DO NOT TYPE IN THIS BOX

Bulletin # : _____

Academic Year : _____

FLORIDA INTERNATIONAL UNIVERSITY
UNIVERSITY CURRICULUM COMMITTEE
Proposal for a New Course

1. **School/College** International & Public Affairs

   Div./Dept. in Which Taught Public Policy and Administration

2. | Alpha Prefix | 1st Digit | Last 3 Digits | "C"-lec-lab "L"-Lab | Cr. Hrs. |
   |---|---|---|---|---|
   | PUP | 4 | | | 3 |

   CIP Code *(Leave this blank):* _____

3. **Grading Method (select one):** ☒ Graded ☐ Pass/Fail

4a. **Course Title** Urban Resilience and Sustainability Policies in a Global Context

b. **Abbreviated course Title** *(for computer class schedules, transcripts)* Urban Resilience Sustain

LIMITED TO 25 Characters *(including spaces)*

5. **Statewide Course Numbering Subject Matter Area** Public Policy

6. **Catalog Description/Major Topics** *(not to exceed 200 characters including spaces)*

College of Medicine and College of Law: Attach description not exceeding 1,000 characters including spaces.

Examines urban responses to the challenges of climate change from around the globe with an emphasis on local adaptation of successful techniques and approaches.

7. **Attach detailed syllabus course outline and course justification on separate page(s).**
8. **Prerequisite(s):** none
9. **Corequisite(s):** none
10. **Objective(s) of Course:**

Understand how climate change affects urban conditions and how cities around the world are responding with policy initiatives.
Apply concepts from resilience and sustainability theory and practice to urban areas affected by climate change.
Analyze urban policy problems associated with resilience and sustainability using a variety of data types and software platforms.

11. **Does this course duplicate/overlap other courses at FIU?** ☒ No ☐ Yes
    If yes, please explain: _____
12. **What other closely related department(s) have been consulted about this course?**

    _____
13. **Is this course used for the assessment of a program or a certificate (if yes, then send a notification to assessment@fiu.edu)?** **No** **Yes**

PROPOSAL REQUESTED BY:

Faculty Contact Keith Revell (Type name) Keith D. Revell (Signature) 2 / 22 / 2021

revellk@fiu.edu (Email address) -0411 (Phone number)

Chairperson (Dept./Div.) Howard Frank (Type name) Howard Frank (Signature) 2 / 22 / 2021

Chairperson (Curr. Comm.) Steven Heine (Type name) _____ (Signature) _____ / _____ / 2021

College/School Dean John Stack (Type name) _____ (Signature) _____ / _____ / 2021

Submit one original form. Attach one copy of the course justification and course syllabus, course description, objectives, major topics and textbooks.

Florida International University **Spring 2022**

PUP4XXX URBAN RESILIENCE AND SUSTAINABILITY POLICIES IN A GLOBAL CONTEXT (Section U01)

(There are no pre-requisites or co-requisites for this course)

CONTACT INFORMATION

Professor Keith D. Revell (Office Telephone: 305-348-0411; Email: revellk@fiu.edu)
Office: Modesto Maidique Campus, Paul Cejas Architecture Building, Room 353B
Office Hours: Wednesday, 4 pm to 6:15 pm, or by appointment

CATALOG DESCRIPTION: Examines urban responses to the challenges of climate change from around the globe with an emphasis on local adaptation of successful techniques and approaches.

DESCRIPTION: Climate change is complicating the already difficult task of managing cities. A majority of the world's population now lives in cities, and those cities are growing larger by the day thanks to steady migration from rural areas along with natural demographic increases. The traditional problems of managing life in urban areas – providing residents with clean water, breathable air, adequate housing, efficient transportation, and economic opportunity, among others – become even more challenging in the face of global warming, sea level rise, catastrophic weather events, and other developments associated with climate change. In this course, students will explore facets of these problems by focusing on urban resilience and sustainability policy issues drawn from a variety of cities around the globe. By examining the ways that other places are dealing with these pressing matters, students will improve their capacity to assist public-service organizations develop effective, efficient, and equitable policy responses adapted to local conditions and institutional preferences.

COURSE LEARNING OBJECTIVES: By the end of this course, you should be able to:

- Understand how climate change affects urban conditions and how cities around the world are responding with policy initiatives.
- Apply concepts from resilience and sustainability theory and practice to urban areas affected by climate change.
- Analyze urban policy problems associated with resilience and sustainability using a variety of data types and software platforms.
- Compare and evaluate policy solutions for resilient and sustainable cities.
- Create policy proposals to assist public-service organizations address the challenges of urban resilience and sustainability.
- Communicate effectively by presenting information and policy proposals in written and oral formats.

READINGS: The WEEKLY CLASS SCHEDULE section of this syllabus contains links to PDFs and other sources used in the course. Students should also purchase cases from Harvard Business Publishing and the Harvard Kennedy Case Program.

REQUIREMENTS: Grades will be determined by a combination of individual and team performance:

Graded Items	Points
Readings Quizzes – Individual (6)	90
Readings Quizzes – Team (6)	90
Case Quizzes – Individual (6)	60
Case Quizzes – Team (6)	60
Data Exercises (6)	120
Case Exercises (6)	120
Policy Alternatives Memo	100
Final Policy Exercise	60
Team Evaluation	100
Total Points	800

READINGS QUIZZES: All readings quizzes are multiple-choice and are structured as follows:

Category of Question	Number	Point Value	Total Points
Facts: Are You Paying Attention?	3	1	3
Arguments: Did You Understand?	3	2	6
Synthesis: Can You See Connections?	2	3	6
Total	8		15

To prepare for quizzes, students should download and complete the study guides for each reading or case. The study guides are arranged almost exactly as the quizzes are arranged; many of the quiz questions will be taken verbatim from the study guides. Keep the following considerations in mind as you complete the study guides: (1) answers to questions about ***Facts*** can usually be found on a single page or two and almost always involve a single item or small group of items; (2) answers to questions about ***Arguments*** will usually be found on several different pages spread over a reading, so you will have to piece the answer together; they will usually involve interpretation of events or concepts beyond basic facts; (3) answers to questions about ***Synthesis*** will likely require thinking beyond the reading to previous material and making connections among arguments; rarely will these answers be found on a single page. ***Facts*** may be found through a key word search or in an index, but ***Arguments*** and ***Synthesis*** are unlikely to appear in a key word search or an index; they must be derived from a careful reading of the entire text. ***Although the study guides are not graded, you may use them during quizzes. I will also collect them to determine how well you are keeping pace with the assigned work, so please be prepared to turn them in every week. For every failure to turn in a completed study guide, a 1 percent penalty (10 points) will be deducted from your final grade.***

APPEALS PROCESS FOR QUIZ QUESTIONS: At the end of the team quizzes, teams are encouraged to appeal questions that they got incorrect. Only teams can appeal; individuals cannot. Teams should fill out the appeals form from the course website and present a detailed written argument to make their case. Appeals will only be considered outside of class time and the results will be announced at the next class meeting.

QUIZ ETIQUETTE: Individuals and teams will complete their quizzes at different times; this means that there may be a few moments in class when you are waiting for other students or teams to finish. During these moments, you may use your cell phones and other devices, though please do so discretely and silently. However, promiscuous use of cell phones or other electronic devices during team quizzes or class exercises will be considered non-performance (see below).

MAKING SENSE OF NUMBERS EXERCISES: Making Sense of Numbers Exercises require students to download, analyze, and present data (quantitative, spatial). Using Excel, ArcGIS, and PowerPoint (or some other presentation program), students will create mini-presentations in class to illustrate their understanding of problems related to urban resilience and climate change. Students can obtain access to ArcGIS for no charge.

CASE EXERCISES: Students should prepare for case activities in advance by reading all the case materials, preparing the case study guides, and drafting case responses. Before each case activity, students will take an individual and a team case preparation quiz. You may use your study guides during these quizzes. The individual and team case preparation quizzes are worth 10 points each. The case exercises that follow will be worth an additional 20 points (10 points for individual case responses and 10 points for team case responses), which means that each case is worth a maximum of 40 points. Cases are usually self-contained but they occasionally include terms that you may not understand. It is incumbent upon you to look up those terms or even conduct simple calculations (using material in the case or case appendices) so that you are fully prepared for the case exercise. I will collect study guides for cases, so please prepare them carefully and come to class ready to apply what you have learned. Failure to prepare case study guides will also result in a 1 percent penalty (10 points) deducted from your final grade.

TEAMS AND CLASS PARTICIPATION: Class participation is an essential element of this course. It is not possible to avoid participation and pass the course because so much of your grade will depend on team activities that can only be completed in class. Each student will be assigned to a team for the entire semester. All team work will be completed in class and there is no need or obligation to meet with your team outside of class. At the end of the term, you will evaluate your teammates using the criteria below. The average of your teammates' evaluation of your performance will be multiplied by your attendance percentage to determine this component of your grade.

1. Preparation – Were they prepared for team meetings?
2. Contribution – Did they contribute productively to team discussion and work?
3. Respect for others' ideas – Did they encourage others to contribute to team decisions?
4. Flexibility – Were they flexible when disagreements occurred?
5. Learning – Did they learn and apply the materials taught during the course?

Even though class participation is a major component of your final grade, some students may still be non-performers: coming to class unprepared and hoping to rely on their teammates to carry the team component of their grade. The three principal indicators of non-performance are (1) failure to come to class with completed study guides, (2) failure to share material from study guides, and (3) limited contributions to team exercises. If this happens in your team, please bring it to the attention of the professor (in person, via email or voicemail), so that persistent non-performers can be removed from their teams. Persistent non-performers will have their grades computed solely from their individual quiz results. Previous experience with team-versus-individual test results indicates that 80 to 86 percent of individual students score below the lowest scoring team: in other words, team results will help you.

TEAMWORK ETIQUETTE: There are team quizzes for every reading and case, so working effectively with your teammates will be essential to getting a good grade. The first step toward effective teamwork is proper individual preparation: a close reading of the assigned texts and thorough preparation of the study guides. As your team debates which answers to choose on the team quizzes, you should use those study guides to make *evidence-based arguments*. Reasoning your way through the quizzes – by citing quotations from the texts, identifying sources by page number, and drawing on material from other sources (readings, videos, cases) – is a superior approach to voting, for example, or bullying your teammates into accepting your answer, or simply sitting back and letting your team decide without your contribution. Logical, grounded argument is the best approach to successful teamwork.

POLICY ALTERNATIVES MEMO: The final deliverable for the course is a Policy Alternatives Memo that analyzes an urban resilience and/or sustainability issue, offers feasible policy options, and proposes the best solution.

FINAL POLICY EXERCISE: This exercise requires students to use a variety of the techniques learned in the course to analyze a policy problem and present proposed options to the class.

GRADING SCALE: Grades will be awarded according to the following scale:
To get an A (94%) in the course, you will need at least 752 points.
To get an A- (90%) in the course, you will need at least 720 points.
To get a B+ (87%) in the course, you will need at least 696 points.
To get a B (84%) in the course, you will need at least 672 points.
To get a B- (80%) in the course, you will need at least 640 points.
To get a C+ (77%) in the course, you will need at least 616 points.
To get a C (74%) in the course, you will need at least 592 points.
To get a C- (70%) in the course, you will need at least 560 points.
To get a D (65%) in the course, you will need at least 520 points.
Any point total below 480 receives an F (60%).

MISSED CLASS POLICY: There will be graded activities every week, with the exception of the first class. You may make-up **one** of the individual quizzes that you miss if you are unable to attend class, though you cannot receive credit for any team quizzes or exercises that you miss. Other absences will also result in the loss of all points missed.

WEEKLY CLASS SCHEDULE

MODULE 1

Week 1 January 12: Urban Resilience and Sustainability in a Global Context

Reading: Steven Cohen, "Sustainable Urban Systems: Defined and Explained," in *The Sustainable City,* Columbia University Press, 2015: 15-38.

Reading:

MODULE 2

Week 2 January 19: Greenhouse Emissions and Sustainability Policies

Reading #1: Dakota Freeze and Jennifer Carstens, "Driving Change: A Route to More Sensible Vehicle Emissions Regulation," *Vermont Journal of Environmental Law* 21/2 (Fall 2019): 113-145.

Making Sense of Numbers Exercise #1: EPA Emissions Data (download/graph/interpret).

Week 3 January 26: Greenhouse Emissions and Sustainability Policies

Case Exercise #1: HKS Case 1978 "Ambitious but Achievable: Using Transportation and Land Use Plans to Reduce GHG Emissions in California."

MODULE 3

Week 4 February 2: Green Construction and Urban Sustainability

Reading #2: Tom-Pierre Frappé-Sénéclauze, "Achieving Canada's climate and housing goals through building retrofits: Recommendations on green stimulus and platform commitments," Pembina Institute, 2020.

Making Sense of Numbers Exercise #2: Real Estate Proforma Analysis.

Week 5 February 9: Green Construction and Urban Sustainability

Case Exercise #2: HBS Case NA0056 The Green Duplex (developer analyzes the cost of greening a real estate project).

MODULE 4

Week 6 February 16: Flooding and Urban Resilience

Reading #3: P. N. Duy; L. Chapman; M. Tight; L. V. Thuong; and P. N. Linh, "Urban Resilience to Floods in Coastal Cities: Challenges and Opportunities for Ho Chi Minh City and Other Emerging Cities in Southeast Asia," *Journal of Urban Planning and Development* 144/1 (March 2018): 1-10.

Making Sense of Numbers Exercise #3: ArcGIS NOAA Flood Maps Analysis.

Week 7 February 23: Flooding and Urban Resilience

Case Exercise #3: HKS Cases 2124/2125 "A Cascade of Emergencies: Responding to Superstorm Sandy in New York City."

Week 8 March 2: Spring Break – No Class

MODULE 5

Week 9 March 9: Urban Waste Management and Citizen Participation

Reading #4: James Okot-Okumu, "Solid Waste Management in Uganda: Challenges and Options," in *Future Directions of Municipal Solid Waste Management in Africa*, Romeela Mohee and Thokozani Simelane, eds. (Africa Institute of South Africa, 2015): 107-135.

Making Sense of Numbers Exercise #4: World Bank Municipal Waste Data (download/graph/interpret).

Week 10 March 16: Urban Waste Management and Citizen Participation

Case Exercise #4: Bloomberg/Harvard/City Leadership Initiative Case 0026TC "The 'Garbage Lady' Cleans Up Kampala: Turning Quick Wins into Lasting Change."

MODULE 6

Week 11 March 23: Disaster Vulnerability and Urban Resilience

Reading #5: Birkmann, J., Cutter, S. L., et al, "Scenarios for Vulnerability: Opportunities and Constraints in the Context of Climate Change and Disaster Risk," *Climatic Change* 133/1 (2015): 53-68.

Making Sense of Numbers Exercise #5: ArcGIS Vulnerability Mapping.

Week 12 March 30: Disaster Vulnerability and Urban Resilience

Case Exercise #5: HKS Case 2053.0 "Ready in Advance: The City of Tuscaloosa's Response to the 4/27/11 Tornado."

MODULE 7

Week 13 April 6: Smart Cities and Sustainability

Reading #6: Anthony McLean, Harriet Bulkeley and Mike Crang, "Negotiating the Urban Smart Grid: Socio-Technical Experimentation in the City of Austin," *Urban Studies*, 53/15 (November 2016): 3246-3263.

Making Sense of Numbers Exercise #6: ArcGIS Urban Cycling Maps Analysis.

Week 14 April 13: Smart Cities and Sustainability

Case Exercise #6: HKS Case 2113.0 "Choosing the Road Less Traveled: How Cycling Took Hold in Copenhagen."

MODULE 8

Week 15 April 20: Final Policy Exercise