

School Of Architecture and Interior Design (SAID), KTR
School Of Architecture, Environment And Design (SEAD), RPM
Faculty of Engineering and Technology
S.R.M INSTITUTE OF SCIENCE AND TECHNOLOGY

Lesson Plan – Theory Course

Course Code : 16 AR 311
Course Title : **TEMPLE ARCHITECTURE**
Year & Semester : **B.Arch, III year, V sem**
Course time : **EVEN (July – Dec 2018)**
Faculty Details:

Name of the Staff	Designation	Sec	Office	Mail ID	Mobile No
Ar Kamalakannan	Professor	B	SAID	kamalakannan.t@ktr.srmuniv.ac.in	9840109558
Ar Srinath	Asso.Prof	A	SAID	srinath.v@ktr.srmuniv.ac.in	9791299811
Ar Arun	Asso.Prof	C	SAID	arun.sk@ktr.srmuniv.ac.in	7401308691
Ar Yogapriya	Professor		SEAD	yogapriya.g@rmp.srmuniv.ac.in	9176773139
Ar Prathyusha	Asst. Prof		SEAD	prathyushanilakantan@gmail.com	9841930572

Required Text Books:

1. Percy brown, Indian architecture (Hindu period) Taraporevala and sons, Bombay, 1983
2. Satish Grover, the architecture of India (Buddhist and Hindu period), Vikas publishing house, New Delhi.
3. The history of architecture in India, Christopher Tadgell, Longman group, U.K.ltd., London,1990.
4. Living architecture India (Buddhist and Hindu), A.Volwahren, oxford and IBM, London , 1969.
5. The Iconography of Architectural plans, Fredrick W.Bunce.

Tentative Assessment Dates

Midterm Test : 11/09/2018 – 18/09/2018
Model Examination : 12/10/2018 – 17/10/2018

Assessment Portions:

Midterm Test : First Two And A Half Units
Model Examination : All Five Units

Assessment Details

Midterm Test : 25 Marks
Model Examination : 25 Marks

S.No	Assignment Topics	Tentative Dates
1	Vasthu mandala	
2	Dravidian temples	
3	Case study of temple(Which require restoration)	

DETAILED SESSION PLAN

Total No. of Hour given in Syllabus: 45

S. No.	Topic	No. of Hours	Reference Book	Page No
UNIT-1 ART & ARCHTECTURE – 9				
1,2	Art & Architecture - Role of fine arts, music, dance, painting and sculpture forms in the evolution of temple architecture	2 hrs	?	
3,4	Vastu Vidya –Vasutu Sastra,Silpa and AagamaSastra, guideline for selection of site for temple.	2 hrs		
5	Dynamics of spaces- mandala energy grid, installation of deities, consecration, rituals, priestly duties,	2 hrs		
6	sculpture – images and iconography according to sakaladhikara/ silpasastra.	1 hr		
7,8	Water its relevance in ritual and temple architecture	2 hrs		
UNIT-2 MATHEMATICS, GEOMETRY, SCIENCE & PHILOSOPHIES IN TEMPLE ARCHITECTURE - 9				
9,10	Mathematics and geometry, units, measurements and scale, human scale and monumental scale,	2 hrs	?	
11,12	study and analysis of mathematics series and geometry in the evolution of temple form.	2 hrs		
13,14	Temple layout as well as vertical composition and its relevance to human form.	2 hrs		
Mid Term Exam				
15	Structural components: – plinth, walls,	2 hrs		

	columns/pillars, beams, brackets, cornice, overhangs, fenestrations and surface decorations.			
16,17	Vertical elements –Vimana /Shikara, Gopurams and Dwajasthamba/stambas.	1 hr		
UNIT-3 EVOLUTIONOF HINDU TEMPLES - 9				
18	Origin and Evolution of Hindu temple in chronological order-classification of Hindu temples from Vastuvidya/Kamigama/Silparatna	1 hr	?	
19, 20	origin under Guptha's, cradle of temple evolution at aihole, central India under chalukya's, development of regional styles from Aihole group of temples – Nagara [satwa] -Vesara[thamasa] and Dravida [Rajasa].	2 hrs		
21	Nagara style (Satwa/Indo-Aryan style), east- Orrisa, central - Khajuraho/Rajaputana, north-kashmir,west-Gujarat/Gwalior.	1 hr		
22- 23	Vesara style (Thamasa/Central Hindu style), central India-badami, pattadakka, ellora, bellur, halibedu & singeri .	2 hrs		
24- 25	Dravida style (Rajas/Dravidian style), pallava's - kancheepuram, mahabalipuram, chola's-tanjore, gangaikondacholapuram, pandya's- madurai, vijayanagar-kancheepuram, madurai,srirangam.	2 hrs		
26	Vernacular architecture: Styles of vernacular influence for vernacular deities of pre gupta's period, grama deva shrines. Chera's -Temples of Kerala (Trichur /Vaikom /Thiruvalla /Thiruvananthapuram).	1 hr		
UNIT-4 DETAIL STUDY, ANALYSIS AND SYNTHESIS – 9				
27- 28	Detail study of each style, to understand their classification	2 hrs	?	
29- 30	concept, philosophy, form, theory of composition, spatial derivation, striking features	2 hrs		
31	social relevance, Structure, materials, construction techniques and overall presence	2 hr		
32- 33	Vertical elements, accessories, security component, water harvesting and storing methodology.	2 hrs		
34- 35	Indo-Aryan region wise and Dravidian style –under the influence of various dynasties	1 hr		
UNIT-5 CASE STUDIES - 9				
36- 38	Case study of at least one example for each style to be undertaken for documentation and research to preserve, conserve, maintain, incorporate retrofitting concept and detailing	3 hrs		

39-41	Explore new approach to meet the challenges of present age without deviating the ancient principles.	3 hrs	?	
42-44	Identifying elements and components, which can be replaced by new materials in terms of strength, durability, maintenance & promote green architecture within the tradition of temple architectural principles.	3 hrs		
45	Revision of all Units	1 hr		
Model Exam		Total Hours :45		

Reference material?

Faculty in Charge

VP (Academics)/SEAD
Dr.Devyani

HOD/SAID
Prof. T. Lakshmanan

Ar Kamalakannan

Ar Srinath

Ar Arun

Ar Yogapriya

Ar Prathyusha

16AR 311	TEMPLE ARCHITECTURE	L	T	P	C
	Prerequisite - Nil	3	0	0	3

OBJECTIVES

- Understand tenets and concepts of Hinduism, Hindu idea of God, Goals of life, Rituals and Festivals and its relevance on planning – designing and building –Hindu Temples under the influences of various regional conditions and beliefs within the country.
- To study and synthesize, sacred geometry, measurements and structural systems of Hindu temple architecture, along with vernacular material, construction techniques and process involved in the design of temples.
- The knowledge thus acquired to be effectively utilized to conserve, preserve and maintain the heritage cultural treasure and to create stylized expression to address future forms with appropriate materials and technology.

Unit: 1 ART & ARCHTECTURE

Introduction – About the land, Indus valley civilization, Vedic culture, regional cultures, cohesive forces, regional histories and religious movements. Evolution of Hinduism – epics and puranas. Hindu gods and

goddess. Theory of life cycle - creation, destruction and rebirth. Hindu goals of life, rituals, celebration and pilgrimage. Bakthi movement – revival of Hinduism under – the great philosophers and teachers - Adisankara. Siva and Vaishnava saints

Art & Architecture - Role of fine arts, music, dance, painting and sculpture forms in the evolution of temple architecture. Vastu Vidya –Vasutu Sastra, Silpa and Agama Sastra, guideline for selection of site for temple. Sthalavriksha- Sthala Theertha. – Layout of temple- temple form, Dynamics of spaces- mandala energy grid, installation of deities, consecration, rituals, priestly duties, sculpture – images and iconography according to sakaladhikara/ silpasashtra. Water its relevance in ritual and temple architecture.

Unit: 2 MATHEMATICS, GEOMETRY, SCIENCE & PHILOSOPHIES IN TEMPLE ARCHITECTURE.

Mathematics and geometry, units, measurements and scale, human scale and monumental scale, study and analysis of mathematics series and geometry in the evolution of temple form. Temple layout, as well as vertical composition and its relevance to human form. The Layout of Hindu Temple - plan, prakaras, open spaces, enclosure, tank, and others accessories, Structural system – trabeated and corbelling system. Structural components: – plinth, walls, columns/pillars, beams, brackets, cornice, overhangs, fenestrations and surface decorations. Vertical elements –Vimana /Shikara, Gopurams and Dwajasthamba/stambas.

Unit: 3 EVOLUTION OF HINDU TEMPLES.

Origin and Evolution of Hindu temple in chronological order-classification of Hindu temples from Vastuvidya/Kamigama/Silparatna,- origin under Guptha's, cradle of temple evolution at aihole, central India under chalukya's, development of regional styles from Aihole group of temples – Nagara [satwa] - Vesara[thamasa] and Dravida [Rajasa].

Nagara style (Satwa/Indo-Aryan style), east- Orrisa, central - Khajuraho/Rajaputana, north-kashmir, west-Gujarat/Gwalior.

Vesara style (Thamasa/Central Hindu style), central India-badami, pattadakkal, ellora, bellur, halibedu & singeri .

Dravida style (Rajas/Dravidian style), pallava's - kancheepuram, mahabalipuram, chola's-tanjore, gangaikondacholapuram, pandya's- madurai, vijayanagar-kancheepuram, madurai, srirangam.

Vernacular architecture: Styles of vernacular influence for vernacular deities of pre gupta's period, grama deva shrines. Chera's -Temples of Kerala (Trichur /Vaikom /Thiruvalla /Thiruvananthapuram).

Unit: 4 DETAIL STUDY, ANALYSIS AND SYNTHESIS.

Detail study of each style, to understand their classification, concept, philosophy, form, theory of composition, spatial derivation, striking features, and its social relevance, Structure, materials, construction techniques and overall presence. Vertical elements, accessories, security component, water harvesting and storing methodology. (Indo-Aryan region wise and Dravidian style –under the influence of various dynasties)

Unit: 5 CASE STUDIES.

Case study of at least one example for each style to be undertaken for documentation and research to preserve, conserve, maintain, incorporate retrofitting concept and detailing, and to explore new approach to meet the challenges of present age without deviating the ancient principles. Identifying elements and components, which can be replaced by new materials in terms of strength, durability, maintenance & promote green architecture within the tradition of temple architectural principles.

OUTCOME

Students will Learn the origin and evolution of Hindu temple architecture in India under various contexts, through the length and breadth of the country and beyond. Also to Understand the development of Hindu temple architecture from its root through the application of vernacular materials, construction methodology, techniques, and craftsman skills of the native scholars and artisans. Students shall examine the development of Hindu temple architecture style in the neighbouring countries through its trade and cultural links.

Text books:

1. Building architecture of Sthapatya Veda, Dr. V.Ganapathi sthapati, Dakshina publication house. 2005.
2. Architecture of Manasara by Prasanna Kumar Acharya.
3. "Geometry and measure in Indian temple plans: rectangular temples". Meister, Micheal (1983).
4. An encyclopedia of Hindu architecture by Prasanna Kumar Acharya
5. Gateway to Indian architecture, Guruswamy Vaidyanathan
6. Significance of vimanam & gopuram.chennai, india. Dakshina publication. House
7. The Hindu temple, volume 1, Stella Kramrisch Motilal Banarsidass.

Reference books:

1. Percy brown, Indian architecture (Hindu period) Taraporevala and sons, Bombay, 1983
2. Satish Grover, the architecture of India (Buddhist and Hindu period), Vikas publishing house, New Delhi.
3. The history of architecture in India, Christopher Tadgell, Longman group, U.K.ltd., London,1990.
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