

COURSE TITLE : TRADITIONAL ARCHITECTURE
COURSE CODE : 6185
COURSE CATEGORY : E
PERIODS/WEEK : 4
PERIODS/SEMESTER : 60
CREDITS : 4

TIME SCHEDULE

MODULE	TOPIC	PERIODS
I	Principles of vastuvidya	15
II	Characterization of land and measurement system	15
III	Planning	15
IV	Residential architecture	15
TOTAL		60

Course Objective :

Sl.	Sub	Student will be able to
1	1	Understand the principles of vastuvidya
	2	Understand the principles of site selection
	3	Know the elements of measurement system
2	1	Identify the factors influenced the planning
	2	Identify the most auspicious perimeter
	3	Understand site planning principles
3	1	Identify buildable space in a site
	2	Understand the principles of design of residential building

Module I: Principles of vastuvidya

1.1 Understand the term vastuvidya

1.1.1. Define vastu

1.1.2. Classify vastu

1.1.2. Define vastuvidya

1.2. Understand the phylosophy of vastushastra

1.2.1. State the concept of Brahmanda and Pindanda

1.2.2. State the concept of Universe

1.2.3. State the concepts of Prakrity and Purusha

1.2.4. State the significance of these concepts in modern context

1.3. Understand the source of vastuvidya

1.3.1. Know the source of Vasthuvidya

1.3.2. List out authors and resource materials of vastuvidya

1.4. Understand the evolution of vastuvidya through centuries

1.4.1. Explain the development of Indian architecture

1.4.2. Explain the influence of climate, mixed mode of construction and social factors in the development of Kerala architecture

1.5. Understand the qualifications and responsibilities of silpins

1.5.1. Define the term silpin

1.5.2. Categorize silpins

1.5.3. List out qualifications and responsibilities of Stapathy, Sutragrahi, Vardhaki and Taksaka

1.6. Understand the difference between Tachan, Perumthachan and Thachusasthram

Module II: Characterization of land and measurement system

2.1. Select ideal site for human habitation

2.1.1. Classify sites according to topography, climate, location and use.

2.1.2.State characteristics of ideal site for human habitation

2.1.3.Explain procedure for site selection

2.1.4.Classify sites according to site slope

2.1.5.Identify suitable site slope for building

2.2.Orient building in a site

2.2.1.Explain traditional methods to determine cardinal direction

2.3. Understand dimensional system in vastuvidya

2.3.1.Explain dimensional unit based on grain size

2.3.2.Explain dimensional unit based on human figure

2.3.3.Describe how these two are related to human dimensions and how they are integrated

2.3.4.State regional changes in measurement of measuring rod

2.3.5.Describe the standardisation of measurements and conversion to SI system

2.4. Understand concept of mandala-padavinyasa

2.4.1.Categorise mandala based on grid division

2.4.2.Form groups of mandalas for different purposes

2.4.3.State positions of gods in mandala

2.4.4.Draw paramasayika mandala and designate devas in it

2.4.5.Identify marmas,sutras and rajjus in a mandala

2.4.6.State the principles of sutravedha and marma vedha and apply it in a plot

2.5. Understand concept of vithi-vithinirnayam

2.5.1.Identify vithis in a plot

2.5.2.Explain systems of four vithis and nine vithis

2.5.3.Identify buildable area in a plot

Module III:PLANNING

3.1.Know proportioning system used in vastuvidya

- 3.1.1.Explain the role of perimeter as the significant measurement of any object
- 3.1.2.Give technical explanation for the significance of perimeter in vastuvidya
- 3.1.3.Identify commonly used length width proportion-gunamsa
- 3.1.4.Identify the most suitable proportions in buildings

3.2.Understand Ayadishadvargam

- 3.2.1.Define ayadishadvargam
- 3.2.2.State the objectives of calculating the ayadishadvargam of a given perimeter
- 3.2.3.Identify characteristics of uthamaparyantham

3.3.Calculate ayadishadvargam

- 3.3.1.Calculate yoni number of a perimeter
- 3.3.2.Calculate vayassu of a perimeter
- 3.3.3.Calculate aayam-varavu-of a perimeter
- 3.3.4.Calculate vyayam-chilavu-of a perimete
- 3.3.5.Calculate aayam-varavu-of a perimeter
- 3.3.6.Calculate thidhy of a perimeter
- 3.3.7.Calculate paksham of a perimeter
- 3.3.8.Calculate vaaram of a perimeter

3.4.Site planning principles

- 3.4.1.Classify plots according to size
- 3.4.2.State minimum and maximum sizes for large plot, small plot and very small plot
- 3.4.3.Define khandams or sectors
- 3.4.4.Identify buildable khandams
- 3.4.5.State site planning principles

3.4.6. Know principles of positioning of the building in kshethrakhandam with respect to Padam and vithis

3.4.7. Know principles of positioning of the building in kshethrakhandam with respect to The central point

Module IV: Residential architecture

4.1. Understand basic unit of residence

4.1.1. Define ekasala

4.1.2. Categorise ekasala

4.1.3. State order of preference of ekasala for residential unit

4.1.4. State functions of different salas

4.1.5. State basic form of an ekasala

4.1.6. State planning principles of ekasala

4.1.7. Describe the procedure for extensions of ekasala

4.1.8. Explain materials used in construction

4.1.9. Explain method of construction

4.2. Understand characteristics of dwisala and trisala

4.2.1. State characteristics of dwisalas and trisalas

4.2.2. Draw types of dwisalas and trisalas

4.3. Understand the features of nalukettu

4.3.1. Define nalukettu

4.3.2. State features of nalukettu

4.3.3. Categorise nalukettu

CONTENT DETAILS

MODULE I: Principles of vastuvidya

Introduction-Meaning of the word vastu with respect to context - Definition of the term "Vastu" – classification of vastu-bhumi, harmyadi vastu, paryankadivastu-concept of brahmanda and pindanda-

concept of universe-concept of prakriti and purusha-modern context- resource materials and authors-origin and development of Vastu Sastra through centuries-development of Indian architecture-factors influenced the development of Kerala architecture-Categorization of silpins and their responsibilities-sthapati,sutragrahi,vardhaki and takshaka- meaning of the term Tachan,Perumthachan and Thachusasthram.

MODULE- II: Characterization of land and measurement system

Categorization of land based on various characteristics like climate, use and location and based on topography-supadma,bhadra,purna,dhumra-site slope analysis-Characteristics of habitable land – Selection of land for habitation - experiments to find the suitability of the land - fixing cardinal directions as per Vastu texts-measurement system in vastushashtra-yavamana-purusha pramana- proportion used in Vastu Sastra –yavamana and purusapramana – their integration- their relationship with human dimensions – measuring units rela- to human body - lower units and higher units in the scale - existence of a number of measuring rods and their use - regional changes in measurement of the measuring rod – standardization of measurements and conversion to SI system-Concepts of Mandala – various categories - padam and padavinyasa - marma and sutra marmavedha and sutra vedha - Designation of Devas in Paramasyika mandala -veedhi and veedhivinyasa –nine veedhi-four veedhi-identification of buildable area in a plot

MODULE- III Know proportioning system used in vastuvidya

Perimeter as the significant measurement of any object – its relevance.-Ayadishadvaragam –and their characteristics – the concept of yoni – its significance in planning-Proportions of width and length – gunamsa – importance of perimeter in the design of buildings-technical explanation.-Different types of plots according to size - Kshudrakshetram, Alpakshetram etc - Minimum width of each type – Division of large and very large plots – locating buildings in smaller plots.

MODULE -IV

Basic unit of residence – Ekasala – Its definition and characteristics-Planning of the core of Ekasala - Diksalas and their characteristics – their positions with respect to Brahmanabhi-Development of Eksalas (horizontal and vertical) – Combinations of Eksalas to develop into higher forms such as dwisala, thrisala and chatussala as the optimal solution for a residence.-Characteristics and planning of Chatussala – Types of Chatussala– Concept of Aroodham

REFERENCES

1. Architecture Manasara (tr) – Dr.P.K. Acharya – 7 volumes
2. Mayamata (tr) Bruno Dagens
3. Manushyalaya Chandrika Bhastiyam – (tr) – Dr. Achuthan & Dr. Balagopalan T.S. Prabhu
4. Vastuvidya Pravisika – Dr. Achuthan & Dr. Balagopalan T.S. Prabhu
5. Traditional Residential forms of Malabar Coast – Dr. Ashalath Thampruan
6. Vastuvidhanadipika – Dr. Achuthan & Dr. Balagopalan T.S. Prabhu
7. Temples of Kerala – HC Sircar
8. Temples of Kerala – Soudaa Rajan
9. Temples of Kerala – Sri,. Jayakumar