan - CDC Harvard Program Evaluation Practicum for Florida, Maternal and Child Health Section Bureau of Family Health Services, Division of Community Health Promotion, Florida Department of Health, **2018, January**

23. *Professional and Honorary Organizations*:
    - Louisiana Mosquito Control Association, **2018-present**
    - American Evaluation Association (AEA), **2016**
        - American Evaluation Association (AEA), MSI Fellowship Program Reviewer, **2017**
    - Association for Global Health, **2007-present**
    - Association for Urban and Regional Information Systems (URISA), **2007-present**
    - Association of American Geographers, **2005-present**
        - Bylaws Committee, Africa Specialty Group (ASG) **AAG, 2017**
        - AAG Jacques May Thesis/Dissertation Award Reviewer, **2016**
    - Illinois GIS Association, **2008-present**
    - Community Coalition for Environmental Justice, **2003-present**

24. *Honors and Awards*:
    - University of Miami Engaged Faculty Fellows Program, Office of Civic and Community Engagement Fellowship, **2018-2019**
    - University of Miami Scholarly & Creative Activities Recognition Award, College of Arts & Sciences, **2018**
    - Gamma Theta Upsilon Honor Society in Geography Member, **Lifetime**
    - The American Evaluation Association Fellowship, **2016-2017**
    - University of Miami Summer Writing Institute (SWI) Fellowship, FL, **2017**
    - College of Arts and Sciences Dependent Care Reimbursement for Travel, **2015, 2016, 2017, 2018**
    - Ford Diversity Fellowship- Honorary Mention List, **2011**
    - Journal of Map & Geography Libraries Best Paper Award, **2011**
    - Illinois GIS Annual Spring Conference, Best Poster Award, **2010**
    - ESRI-GIS Development Center Scholarship, **2010**
    - University of Illinois Department of Geography and GIS Beatty Fellowship, **2009-2010**
    - University of Illinois Foreign Language and Area Studies fellowship, **2009-2010**
    - Earth and Society Initiative, Disease Emergence & Ecosystem Health fellowship, **2007**
    - Graduate College fellowship, University of Illinois, **2005-2006**
    - University of Oregon, Departmental Honors, **2005**
    - University of Oregon College of Education, Undergraduate Research Award for Commitment to Research Scholarship, **2004-2005**
    - University of Oregon McNair Scholar, **2003-2005**
    - University of Oregon Diversity Building Scholarship for Academic Achievement & leadership, **2003-2005**
    - Lane Community College Diversity Scholarship, **2002**

25. *Post-Doctoral Fellowships*:

    n/a

Continuing Education/Training

Competitively Selected

- RWJF New Connections Capstone Symposium **2019, Mar 14**

- Fellow, American Evaluation Association (AEA) **2016-2017**
- Fellow, Summer Writing Institute (SWI) Fellow, University of Miami, FL **2017**
- Participant, Robert Wood Johnson Foundation (RWJF) New Connections Research and Coaching Clinic, Atlanta, GA **2017**
- Participant, RWJF New Connections Symposium, Princeton, NJ **2017**

Workshops

- CTSI Grant Writing Workshop, Miller Medical School, University of Miami **2017, Oct-Nov**
- Technology for Monitoring & Evaluation (M&E), TechChange **2016, Aug-Oct**
- R01 Bootcamp, University of Miami **2016, Sep 7**
- NIH/NSF Grant Writing, University of Miami **2016, Oct 19**
- Navigating the NIH Funding System, Pre-Meeting Workshop Epidemiology Congress of the Americas Conference **2016, Jun 21**
- BenMap, U.S. Environmental Protection Agency, Pre-Meeting Workshop Epidemiology Congress of the Americas Conference **2016, Jun 21**
- NIH Grants Process workshop, University of Miami **2015, Sep 23**
- Net-Map Hands-on Certification Training, Washington DC **2015, Nov 20-21**

26. *Other Professional Activities:*

Invited Lectures/Speaking Engagements:

1. **Imelda K. Moise**. "Call to community & Academic Partnership: Leading by Example." Invited Speaker by the Organization of Zambians Abroad on February 18, 2019, University of Miami, FL.
2. **Imelda K. Moise**. Invited Panel Speaker on "Advocating Renewed Passion & Commitment to Public Service." Presented at the 13th Annual ASPA SoFla Best Practices Conference on February 8, 2019, Nova Southeastern University, FL.
3. **Imelda K. Moise**. Invited lecture to the 2017 University of Miami Miller School of Medicine Grand Rounds, **February 10, 2017,** Miami, FL.
4. **Imelda K. Moise**. "Capacity of local Florida mosquito control agencies." Invited Speaker the 15th arbovirus surveillance and mosquito control workshop in conjunction with the NE1443 Regional Project's 4th annual meeting and the FMCA'S NE Regional Meeting on March 19-22, 2018, St. Augustine, FL.
5. **Imelda K. Moise**. "Using Geographic Thinking to Identify Disease Risk and At-risk Groups during Disasters." Invited Speaker to the University of Miami College of Engineering HuRRI Seminar on April 30, 2018, University of Miami, FL.
6. **Imelda K. Moise**. "Data management" and "Understanding your customers." Invited Speaker by the City of New Orleans & the Greater New Orleans Pest Control Association Pest Control Academy on October 9-11, 2018, at the City of New Orleans Mosquito & Termite Control Board Offices, New Orleans, LA.
7. **Imelda K. Moise**. "Knowledge Attitudes and Practices: 2016 Zika Outbreak." Invited speaker by the CDC Southeastern Regional Center of Excellence in Vector Borne Diseases: Gateway Program, Emerging Pathogens Institute on November 28-30, 2018, University of Florida, Gainesville.
8. **Imelda K. Moise**. "Exploring the world of mosquitoes in Miami-Dade County." The Louisiana Mosquito Control Association (LMCA) 60th Annual Meeting on December 2017, Covington, LA.
9. **Imelda K. Moise**. Invited to introduce the Keynote Speaker Carrie Stokes, Chief Geographer and GeoCenter Director, U.S. Global Development Lab, USAID at the URISA's 2016 GIS and Health Symposium, June 1-3, Washington, DC.
10. **Imelda K. Moise**. "Research Methods for MPH students writing workshop." Invited speaker at the University of Zambia Department of Public Health, May 2016, Zambia.
11. **Imelda K. Moise**. "Genetically modified organisms and concomitant reduction of native plant varieties. Invited

speaker", Invited speaker by American University, July 24, 2014, Washington, DC.

12. **Imelda K. Moise. "Genetically modified organisms and concomitant reduction of native plant varieties. Invited speaker", Invited speaker by American University, July 24, 2014, Washington, DC.**
13. **Imelda K. Moise. "**Sub-national HIV modeling Malawi example. Presented at the Technical Consultation on Methods for Generating Sub-National Estimates of HIV Epidemiology to Support Country Program Planning and Evaluation. Invited speaker by UNIADS HIV Modelling Consortium, March 24 to 25, 2014, Nairobi, Kenya.
14. **Imelda K. Moise**. "Applications of Geospatial Analysis to Surveillance Data." **Invited** to lecture to Plenary Speaker by the Population Division of the U.S. Census Bureau, January 2007, Suitland Federal Center, MD.

Conference/Workshops facilitated)

1. "Health Applications of GIS" GIS-Pro & CalGIS 2018, October 9, 2018. Palm Springs, CA.
2. Pre-service GIS training for public health professionals, Department of Pathobiology and Champaign County Public Health, July 13, 2011. Champaign, IL.
3. Undergraduate GIS and Public Health Workshop, Department of Community Health, University of Illinois, 2009-2010, Champaign, IL.
4. Coalition for Environmental Racism 9th, Conference, University of Oregon, January 23-25, 2004, Eugene, OR.

TEACHING

27. Teaching Awards Received:
None

28. *Teaching Specialization*:

Courses Taught, University of Miami

GEG 101: Digital Earth, Developed course content	**spring**
GEG 306: Geographic Research Methods New course developed	**spring**
GEG 345: Sustainable Food ECS 372/INS 310 New course developed- https://gegsustainablefood.wordpress.com/ **Tag**: Sustainability	**spring**
GEG 346: Immigrant & Refugee Health (Also listed as ECS 372/INS 310/SOC 391) New course developed **Tag**: Writing	**fall**
GEG 412: GIS for Health & Environment (Also listed as ECS 372/INS 310/SOC 391) Developed course content	**spring, fall**
GEG 501: Capstone (Service learning) Developed course content **Tag**: Civic	**(by Announcement Only)**
GEG 603: Advanced Research Design in Geography Developed course content GEG 625: Applications of GIS for Health New course	**(by Announcement Only)**

Courses Taught, University of Illinois at Urbana-Champaign

GEOG 101: Global Development & Environment	**2006-2007**
GEOG 379: Introduction to GIS	**2006-2007**

GEOG 489: Programming for GIS	**2006-2007**
Geography 479: Principles of GIS (Advanced GIS)	**2006-2007**
Guest Lectures, University of Miami	
GEG 331: Sustainable Development Department of International Studies, University of Miami, FL	**2018, Nov**
GEG 336: Hazards and Disasters: The Nature-Society Interface Department of International Studies, University of Miami, FL	**2018, Nov 5**
EPH 639: Ecology and Control of Vector Borne Diseases Division of Environment and Public Health, Miller School of Medicine, Miami, FL	**2018, Nov**
BPH 309: Health and Environment School of Nursing and Health Studies, University of Miami, FL	**2018, Mar 6**
INS 310: Food Policy Hands-on Approach Department of International Studies, University of Miami, FL.	**2018, Feb 29**
INS 310: Global Food: Hands-On Approach Department of Geography, University of Miami, FL.	**2017, Oct 10**
GEG 348: Climate Change & Public Health Department of Geography, University of Miami, FL.	**2017, Oct 10**
GEG 331: Sustainable Development Department of Geography, University of Miami, FL.	**2016, Nov 16**
INS 570 & INS 639: Globalization and Public Health Department of International Studies, University of Miami, FL.	**2016, Oct 10**
URB 201: Metropolitan Miami Department of Geography, University of Miami, FL.	**2016, Oct 17**
INS 503/605 Also CIM 594/795: Foreign Aid Debate: Producing Media Building Blocks of Knowledge Department of International Studies, University of Miami, FL	**2016, Oct 10**
GEG 341: Population, Health & Environment Department of Geography, University of Miami, FL.	**2015, Oct 10**
GEG 510: Place, Region, Nature Department of Geography, University of Miami, FL.	**2015**
Guest Lectures, Other Universities	
Public Health 6437: Advanced Program Evaluation Course. Department of Global Health, George Washington School of Public Health and Health Services, Washington DC	**2014, Jul 15**
GEOG 101: Global Development & Environment Department of Geography and Geographic Information Science, University of Illinois at Urbana-Champaign, IL	**2009, Apr 5-25**
CHLH 274:Introduction to Epidemiology Department of Community Health and Kinesiology University of Illinois at Urbana-Champaign, IL	**2010-2012, spring**
IB 220: Introduction to Applied Entomology Department of Entomology,	**2012, spring**

University of Illinois at Urbana-Champaign, IL

29. *Thesis and Dissertation Advising/Post-doctoral Student Supervision*:

Thesis and Dissertation Advising

Name	Degree sought	Status	Institution
Qian Huang	Masters of Arts	2017-present (**Chair**)	University of Miami
Leighton Andrew Shervington	Master of Arts	2016-present (**Member**)	University of Miami
Tricia Caroline Gomes Hutchings	Master of Arts	2015-2017 (**Chair**)	University of Miami
Benjamin Ghansah	PhD	2018-present (**Chair**)	University of Miami
Rhoda Moise	PhD	2016-present (**Member**)	University of Miami
Julius Roderick Dewald	PhD	2016-present (**Member**)	University of Miami
Jill Nicole Ulrich	PhD	2013-2017 (**Member**)	University of Miami

Graduate Student Independent Project Supervision:

Name	Degree sought	Project Title	Status	Department/School/Institution
Zara Masood	PhD	"Implementing Sustainable Climate Change Induced Health Interventions in South Asia: A scoping review."	2017-present	UM Journalism and Media Management, School of Communication,
Samuel Swift	PhD	"Cesarean Births and Maternal Region of Birth in Florida: A 10-Year Retrospective Study."	2017-present	UM Division of Epidemiology & Population Health, Miller School of Medicine

Undergraduate Students Independent Project Supervision/Mentee:

Name	Major	Status	Awards or Notable Academic Achievements
Evan De Joya	Geography & Biology	2016-present	Admitted to UM Miller School of Medicine **Medical Scholars' Program** Current President of Student Government & Student Trustee UM Board Of Trustees
Millie Chokshi	Public Health	2017-present	Admitted to UM Miller School of Medicine **Medical Scholars' Program** Iron Arrow Sophomore Leadership Award 2018
Moisés Zamora	Geography & Political Science	2019, spring	
Ben Caplan	History Major	2017-2018	Admitted to Cooper Medical School
Rick Lin	Neuroscience	2017, fall	
Jaclyn F Verity	Health Geographics Major	2016	**Recipient of the College of Arts and Sciences' "Beyond the Book" Summer Award for** Research-Based Learning Scholarship Admitted to Columbia University School of Public Health
Bhargavi Pochi	Public Health	2018, spring	
Catherine Chase E	Public Health	2018, spring	Interning with Anastasia Mosquito Control

Name	Major	Status	Awards or Notable Academic Achievements
			District in summer 2018 Studied abroad in fall 2018, University of Sydney, AU
Monica Samit E	ECS & Microbiology/Immunology	2018, spring	
Patricia Emelle	Public Health	2018, fall	
Celeste Temers	Economics	2018, fall	
Vinicious Silva	Economics	2018, summer	
Daniel Miranda	Geography	2017, fall	
Emilio Georges Issa	International Studies	2016, summer	Admitted to Grenada Medical School
Kevin Schaum	International Studies	2016, summer	

Note: * **Also, recipient of the College of Arts and Sciences' "Beyond the Book" Summer Award for Research-**Based Learning Scholarship.

Undergraduate Research/Scholarly/Artistic Supervision activities:

Student Name	Class	Title	Period of Supervised Contribution	Nature of Scholarly/Artistic Project
Evan de Joya	2019	**"Assessing alcohol use, sleep, and anxiety** during pregnancy among women attending **antenatal care in Zambia: A pilot study."**	2016-present	Conference presentation
		Chapter 4: Progress towards combatting HIV/AIDS in Africa. In: Public Health, Disease and Development in Africa.		Book chapter
		"Adolescent and young adult couples' views of intravaginal practices: a focus group analysis."		Peer reviewed article
Ben Caplan	2018	**"Adolescent and young adult couples' views of intravaginal practices: a focus group analysis."**	2017-2018	Peer reviewed article
Jaclyn F Verity	2016	Identifying youth-friendly service practices **associated with adolescents' use of reproductive** healthcare services in post-conflict Burundi: a cross-sectional study	2016	Peer reviewed article

SERVICE

30. *University Committee and Administrative Responsibilities:*

Committee Service:

- Undergraduate Major in Global Health Committee, University of Miami, CAS, **2018**.
- Website Advisory Committee, College of Arts & Sciences, University of Miami, **2017-present**.

Student Organizations at the University

- African Students Union
  - Faculty Advisor, **2018-present**
- Plant-based Canes Student Organization
  - Faculty Advisor, **2017-present**
- United Against Infectious Diseases (UAID)
  - Faculty Advisor, 2017-present

Reviewer/ Judge Service

- Undergraduate Research, Creativity and Innovation Forum, Office of Undergraduate Research and Community Outreach, University of Miami, **April 21, 2016**
- Proposal reviewer, Provost Research Award Social Science, **2016**
- National Healthy Start Association, Conference Abstract and Poster Reviewer, **2016**

Administrative Service

- Wrote a Master of Professional Science in Urban Sustainability program proposal Department of Geography, University of Miami, FL. **2018**
- Synergizing between Department of Geography undergraduate and graduate programs. **2017**
- Graduate Advisor, Department of Geography, University of Miami, FL. **2017-present**
- Social Media, Director, Department of Geography, University of Miami, FL. **2016, fall**
- GIS Day Planning Committee, Department of Geography, University of Miami, FL **2015-present**
- Urban Geographer Search Committee, Department of Geography, University of Miami, FL. **2016**

Community Service

- **Participant, MetroLab Fight the Bite, Mayor's Office Initiative, MDC, FL.** **2017**
- Member, Miami-Dade Area Refugee Task Force, Miami, FL. **2015-present**

MEDIA COVERAGE

Videos

"Join us in fighting childhood obesity," Illinois Public Media, C-U Fit Families, 2010. Accessible at: https://www.youtube.com/watch?v=HHd7KAmzYTU.

"Natural Disasters May Increase Substance Abuse Risk, Study Finds," ABC News, October 13, 2016. Accessible at: https://www.youtube.com/watch?v=KXw8RjRWM_o.

Radio

"Natural Disasters May Increase Substance Abuse Risk, Study Finds," KTIC Radio, AM 840/98.3 FM/107.9 BULL, October 17, 2016. Accessible at: http://webcache.googleusercontent.com/search?q=cache:hAVCU2gcmAMJ:kticradio.com/abc_health/natural-disasters-may-increase-substance-abuse-risk-study-finds-abcid35790372/+&cd=2&hl=en&ct=clnk&gl=us.

"Natural Disasters May Increase Substance Abuse Risk, Study Finds," Lite Rock 95.9 Radio, October 17, 2016.

Print/Online Media

"Researchers conduct survey to understand people's perceptions on Zika virus." **Accessed at**: https://www.news-medical.net/news/20180630/Researchers-conduct-survey-to-understand-peoples-perceptions-on-Zika-virus.aspx

"Perceptions on Zika." **Accessed at**: https://eurekalert.org/pub_releases/2018-06/uom-poz062818.php.

"Perceptions on Zika." **Accessed at**: https://www.brightsurf.com/news/article/062818460083/perceptions-on-zika.html.

"Zika spread depends on amount of time people spend outdoors." PLOS Research News, September 18, 2017. Accessible at: http://researchnews.plos.org/2017/09/18/zika-spread-depends-on-amount-of-time-people-spend-outdoors/.

"Spread of Zika linked to how much time people spend outside." ScienceDaily, September 14, 2017. Accessible at: https://www.sciencedaily.com/releases/2017/09/170914152114.htm.

"More time spent outside linked to higher likelihood of Zika infection." Homeland Preparedness News, September 26, 2017. Accessible at: https://homelandprepnews.com/stories/24373-time-spent-outside-linked-higher-likelihood-zika-infection/.

"Spread of Zika linked to how much time people spend outside." Healthy World, September 17, 2017. Accessible at: https://health.economictimes.indiatimes.com/news/industry/spread-of-zika-linked-to-how-much-time-people-spend-outside/60723970.

"Time expended outdoors impacts chance for contracting Zika virus." GOOD KINGNEWS Breaking headlines and latest news, September 22, 2017. Accessible at: https://good-kingnews.com/health/time-expended-outdoors-impacts-chance-for-contracting-zika-virus/61776/.

"In US, spread of Zika linked to time outdoors." Medical Express, September 14, 2017. Accessible at: https://medicalxpress.com/news/2017-09-zika-linked-people.html.

"Zika Virus News Update: Three New Things You Should Know." Contagion Live, SEP 19, 2017. Accessible at: http://www.contagionlive.com/news/zika-virus-news-update-three-new-things-you-should-know.

"Natural Disasters May Increase Substance Abuse Risk." UM e-Veritas University Communications, October 21, 2016. Accessible at: http://everitas.univmiami.net/2016/10/27/natural-disasters-may-increase-substance-abuse-risk/.

"Natural Disasters May Increase Substance Abuse Risk, Study Finds," ABC News, October 13, 2016. Accessible at: http://abcnews.go.com/Health/natural-disasters-increase-substance-abuse-risk-study-finds/story?id=42775771.

"The Hidden Effects of Natural Disasters Study: Substance Use Linked to Disaster Areas" abc36, October 17, 2016.

"Natural Disasters may increase Alcohol & Drug abuse," 12abc, October 14, 2016.

"Study: Living Through Hurricanes Makes People Abuse More Substances, "Miami New Times, October 14, 2016. Accessible at: http://www.miaminewtimes.com/news/study-living-through-hurricanes-makes-people-abuse-more-substances-8846414.

"Natural Disasters May Increase Substance Abuse Risk, Study Finds," Yahoo News, October 13, 2016. Accessible at: https://www.yahoo.com/gma/natural-disasters-may-increase-substance-abuse-risk-study-181015643.html.

"Natural Disasters May Increase Substance Abuse Risk, Study Finds," USA Today Sports, October 14, 2016. Accessible at:

Article Featured On Other Websites

"Host outdoor exposure variability affects the transmission and spread of Zika virus: Insights for epidemic control," *PLoS Negl Trop Dis*, September 14, 2017. Accessible at: http://journals.plos.org/plosntds/.

"Drug and alcohol intensifies during the natural disasters" Intervention Services Inc. Accessible at: http://www.interventionservicesinc.com/drug-alcohol-use-intensifies-during-natural-disasters/.

"Natural Disasters May Increase Substance Abuse Risk, Study Finds," JosefShomperlen.net, October 15, 2016. Accessible at: http://josefshomperlen.net/natural-disasters-may-increase-substance-abuse-risk-study-finds/.

"Substance use disorder hospitalizations increase post-Hurricane Katrina," Psychiatric Annals, October 15, 2016. Accessible at: https://www.healio.com/psychiatry/substance-use-disorders/news/online/%7B2c7f22ee-671c-496f-8df1-c2fc31ca7a30%7D/substance-use-disorder-hospitalizations-increase-post-hurricane-katrina.

"Observations of Marketing on Food Packaging Targeted to Youth in Retail Food Stores," RWJF Healthy Eating Research, September 2011. Accessible at: http://healthyeatingresearch.org/research/observations-of-marketing-on-food-packaging-targeted-to-youth-in-retail-food-stores/.

"Observations of Marketing on Food Packaging Targeted to Youth in Retail Food Stores," National Cancer Institute, May 2016. Accessible at: https://epi.grants.cancer.gov/mfe./publications/observations-of-marketing-on-food-packaging.

"Geographic Assessment of Unattended Swimming Pools in Post-Katrina New Orleans, 2006–2008." *Journal of Planning Literature,* July 8, 2016. Accessible at: http://journals.sagepub.com/doi/full/10.1177/0885412216657174.

OTHER FORMS OF WORK RECOGNITION

"Geographic Assessment of Unattended Swimming Pools in Post-Katrina New Orleans, 2006–2008." Featured in a virtual special issue titled *Hurricane Katrina: A Geographical Perspective*, September 15, 2015. Accessible at: http://explore.tandfonline.com/page/bes/hurricane-katrina-a-geographical-perspective.

APPENDIX C

Sonia R. Chao
Research Associate Professor, University of Miami School of Architecture
Director, Center for Urban & Community Design, University of Miami School of Architecture
1223 Dickinson Drive, Building 48-E, Coral Gables, Florida, 33146-5010
schao@miami.edu; https://people.miami.edu/profile/schao@miami.edu

(a) Professional Preparation
A list of the individual's undergraduate and graduate education and postdoctoral training as indicated below:

University of Miami	Coral Gables	Architecture	B.Arch, 1983
Columbia University	New York	Architecture	M.S. Architecture-Building Design & Theory

(b) Appointments
Research Associate Professor, University of Miami, School of Architecture, Coral Gables, Florida. Spring 2017.
Research Assistant Professor, University of Miami, School of Architecture, Coral Gables, Florida, Spring 2004 – present.
Director, Center for Urban and Community Design, University of Miami, School of Architecture, Coral Gables, Florida, Summer 2006- present.
Visiting Professor, Instituto Tecnológico de Monterey- Queretaro, Mexico, Inter-sessions: 2009, 2007, 2006.
Director, Havana Initiative, The Seaside Institute, Seaside, Florida. 2002-04.
Lecturer (Full-time Faculty), University of Miami, School of Architecture, Coral Gables, Florida, Fall 2002 - Fall 2003.
Part-time Faculty, University of Miami, School of Architecture, Coral Gables, Florida, Fall 1998-Spring 2002.
Principal, Sonia R. Chao Architect, Miami, Florida. 1998 – present.
Grant Administrator, Dade Heritage Trust, Miami, Florida. Hurricane Recovery Grants for Historic Properties in South Dade. January 1993- December 1994.
Research Associate and Managing Director, Center for Urban and Community Design, University of Miami, School of Architecture, Coral Gables, Florida, Fall 1992-Fall 1993.
Lecturer, University of Miami, School of Architecture, Venice Program, Venice, Italy, Spring 1988.

(c) Products *[this section may be titled **Publications** if only publications are listed]*

1. S. Chao, J. Correa, S. Fett, A. Montero, G. Sanchez-Hugalde, D. Smith, M. Zabala. *Haiti: Developing Sustainable Traditions & Innovations in Architecture and Urbanism for the Region,*

Towns and the Rural Villages of Akayè (Arcahaie). University of Miami, Center for Urban & Community Design. 2016. Web. Jan. 2016. http://arc.miami.edu/community/center-for-urban-community-design

2. S. Chao, J. Correa, S. Fett, A. Montero, G. Sanchez-Hugalde, D. Smith, M. Zabala. *Haiti: Developing Sustainable Traditions & Innovations in Architecture and Urbanism for the Region, Towns and the Rural Villages of Akayè (Arcahaie).* 2015. Print.

3. Correa, Jaime, Chao, Sonia, Bachin, Robin. *Design Guidelines (for Miami Dade County Housing Finance Authority Projects).* University of Miami Center for Urban & Community Design. 2014. http://hfamiami.com/wp-content/uploads/2014/06/ADRAC-GUIDELINES

4. S. Chao, J. Correa, J. Hernandez, J. Hochstim, B. Matkov, E. Plater-Zyberk, G. Sanchez-Hugalde, A. Shulman. *Under the Sun Traditions and Innovation in Sustainable Architecture and Urbanism in the Sub-tropics.* University of Florida Press. 2014. Print.

5. S. Chao. Chapter: *Sustainable Architecture*, Miami-Dade County Urban Design Handbook. Miami-Dade County Planning. Miami, FL. Print. 2006

Acceptable products must be citable and accessible including but not limited to publications, data sets, software, patents, and copyrights. Unacceptable products are unpublished documents not yet submitted for publication, invited lectures, and additional lists of products. Only the list of 10 will be used in the review of the proposal. *[Unpublished documents submitted/accepted for publication are acceptable and should include likely date of publication*]

Citation format:
Each product must include full citation information including (where applicable and practicable) names of all authors, date of publication or release, title, title of enclosing work such as journal or book, volume, issue, pages, website and URL or other Persistent Identifier.

(d) Synergistic Activities
A list of up to **five examples** that demonstrate the broader impact of the individual's professional and scholarly activities that focuses on the integration and transfer of knowledge as well as its creation. Examples: innovations in teaching and training (e.g., development of curricular materials and pedagogical methods); contributions to the science of learning; development and/or refinement of research tools; computation methodologies, and algorithms for problem-solving; development of databases to support research and education; broadening the participation of groups underrepresented in science, mathematics, engineering and technology; and service to the scientific and engineering community outside of the individual's immediate organization.

1. **Research Grants** (as Principal Investigator or Co-Principal Investigator)

National Science Foundation (NSF) CRISP October, 2016. *Collaborative Research: A human-centered computational framework for urban and community design of resilient coastal cities.* Co-Principal Investigator. Collaborators: UM: Landolf Rhode-Barbarigos (PI), University of Colorado,

Wangda Zuo; Virginia Tech: Walid Saad and Anamaria Bukvic) Grant period: January 2017-December 2018.

The W.K. Kellogg Foundation *Haiti: Developing Sustainable Traditions & Innovations in Architecture and Urbanism for the Region, Towns and the Rural Villages of Akayè (Arcahaie) Learning from the Past. Forging the Future. Empowering the Population.* (2013-2016) Principal Investigator.

The Barr Foundation. *Haiti: Developing Sustainable Traditions & Innovations in Architecture and Urbanism for the Region, Towns and the Rural Villages of Akayè (Arcahaie) Learning from the Past. Forging the Future. Empowering the Population.* (2013-2015) Principal Investigator.

Miami Dade Housing Finance Authority. *Design Guidelines for Affordable Housing in Historic Neighborhoods*. (2013-2016). Co-Principal Investigator. P.I Asst. Vice-Provost Dr. Robin Bachin.

The Jesse Ball duPont Religious, Charitable and Educational Fund. Miami.; South Florida Affordable Housing Initiative (Charrettes and Masterplans for Opa-Locka, Allapattah and Overtown). (2012-2015). Co-Principal Investigator. P.I Asst.Vice-Provost Dr. Robin Bachin.

National Endowment for the Arts (N.E.A.) *Under the Sun: Sustainable Innovation + Traditions*, DESIGN: Access to Excellence Award. Washington, D.C. (2009-2012). Principal Investigator

The J. M. Kaplan Fund, (Four awards: 2002-2012) *Havana Initiative*- Related Research: *Havana: the evolution of urban form and codes*; *Preservation-minded Codes: Case Studies: Historic Center and El Vedado Neighborhoods; Sustainable Architecture at Mid-Century in Florida and Cuba and the Resulting Cross-pollination*. Presented at: Florida Trust for Historic Preservation (2004, 2013, 2014, 2015); Congress for the New Urbanism (2004, 2012); Institute for Classical Architecture and Art (2012, 2013). Principal Investigator.

2. Innovation in Teaching and Training

Chair and Speaker. High School Outreach. *In the Wake of Climate Changes- Are my family and I ready?* Resilient Neighborhoods & Net-Zero Housing Community Workshop, Cutler Bay High School Environmental Magnet Program, Cutler Bay, Fl. November 2015.

Charrette Leader and Organizing Committee. *Building a Resilient South Florida - High School Charrette: Dialogues on the new urban agenda; helping pave the road to U.N. Habitat III*, Partners: The Southeast Regional Office of the U.S. Department of Housing & Urban Development, and AARP Foundation. Participating high schools: BIOTECH (Richmond Heights), MAST Academy (Key Biscayne), Hialeah Gardens (Hialeah), Miami Coral Park (Coral Gardens/West Miami), South Dade (Homestead). June, 2016

Supervisor. *CUCD Preservation and Resiliency Internships*, in collaboration with the Division of Historic Preservation, City of Miami Beach (Fall 2015 and Spring 2016) and the Office of Resiliency, Miami-Dade County, (Spring 2016).

NCARB Authorized Internship Supervisor. - *Intern Development Program (NCARB- IDP) Supervisor for UM SoA Center for Urban & Community Design*. Supervision over CUCD affiliated graduate research assistants, collaborating on community outreach projects; credits towards the Intern Development Program, which is required prior to professional registration. National Council of Architectural Registration Board designation. Fall 2012 – present.

Committee Chair. *UM SoA Inaugural U-SERVE Initiative*- School-wide Day of Service and Learning. Historic Resources Digital Documentation- East Little Havana, School of Architecture, University of Miami, Coral Gables Campus. Spring 2015.

3. Contributions to the Science of Learning/ Interdisciplinary Collaborations

Chair and White Paper Contributor. *Resilient Miami Initiative*. Interdisciplinary ad hoc faculty group from University of Miami (Architecture, Center for Urban & Community Design, Communication, Engineering, Geography, Geology, RSMAS [Department of Atmospheric Sciences, Cooperative Institute for Marine & Atmospheric Studies, Center for Computational Science Climate and Environmental Hazards Program], and the Center for Computational Sciences), Florida International University (Wetlands Ecosystem Research Lab, S.E. Environmental Research Center, Department of Biological Sciences, School of Environment, Arts and Society) and Florida Atlantic University (Architecture, Center for Environmental Studies), focused on the resiliency of historic neighborhoods in Southeast Florida. With guidance and collaboration from Assistant Provost Karin Scarpinato. December, 2015- May 2016.

Faculty Committee Member (Invited). The University of Miami Sustainability Institute- Concept Paper, December, 2015. (Under review. UM College of Engineering, College of Arts & Sciences, RSMAS, School of Architecture. (Chairs: Ben Kirtman, Helena Solo- Gabriele)

Member. University of Miami Ad hoc CUBA Research Group, (Chair: L. Manzor). Fall 2015-present.

4. Development/Refinement of Research Tools

Florida Climate Institute (FCI), Executive Board Member, Spring 2017- present. Statewide collective of academics; collaborates directly with government administrators and the Southeast Florida Regional Climate Change Compact, by sharing research on the impact of climate variability, climate change, and sea level rise on the economy, ecosystems, and human-built systems.

5. Community Engagement and Symposia

Guest Participant. Keeping Current: A Sea-Level Rise Challenge for Greater Miami, University Research Summit. The Van Allen Institute, University of Miami Shalala Activities Center, November, 2017.

Panelist. Resilient Design and the Built Environment, The Wexford Innovation Summit, University of Miami, Rosenstiel School of Marine and Atmospheric Sciences, October 2017.

Presenter and Mini-charrette Co-leader. *Redesigning for Resilience: A Case Study Workshop Exploring Possibilities.* Workshop Organizer: Nancy Schneider, Institute for Sustainable Communities. National Adaptation Forum. St. Paul, MN. In collaboration with Resiliency officers from Miami-Dade, Broward and Hollywood, Fl. May, 2017

Panelist. *Urbanism 3.0*, Companies vs. Climate Change-- The B2B Climate Solutions- US Green Building Council (USGBC), event. December, 2016.

Charrette Leader and Organizing Committee. Resilient Re-design III, Southeast Florida Regional Climate Change Compact and Institute for Sustainable Communities. With participation of Miami-Dade, Monroe and City of Miami staff from Planning & Zoning, Water Management, Resiliency Officers, in addition to scientists, planners, architects, and FIU, FAU and UM SoA faculty and students. Focus Areas: Arch Creek Basin, Shorecrest, Islamorada. November, 2016.

Guest Lecturer. *South Florida Intersection- Sea Level Rise and Historic Preservation; Flamingo Park, Case Study.* Harvard Graduate School of Design, Office for Urbanization, Miami Beach, FL. February, 2016.

Local Expert/Consultant. Resilience Advisory Services, Urban Land Institute Advisory Service Program, Topic: Miami-Dade County on Arch Creek Basin Resiliency and Climate Change Impacts. Interview, May, 2016, Consultations recorded in report, June, 2016.

Organizer and Speaker. "In the Wake of Climate Changes- Are my family and I ready?" Resilient Neighborhoods & Net-Zero Housing Community Workshop, Cutler Bay High School Environmental Magnet Program, Cutler Bay, Fl. November 2015.

Session Organizing Committee & Session Moderator. Hispaniola: Birthplace of the Latin American City, Congress for the New Urbanism, West Palm Beach, Fl. May, 2012

Session Organizing Committee, Presenter & Session Moderator. Havana: Paradigm of a Caribbean City, Congress for the New Urbanism, West Palm Beach, Fl. May, 2012

Co-Chairperson (with Becky Matkov / Dade Heritage Trust Executive Director) & Lecturer. Historic Preservation: a green alternative; 1 day symposium, in collaboration with Dade Heritage Trust and AIA Miami. University of Miami School of Architecture. Coral Gables, Fl. March, 2007.

Chairperson, Exhibit Curator & Lecturer. Under the Sun: Sustainable Innovations & Traditions, 2 ½ day symposium in collaboration with the University of Miami Law School's Center for Ethics & Public Service, U.S Green Building Council- South Florida Chapter and American Institute of Architects (AIA) Miami Chapter. University of Miami, School of Architecture. Connected to 3 credit elective course: Under the Sun Sustainable Traditions and Innovations. Faculty: Chao. Coral Gables, Fl. Symposium: January 2007 and Course: Spring, 2007.

APPENDIX D

Market Research on Employability of Graduates from the Master of Professional Science in Urban Sustainability and Resilience

According to Professional Science Masters (PSM, the cross-disciplinary network of national MPS programs), the annual base salary of a graduate of an MPS program was 4%-16% than higher than their counterparts with only a bachelor's degree. It should be noted that the University of Miami is already an affiliate of PSM through RSMAS.

Some jobs held by graduates of PSM-affiliate programs in Sustainability Science and related degrees include:

- Urban Planner
- Architect
- Mitigation Manager
- Sustainability Specialist
- Climate Change Analyst
- Energy Analyst
- Sustainability Strategist
- Science Teacher
- Botanist, Ecologist, Ornithologist
- Ecosystem Policy Manager
- Risk Manager
- Insurance Broker
- Chief Resiliency Officer (CRO)
- Resiliency Officer
- Military/Government Personnel
- Public Relations
- Green Building Manager
- Waste Management
- Supervisor of Municipal Operations
- Parks & Recreation Director
- Construction Manager
- In-house Counsel/Consulting
- **Strategic Communications Officer**
- Geographic Information Systems (GIS) Specialist

UM's degree will be unique to the current catalog of MPS programs offered by our PSM-affiliates in that it combines coursework typically found in a Sustainability Science degree with the components of an applied degree focusing on resilience and mitigation specifically in urban settings. NGOs, government/military, insurance companies, eco-consulting firms, architecture firms, engineering firms, contractors and construction managers, strategic communications firms, and any company with interests in urban areas affected by climate change and/or natural disasters can benefit from employees or consultants who have successfully completed this degree.