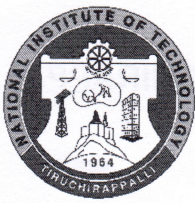


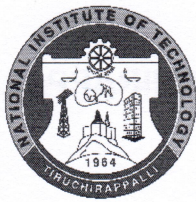
<b>MAPPING OF COs with POs</b>	
<b>Course Outcomes</b>	<b>Programme Outcomes (PO) (Enter Numbers only)</b>
1. Understanding of impact of climate on buildings and vice versa through familiarizing climate variables and zones.	
2. Understand and analyse basics of human thermal comfort, climate variables.	
3. Understand solar geometry and engage in the design of solar shading and its applications in building and site design.	
4. To generate design guidelines for any climate zone and to be able to integrate the same into architectural design decisions.	
5. To familiarize about Natural ventilation in buildings.	

<b>COURSE PLAN – PART II</b>			
<b>COURSE OVERVIEW</b>			
<p><b>This course aims to provide the students with the understanding and ability to integrate climatic analysis and design shading devices into Architectural design decisions at the sketch and schematic design stage.</b></p>			
<b>COURSE TEACHING AND LEARNING ACTIVITIES</b>			( Add more rows)
<b>S.No.</b>	<b>Week/Contact Hours</b>	<b>Topic</b>	<b>Mode of Delivery</b>
1	1 week	Introduction, climate, scales of climate, microclimate	Lecture
2	2 weeks	Introduction to microclimate and its impact on Buildings and surroundings, climate zones climate variables	Lecture
3	1	Climate data	Lecture
4	1	Thermal comfort, Discomfort	Lecture
5	1	Thermal comfort models and indices	Lecture
6	1	Test and Climate, comfort analysis	Lecture
7	2	Climate and comfort analysis	Tutorial and project
8	1	Sun angles	Lecture
9	1	Solar geometry	Lecture
10	1	Design of Shading devices	Tutorial and Project
11	1	Natural Ventilation/ window design	Lecture

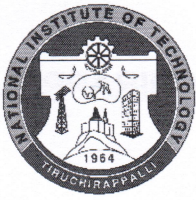


DEPARTMENT OF ARCHITECTURE

COURSE PLAN – PART I			
Name of the programme and specialization	B.ARCH		
Course Title	CLIMATICALLY RESPONSIVE ARCHITECTURE		
Course Code	AR 202	No. of Credits	3
Course Code of Pre-requisite subject(s)	NIL		
Session	July / January	Section (if, applicable)	A / B N A
Name of Faculty	T. SRINIVAS	Department	ARCHITECTURE
Official Email	SRIVAS@NITT.EDU	Telephone No.	
Name of Course Coordinator(s) (if, applicable)			
Official E-mail		Telephone No.	
Course Type (please tick appropriately)	<input type="checkbox"/> Core course	<input type="checkbox"/> Elective course	
<b>Syllabus (approved in BoS)</b>			
<p>Climate &amp; Weather. Scales of climate macroclimate, mesoclimate and micro climate. Climatic variables: temperature, humidity, precipitation, cooler radiation, wind, etc. Tropical Climate. Climatic Zones of India &amp; their characteristics. Geometry of solar movement. Altitude &amp; azimuth angles. Sun path diagram/Solar chart. Horizontal and vertical shadow angles. Use of shadow angle protractor. Design of shading devices. Performance evaluation of shading devices.</p> <p>Air flow/wind movement around and through buildings. Natural ventilation. Mahoney Tables and their application. Climatic design recommendations for various climatic zones in India. Thermal comfort. Indices of thermal comfort Tropical Summer Index &amp; Effective Temperature. Thermal effects in buildings. Basic concepts of heat transfer in buildings, units &amp; terminology</p>			
<b>COURSE OBJECTIVES</b>			
<ul style="list-style-type: none"> <li>To place emphasis on climate as generator of design form. To provide knowledge and skills to analyse climate &amp; comfort factors so as to enable students to generate design guidelines and design and evaluate sun shades and other buildings elements. To enable the students to integrate climatic design into Architectural design.</li> </ul>			



12	1	Concept of Heat Transfer in Buildings	Lecture	
<b>COURSE ASSESSMENT METHODS</b> (shall range from 4 to 6)				
S.No.	Mode of Assessment	Week/Date	Duration	% Weightage
1	Written test	Week 7	One hour	20%
2	Project 1/Assignment	Weeks 8 and 9	Two weeks and take home	20%
3	Project 2 / Assignment	Weeks 12 and 13	2 weeks and take home	20%
CPA	Compensation Assessment*	Week 14 or 15	One hour	
4	Final Assessment *	Week 16/ as per time table	2 hours	40%
<b>*mandatory; refer to guidelines on page 4</b>				
<b>COURSE EXIT SURVEY</b> (mention the ways in which the feedback about the course shall be assessed)				
NITT may administer the feed back survey as per the regulation of the office of Dean Academic				
<b>COURSE POLICY</b> (including compensation assessment to be specified)				
<p>For those students who miss the written test due to genuine reasons a retest will be held as mentioned and with prior notice.</p> <p>All the assignments are required to be carried out either group or individual in continuous assessment mode. Any delay in submission of assignment will attract reduction of 10% of marks for one week.</p>				
<b><u>ATTENDANCE POLICY</u></b> (A uniform attendance policy as specified below shall be followed)				
<ul style="list-style-type: none"> <li>➤ At least 75% attendance in each course is mandatory.</li> <li>➤ A maximum of 10% shall be allowed under On Duty (OD) category.</li> <li>➤ Students with less than 65% of attendance shall be prevented from writing the final assessment and shall be awarded 'V' grade.</li> </ul>				
<b><u>ACADEMIC DISHONESTY &amp; PLAGIARISM</u></b>				
<ul style="list-style-type: none"> <li>➤ Possessing a mobile phone, carrying bits of paper, talking to other students, copying from others during an assessment will be treated as punishable dishonesty.</li> <li>➤ Zero mark to be awarded for the offenders. For copying from another student, both</li> </ul>				



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students get the same penalty of zero mark.

- The departmental disciplinary committee including the course faculty member, PAC chairperson and the HoD, as members shall verify the facts of the malpractice and award the punishment if the student is found guilty. The report shall be submitted to the Academic office.
- The above policy against academic dishonesty shall be applicable for all the programmes.

### ADDITIONAL INFORMATION, IF ANY

*These passing Minimum marks as per B. Arch Regulations for this subject is 40%.*

### FOR APPROVAL

*T. Srinivas*  
T. SRINIVAS  
Course Faculty  
30/11/19

CC- Chairperson

*R. Prem Kumar*  
R. PREM KUMAR

HOD

*[Signature]*  
30/11/19