

<b>Course title:</b> Sustainable Urban Habitat and Climate Change				
<b>Course code:</b> NRC 161	<b>No. of credits:</b> 3	<b>L-T-P distribution:</b> 28-14-0	<b>Learning hours:</b> 42	
<b>Pre-requisite course code and title (if any):</b>				
<b>Faculty:</b> Ms Nimish Jha	<b>Department:</b> Department of Natural Resources			
<b>Course coordinator (s):</b> Ms Nimish Jha	<b>Course instructor (s):</b> Ms Nimish Jha			
<b>Contact details:</b>				
<b>Course type</b>	<b>Compulsory</b>	<b>Core</b>	<b>Elective</b>	
<b>Course offered in</b>	<b>Semester 1</b>	<b>Semester 2</b>	<b>Semester 3</b>	<b>Other</b>
<p><b>Course Description</b></p> <p>Increasing population and economic activities in the cities due to the amount of energy consumed and the emission produced by them are leading to climate change. These aspects are affecting the city's infrastructure and its capacity to grapple with challenges thrown open to it. The Urban Local Bodies (ULBs), governing the city is facing huge challenges for devising and implement strategies to build resilient cities.</p> <p>While the cities are becoming vulnerable to climate change, at the same time they can play a crucial role in mitigating its impact on the city. The interventions require careful planning, selection of appropriate technologies, optimal financial solution, an effective management of resources and strengthening of infrastructure and services. The ULBs have to be equipped to provide an infrastructure that is sustainable and helps in mitigating and adaptation to challenges of climate change at the local level.</p> <p>Integration of urban and environmental planning, sustainable public service delivery and financial resources to meet the cost can help in mitigating climate change impact at the local level.</p> <p>The objectives of the course are to:</p> <ul style="list-style-type: none"> <li>• Provide an overview of climate change issues and their relevance to the urban context.</li> <li>• Understand the institutional roles and responsibilities and their inter linkage</li> <li>• Learn new technologies and methods that enables better service delivery</li> <li>• Explore financial options to meet the expenditure needs of climate change and sustainability goals.</li> </ul>				
<p><b>Course objectives</b></p> <ol style="list-style-type: none"> <li>1. Provide an overview of climate change issues and their relevance to the urban context.</li> <li>2. Understand the institutional roles and responsibilities and their inter linkage</li> <li>3. Learn new technologies and methods that enables better service delivery</li> </ol>				
<b>Course content</b>				
<b>SNo</b>	<b>Topic</b>	<b>L</b>	<b>T</b>	<b>P</b>
	<b>Climate Change and Cities</b>		2	
1.	Overview of climate change and its relevance to the urban context	2	2	

2.	Integrating urban and environmental planning framework: Adaptation to climate change	2		
3.	Climate resilient cities for sustainable urban habitat	2		
	<b>Institutions, Networks and stakeholders at the Local Levels</b>		2	
4.	Roles and responsibilities of Local Authorities	4	2	
5.	Inter-governmental Linkages and roles in Climate Change	2		
6.	Characteristics of urban governance for climate resilience	2		
7.	Climate resilient urban habitat and urban poor	2		
	<b>Urban Infrastructure and mitigation of Climate Change: Technology and management</b>		4	
8.	Municipal Solid Waste	2	2	
9.	Water and Waste water management	2		
10.	GIS enabled information system in designing mitigation strategies	2		
11.	Solar Green Buildings Program and Climate Change	2		
12.	Urban green spaces	2	2	
	<b>Innovative Financing to meet challenges of Climate Change</b>		4	
13.	Financial Instruments and incentives	2		
	<b>Total</b>	<b>28</b>	<b>14</b>	
<b>Evaluation criteria</b>				
<ul style="list-style-type: none"> <li>▪ Tutorials/ assignments: 20%</li> <li>▪ 2 Minor tests: 15 % each</li> <li>▪ 1 Major test (end semester): 50%</li> </ul>				
<b>Learning outcomes</b>				
1. After the completion of the course, students will be able to demonstrate critical appreciation of inter – relationship between cities, climate change and urban sustainability. This course will equip students to make informed choices of possible actions and strategies for strengthening cities capabilities in dealing with climate change.				
<b>Pedagogical approach</b>				
<b>Materials</b>				
Required text				
Suggested readings				
1. Cynthia R. (et, al) Eds. (2011) Climate Change and Cities: First Assessment Report of the Urban Climate Change Research Network, Cambridge University Press.				
2. Harriet B. and Newell P. (2010) Governing Climate Change, Routedledge, New York.				
3. Intellectual Capital (2010) Opportunities for Private Sector Engagement in Urban Climate Change and Resilience Building, Hyderabad.				
Case studies				
Websites				
Journals				
1. Environment, Development and Sustainability				
2. Urban India				
<b>Additional information (if any)</b>				

**Working Papers/Discussion Notes**

1. OECD (2009) Competitive Cities and Climate Change, Paris, France
2. Singh S.R. (2010) Urbanization in India, Sage, New Delhi
3. UNDP (2010) Local Governance and Climate Change, Bangkok, Thailand
4. World Bank (2008) Climate Resilient Cities, Washington
5. World Bank (2010) World Development Report , Washington

**Policies/Reports**

1. MoUD, JawaharLal Nehru National Urban Renewal Mission
2. State Climate Change Action Plans

**Student responsibilities**

Attendance, feedback, discipline, guest faculty etc