425.630 Cities and Climate Change

JOHNS HOPKINS UNIVERSITY
Krieger School of Arts and Sciences
Advanced Academic Programs
ENERGY POLICY AND CLIMATE
1717 Massachusetts Avenue, N.W., Washington D.C.

425.630 – CITIES AND CLIMATE CHANGE
Class Syllabus

INSTRUCTOR

Dr. Jairo Garcia can be contacted by e-mail at jhgarcia@jhu.edu. E-mails will usually be answered with 24 hours. If urgent send a text to 404-210-7575.

COURSE DESCRIPTION

This course examines cities as the primary centers of energy demand; as major sources of greenhouse gases; as places most vulnerable to climate change impacts; and as significant focal points for mitigation and adaptation solutions. Local level government climate policy and financing options are also examined, including energy efficiency, alternative energy production, resilient water systems and green infrastructure, green buildings, alternative transport and sustainable transportation infrastructure in general, local level offsets, and urban-based Clean Development Mechanisms. Analytical methods are introduced to understand current approaches to decision-making. Offered online at least once every two years.

PREREQUISITES

425.602 Science of Climate Change and Its Impact
425.603 Climate Change Policy Analysis

LEARNING OBJECTIVES

Students will gain an understanding of

• What drives humans to live in urban settings, what makes cities fail or succeed, and the impact of cities on resources, society, and climate change

• How cities operate – required infrastructure, challenges and opportunities
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• Identify existing metrics and organizations that measure cities’ performance in sustainability and climate

• Be familiar with policies, climate actions plans, and resilience plans for climate mitigation and adaptation

• Gain exposure to climate risk analysis and vulnerability assessment

• Be familiar with strategies for urban resiliency, including planning for resiliency, organizations, and financing

• Exposure to proposed scenarios and the future of urban setting in the time of climate change

COURSE REQUIREMENTS

This class will be delivered via online and will consist of 16 weekly lessons. Each weekly lesson will include readings, videos, and quizzes.

At the beginning of the class, students will be divided in “learning groups” of maximum four members that will be assigned by the faculty member.

Prior to each weekly session, each student is required to read the required materials, watch the videos for that particular session, and write a memo.

During the weekly session, each student is required to participate actively with peers and the faculty by responding to questions on the board or by sumitting relevant topics to the discussion.

At the end of the class, the learning groups will submit a final paper and a power point presentation (PPP) of a case study or a policy analysis (one paper per learning group).

GRADING

1. Weekly Quizzes -15 Quizzes total – (15%)

2. Weekly Memos -15 Quizzes total – (30%)

3. Class participation and reading assignment discussion (30%).
4. Final case studies/policy analysis paper with a PPP (25%).

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COURSE MATERIALS

Textbooks:

Rosenzweig, C. (2018). Climate change and cities second assessment report of the Urban Climate

Suggested Readings:


ACADEMIC INTEGRITY

Copying and pasting materials from others’ work in memos, papers, or postings without the proper citation is considered plagiarism. Any incidence of plagiarism or other instances of academic misconduct will be dealt with in accordance with Johns Hopkins University policies without any initial warning. Please familiarize yourself with The Code of Conduct for Johns Hopkins Krieger School of Arts and Science Advanced Academic Program located at http://advanced.jhu.edu/current-students/new-student-checklist/notice-on-plagiarism/

Citations and references must follow APA guidelines.

APA Guidelines

This course requires extensive reading and writing, which are essential for your professional development to formulate clear argument. All papers submitted must be submitted following APA style. You will be able to find many Internet guidelines for APA. Be sure these resources follow the last APA publication:


Citation Software

The University provides the following Citation Software XYZ.

COURSE ACTIVITIES AND SCHEDULE

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Reference</th>
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<tbody>
<tr>
<td>1</td>
<td></td>
<td>Introduction: Cities as the center of civilizations. Factors to the success or failure of a city. Cities and Climate change (introduction): Historical perspective, Framework and definitions.</td>
<td>Required: Rosenzweig, C. (2018); chapters 1, 2, and 3 Glaeser (2012) – chapters 1, 2 and 3 Suggested: Margalit, H. (2018); chapters 1, 2, 3, 4 and 5</td>
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<td>3</td>
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<td>Urban Infrastructure Part II - Water</td>
<td>Required: Rosenzweig, C. (2018); chapter 14</td>
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|   | Urban Infrastructure Part III - Transportation | Required: Rosenzweig, C. (2018); chapter 13  
Suggested: Gravel (2016) |
|---|---|---|
|   | Urban Infrastructure Part IV – Waste vs. Materials Management | Required: Rosenzweig, C. (2018); chapter 15  
Suggested: |
Bridge, G. (2018); chapters 5, 6, 7 and 8  
Suggested: |
|   | Break | |
|   | Urban Ecosystems: Green Spaces, Biodiversity, Coastal Systems | Required: Rosenzweig, C. (2018); chapters 8, 9, 10, and 11  
Suggested: |
|   | Sustainable Infrastructure – Green Buildings & Green Infrastructure | Required: Bridge, G. (2018); chapters 9 and 10  
Suggested: Davoudi (2009) |
|   | Sustainable Infrastructure: Livable Communities & Food Systems | Required:  
Suggested: |
|   | Planning for Climate: Climate Justice and Resiliency | Required: Rosenzweig, C. (2018); chapter 5, 6, and 7  
Glaeser (2012); chapter 4 and 5  
Bulkeley, H. (2015); chapter 11  
Suggested: |
|   | Governance: Policies and Financing | Required: Bulkeley, H. (2013); chapter 4  
Rosenzweig, C. (2018); chapter 7  
Bulkeley, H. (2015); chapter 12  
|   | The City of the Future: Smart Cities - IoT | Required: Rosenzweig, C. (2018); chapter 16  
Suggested: |
|   | Cities and the IPCC SR1.5C – A Small Window for Opportunity | Required: IPCC SR1.5C |