ANNA UNIVERSITY, CHENNAI

UNDERGRADUATE CURRICULUM (NON-AUTONOMOUS AFFILIATED INSTITUTIONS)

Programme: B. Arch. **Regulations:** 2025

Abbreviations:

Category

PC – Professional Core

PE – Professional Elective

BS & AE – Basic Sciences & Applied Engineering

PAE – Professional Ability Enhancement

SD – Skill Development

SL – Self Learning

HUM – Humanities (including Languages and others)

Course Type

S - Studio

T – Theory

TS – Theory cum Studio

IT – Internship Training

LIT – Laboratory Integrated Theory

TCP – Total Contact Period(s)

L – Lecture **P –** Practical

T – Tutorials **S** - Studio

Semester – I							
S. No.	**Course Code**	**Course Name**	**Course Type**	**Periods / Week**		**Credits**	**Category**
				L-T- P/S	**TCP**		
1.	AR25101	Introduction to Architecture	T	3-0-0	3	3	PC
2.	AR25C01	Introduction to Language and English Skills	T	3-0-0	3	3	HUM
3.	AR25102	Mathematics for Architects	T	3-0-0	3	3	BS
4.	UC25H01	தமிழர் மரபு / Heritage of Tamils	T	1-0-0	1	1	HUM
5.	AR25103	Geometrical Drawing	TS	1-0-3	4	4	PC
6.	AR25104	Art as Cognition and Expression	S	0-0-4	4	4	PC
7.	AR25105	Foundational Design Studio	S	0-0-9	9	9	PC
				Total	**27**	**27**	

Semester – II (Prerequisite - Pass in Foundational Design Studio)							
S. No.	**Course Code**	**Course Name**	**Course Type**	**Periods / Week**		**Credits**	**Category**
				L-T- P/S	**TCP**		
1.	AR25201	World Architecture: Early Civilizations to Renaissance	T	3-0-0	3	3	PC
2.	AR25202	Structural Mechanics	T	3-0-0	3	3	BS
3.	AR25203	Environmental Studies	T	3-0-0	3	3	BS
4.	AR25204	Building Components and Measured Drawing	TS	1-0-3	4	4	PC
5.	AR25205	Tools for Design Thinking	S	0-0-4	4	4	PC
6.	UC25H02	தமிழர்களும் தொழில்நுட்பமும் / Tamils and Technology	T	1-0-0	1	1	HUM
7.	AR25206	Basic Space Design Studio	S	0-0-9	9	9	PC
8.		NCC / NSS / NSO	---	---	---	---	---
				Total	**27**	**27**	

Semester – III (Prerequisite - Pass in Basic Space Design Studio)							
S. No.	**Course Code**	**Course Name**	**Course Type**	**Periods / Week**		**Credits**	**Category**
				L-T- P/S	**TCP**		
1.		Architecture in India: Early Civilizations to Mughal Period	T	3-0-0	3	3	PC
2.		Structural Systems and their Analysis	T	3-0-0	3	3	BS
3.		Climate and Built Environment	T	3-0-0	3	3	BS
4.		Non-Structural Building Elements and Finishes	TS	1-0-3	4	4	PC
5.		Digital Drawing, Visualisation and Representation	TS	1-0-3	4	4	SD
6.		Advanced Space Design Studio	S	0-0-9	9	9	PC
				Total	**26**	**26**	

Semester – IV (Prerequisite - Pass in Advanced Space Design Studio)							
S. No.	**Course Code**	**Course Name**	**Course Type**	**Periods / Week**		**Credits**	**Category**
				L-T- P/S	**TCP**		
1.		Regional and Vernacular Built Environments in India	T	3-0-0	3	3	PC
2.		Structural Design of Masonry and Timber	T	3-0-0	3	3	BS
3.		Water Supply and Sanitation in Buildings	TS	2-0-2	4	3	BS
4.		Building Construction with Basic Materials	TS	1-0-3	4	4	PC
5.		Site Surveying and Planning	TS	1-0-3	4	4	PC
6.		Rural Habitat Design Studio	S	0-0-9	9	9	PC
				Total	**27**	**26**	

Semester – V (Prerequisite - Pass in Rural Habitat Design Studio)							
S. No.	**Course Code**	**Course Name**	**Course Type**	**Periods /Week**		**Credits**	**Category**
				L-T- P/S	**TCP**		
1.		Architecture and Urbanism of Colonialism and Modernity	T	3-0-0	3	3	PC
2.		Structural Design of Concrete	T	3-0-0	3	3	BS
3.		Electricity, Lighting and Fire Safety in Buildings	TS	2-0-2	4	4	BS
4.		Concrete in Building Construction	TS	1-0-3	4	4	PC
5.		Professional Elective I	-	X-X-X	3	3	PE
6.		Industry Oriented Course - I	-	X-X-X	X	1	SD
7.		Urban Architecture Design Studio	S	0-0-10	10	10	PC
				Total	**27**	**28**	

Semester – VI (Prerequisite - Pass in Urban Architecture Design Studio)							
S. No.	Course Code	Course Name	Course Type	Periods / Week		Credits	Category
				L-T- P/S	TCP		
1.		Specification, Estimation and Budgeting	T	3-0-0	3	3	PC
2.		Structural Design of Steel	T	3-0-0	3	3	BS
3.		Advanced Building Services	TS	2-0-2	4	4	BS
4.		Steel, Glass and Plastic in Building Construction	TS	1-0-3	4	4	PC
5.		Professional Elective – II	-	X-X-X	3	3	PE
6.		Industry Oriented Course -II	-	X-X-X	X	1	SD
7.		Environmental Design Studio	S	0-0-10	10	10	PC
				Total	**27**	**28**	

Semester – VII (Prerequisite - Pass in Environmental Design Studio)							
S. No.	Course Code	Course Name	Course Type	Periods / Week		Credits	Category
				L-T- P/S	TCP		
1.		Contemporary Architecture: Theories and Practice	T	3-0-0	3	3	PC
2.		Professional Practice of Architecture	T	3-0-0	3	3	PAE
3.		Contemporary Housing	T	3-0-0	3	3	PC
4.		Design Process and Thinking	T	3-0-0	3	3	PC
5.		Professional Elective – III	-	X-X-X	3	3	PE
6.		Critical Design Studio	S	0-0-11	11	11	PC
				Total	**26**	**26**	

Semester – VIII							
S. No.	Course Code	Course Name	Course Type#	Periods / Week		Credits	Category
				L-T- P/S	TCP		
1		*Educational Tour	T	X-X-X	1	1	
				Total	**1**	**1**	

***Educational Tour to be conducted during VI - VII Semester vacation or VII - VIII Semester vacation for a minimum of 2 weeks duration**

Semester – VIII / IX

If offered in SEM VIII - Prerequisite - Pass in Critical Design Studio of VII Semester / If offered in SEM IX - Prerequisite - Pass in Urbanism & Architecture Design Studio of VIII SEM

S. No.	Course Code	Course Name	Course Type#	Periods / Week		Credits	Category
				L-T- P/S	TCP		
1		Practical Training	T	X-X-X	X	**26**	PAE
					Total	**26**	

Semester – VIII / IX

If offered in SEM VIII - Prerequisite - Pass in Critical Design Studio of VII Semester / If offered in SEM IX - Prerequisite - Pass in Urbanism & Architecture Design Studio of VIII SEM

S. No.	Course Code	Course Name	Course Type#	Periods / Week		Credits	Category
				L-T- P/S	TCP		
1.		Urban Design	T	3-0-0	3	3	PC
2.		Landscape and Ecology	T	3-0-0	3	3	PC
3.		Construction and Project Management	T	3-0-0	3	3	PAE
4.		Dissertation	T	0-0-3	3	3	PAE
5.		Program Elective – IV	T	X-X-X	3	3	PE
6.		Urbanism and Architecture Design Studio	S	0-0-11	11	11	PC
				Total	**26**	**26**	

SEMESTER X

(Prerequisite - Pass in Practical Training of IX Semester / Pass in Urbanism and Architecture Design Studio of IX Semester as applicable)

S. No.	Course Code	Course Name	Course Type#	Periods / Week		Credits	Category
				L-T- P/S	TCP		
1.		Program Elective – V	T	X-X-X	3	3	PE
2.		Thesis	S	0-0-23	23	23	PC
				Total	**26**	**26**	

PROFESSIONAL ELECTIVE COURSES – STREAMS

Sem & **Elective**	**Design Process and Practice**	**Energy & Technology in Buildings**	**Architectural Tectonics**	**Digital Design Process**	**Urban Studies**	**Allied – Art, Design and Writing**
Sem V PE - 1	Design Detailing	Sustainable Design	Structure in Architecture	Contemporary Processes in Architectural Design	Human Behaviour and Built Environment	Product Design
Sem VI PE - 2	Space Syntax in Architectural Design	Climatic Design Procedures	Earthquake Resistant Architecture	Parametric Modelling and Coding	Disaster Management	Interior Design
Sem VII PE - 3	Soft Skills	Digital Tools for Building Modelling and Analysis	Contemporary Building Materials	Digital Fabrication and Architecture	History of Tamil Nadu History of Non-Western Architecture	Art Appreciation Theatre and Architecture
Sem VIII/IX PE - 4	Design Communication	Building Automation and Control Systems	Construction Technology	Data Visualisation and Analysis	Heritage Conservation	Techniques of Digital Art
Sem X PE - 5	Professional Service Firm: Management and Excellence	Green Building	Advanced Structures	Artificial Intelligence in Design Process	Smart Cities Human Settlements Planning	Architectural Journalism and Photography

PROFESSIONAL ELECTIVE (PE)

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P/S		
ELECTIVE I								
1.		Design Detailing	PEC	1	0	2	3	3
2.		Sustainable Design	PEC	3	0	0	3	3
3.		Structure in Architecture	PEC	3	0	0	3	3
4.		Contemporary Processes in Architectural Design	PEC	1	0	2	3	3
5.		Human Behaviour and Built Environment	PEC	2	0	1	3	3
6.		Product Design	PEC	1	0	2	3	3
ELECTIVE II								
1.		Space Syntax in Architectural Design	PEC	3	0	0	3	3
2.		Climatic Design Procedures	PEC	1	0	2	3	3
3.		Earthquake Resistant Architecture	PEC	3	0	0	3	3
4.		Parametric Modelling & Coding	PEC	3	0	0	3	3
5.		Disaster Management	PEC	3	0	0	3	3
6.		Interior Design	PEC	2	0	1	3	3
ELECTIVES III & IV								
1.		Soft Skills	PEC	3	0	0	3	3
2.		Digital Tools for Building Modelling and Analysis	PEC	1	0	2	3	3
3.		Contemporary Building Materials	PEC	3	0	0	3	3
4.		Digital Fabrication and Architecture	PEC	3	0	0	3	3
5.		History of Tamil Nadu	PEC	3	0	0	3	3
6		History of Non-Western Architecture	PEC	3	0	0	3	3
7.		Art Appreciation	PEC	2	0	1	3	3
8.		Theatre and Architecture	PEC	3	0	0	3	3
ELECTIVE V								
1.		Design Communication	PEC	1	0	2	3	3
2.		Building Automation and Control Systems	PEC	3	0	0	3	3
3.		Construction Technology	PEC	3	0	0	3	3
4.		Data Visualisation and	PEC	2	0	1	3	3

		Analysis						
5.		Heritage Conservation	PEC	3	0	0	3	3
6.		Techniques of Digital Art	PEC	1	0	2	3	3
ELECTIVE VI								
1.		Professional Service Firm: Management and Excellence	PEC	3	0	0	3	3
2.		Green Building	PEC	3	0	0	3	3
3.		Advanced Structures	PEC	3	0	0	3	3
4.		Artificial Intelligence in Design Process	PEC	3	0	0	3	3
5.		Smart Cities	PEC	3	0	0	3	3
6		Human Settlements Planning	PEC	3	0	0	3	3
7.		Architectural Journalism and Photography	PEC	2	0	1	3	3

Semester I

AR25101	Introduction to Architecture	L	T	P/S	C
		3	0	0	3

Course Objectives :

- To give understanding of architecture as an outcome of the act of design by human society across history and region.
- To give an introduction to the discipline of architecture and its various facets.
- To introduce importance of form and its relation to design through study of nature and manmade environment.
- To introduce the vocabulary of form and space in terms of elements, principles, attributes and organisation as giving cognitive experience in the realm of architecture.

Introduction to Architecture: Origin and definitions of architecture as need based, cultural, environmental, social, psychological response of human society. Architecture as phenomenological mediation of nature. Components of architecture: use, means, site, shelter, relation to nature, structure, skin, materials, services, circulation, typology, aesthetics, expression, character, symbolism, experience, etc., History and types of design in architecture- unself-conscious/ self-conscious design, design through craft/ design through drawing, pragmatic/ iconic/ canonic/ analogic design.

9 periods

Form in Nature and Manmade Environment: Understanding form in all its attributes as the basis of creating architecture. Characteristics of form and its relationship with use/function/evolution as manifested in first hand examples from nature and everyday manmade environment including artefacts, objects buildings, cityscapes. Human body and sensory environment. Cognitive experience of form- ideas of Gestalt, visual perception, proxemics. Tactile, auditory, olfactory senses and human environment.

9 periods

Form as geometric Elements and their effects: Form as embodied in and/or constituted by geometric elements such as point, line, plane, volumes. Attributes, generation and interrelationships among elements. Perceptual effects and use of specific manifestations of the elements- planes as shapes and volumes as geometric forms/space such as sphere, cube, pyramid, cylinder, cone and their sections/ derivatives. Architectural use of elements. Exercises and architectural case studies.

9 periods

Attributes and Principles of Form: Form as manifesting attributes such as pattern, light, colour, surface, texture. Effects of these attributes. Form in its basic state, in combinations, composite organisations and configurations as manifesting characteristics such as proportion, scale, balance, symmetry, asymmetry, rhythm, axis, hierarchy, datum, unity, harmony, dominance, climax, focus. Characteristics acting as principles to generate architectural design. Exercises and architectural case studies.

9 periods

Organisation of Form and Space: Cognitive experience of form and space in architecture –enclosure, internal and external spaces, continuous spaces, hierarchy of spaces, spatial organisation (centralised, linear, radial, clustered, grid), built form- open space relationships. Relationship of movement/ circulation/ path with reference to architectural form and space. Haptic experience. Exercises and architectural case studies.

9 periods

Total: 45 periods

Weightage: Continuous Internal Assessment: 40%, End Semester Examinations: 60%.

Assessment Methodology: Two Assessments with equal weightage.
One Assessment as Internal written Test /Examination (50%), second as Assignment (50%) of any mode such as study, seminar, and or a combination of modes, etc.

References:

1. von Meiss, P. (1990). *Elements of architecture: From form to place*. Routledge.
2. Arnheim, R. (2009). *The dynamics of architectural form*. University of California Press.
3. Prak, N. (2017). *The language of architecture*. De Gruyter Mouton.
4. Roth, L. M. (2018). *Understanding architecture: Its experience, history, and meaning*. Routledge.
5. Conway, H. (2005). *Understanding architecture: An introduction to architecture and architectural history*. Routledge.
6. Johnson, P. A. (1994). *The theory of architecture: Concepts and themes*. Van Nostrand Reinhold Co.
7. Vyas, K. (2009). *Design and environment: A primer*. National Institute of Design.

E - Resources

NPTEL course – Introduction to Architecture - https://onlinecourses.nptel.ac.in/noc23_ar01/preview

NPTEL course - Modern Indian Architecture - https://onlinecourses.nptel.ac.in/noc25_ar15/preview

Gabriela Goldschmidt, 'Critical Design and Design Thinking vs. critical design and design thinking', in *Different Perspectives in Design Thinking*, CRC Press, 2022.

Required Reading

- Geoffrey Broadbent, 'Design in Architecture - Architecture and the Human Sciences', D.Fulton, 1988.
- Francis D.K. Ching, *Architecture – Form, Space and Order*, Wiley, 2023 (5th Edition).
- Simon Unwin, *Analysing Architecture*, Routledge, London, 2021 (5th Edition).
- V. S. Pramar, *Design Fundamentals in Architecture*, Somaiya Publications Pvt. Ltd., New Delhi, 1997 (3rd Edition)
- Yatin Pandya, *Elements of Spacemaking*, Mapin Publishing Pvt. Ltd., May 8, 2024

- Francis D.K. Ching, James F. Eckler, ‘Introduction to Architecture’, Wiley, 2012.
- Robert McCarter, JuhaniPallasmaa, ‘Understanding Architecture’, Phaidon 2012.
- Peter Zumthor, ‘Thinking Architecture’, Birkhäuser, 2010 (3rd Edition).
- Samuel B. Frank, ‘Modern Architecture since 1900, Modern Architecture and Design: An Alternative History’,ebook , MIT Press , 1983

	Description of CO	PO1	PO2	PO3	PO4
CO1	Ability to recognise different facets of architecture.	1	3	2	2
CO2	Basic understanding of form and design in all aspects and scales.	1	3	2	2
CO3	Ability to discern the relationship between manifestations of form and its effects on humans	1	3	2	2

AR25C01	Introduction to Language and English Skills	L	T	P/S	C
		3	0	0	3

Course Objectives:

- To give an introduction to the concepts and evolution of language in human society including its various expressions and functions
- To give basic skills of English language in everyday situations involving speaking, listening, reading, writing, presenting.
- To enable the use of language to think, express experience and communicate larger meaning.

Introduction to Language and Linguistics: communication in humans and animals. language in humans– definition, function and hypotheses of evolution. some concepts of language- phonetics, phonology, morphology, syntax, semantics, pragmatics.

9 periods

English- Speaking and Listening: Everyday Communication and Human Interaction Through Language. Speaking and Listening. Simple Class Exercises.

9 periods

English- Reading, Writing, Presenting: Reading and Writing. Language Comprehension Skills through Reading and Writing. Presenting Information and Ideas. Simple Exercises.

9 periods

Language as Expression and Cognition : Language as Expression – Poetry, Prose, Literature, Etc., Cognitive Function of Language. Cognitive Role of Language in Constructing Reality, Abstracting, Projecting the Future. Simple Exercises.

9 periods

Language as Discourse: Thinking, Talking and Writing About Ideas and Situations Within a Social Context and Conveying Broader Meaning and Abstraction. Discourse, Dialectic. Simple Class Exercises. **9 periods**

Total : 45 periods

Weightage: Continuous Internal Assessment: 40%, End Semester Examinations: 60%.

Assessment Methodology: Two Assessments with equal weightage.

One Assessment as Internal written Test /Examination (50%), second as Assignment (50%) of any mode such as study, seminar, and or a combination of modes, etc.

E –resources

1. Cambridge English – https://www.cambridgeenglish.org/learning-english/grammar-and-vocabulary/
2. Perfect English Grammar – https://www.perfect-english-grammar.com/

3. British Council – Learn English - https://learnenglish.britishcouncil.org/grammar
4. Speechling – https://speechling.com/
5. mePro by Pearson – https://mepro.pearson.com/
6. TED Talks – https://www.ted.com/

Required Reading

- Sharon Hendenreich, 'English for Architects and Civil Engineers', Springer, 2014
- N. Chomsky, 'Reflections on Language', Fontana, 1975.
- Steve Pinker, 'The Language Instinct', Penguin, 2015.
- R.L. Trask, 'Language and Linguistics: The Key Concepts', Routledge, 2007.
- R.L. Trask, 'Language: The Basics', Routledge 1999

	Description of CO	PO3	PO5
CO1	An understanding of basic role of language in humans.	3	2
CO2	Skill and confidence in everyday requirements of the English language.	3	2
CO3	Ability to express experience, explore meaning and construct reality through language.	3	2

AR25102	Mathematics for Architects	L	T	P/S	C
		3	0	0	3

Course Objectives:

- To help derive solutions involving trigonometric and exponential functions in practical problems.
- To inform about three dimensional analytical geometry.
- To enable understanding of functions of more than one variable.
- To give information to solve differential equation of certain type.
- To enable data analysis and interpretation of results using statistical tools.

Trigonometry and Mensuration: Trigonometric (sine, cosine and tan functions) and exponential functions. De- Moiver's theorem. Area of plane figures. Computation of volume of solid figures. **9 periods**

Three Dimensional Analytical Geometry: Direction cosines and ratios. Angle between two lines. Equations of a plane. Equations of a straight line. Coplanar lines. Shortest distance between skew lines. Sphere, Tangent plane, Plane section of a sphere.

9 periods

Integration and Functions of Two Variables: Integration of rational, trigonometric and irrational functions. Properties of definite integrals. Reductions formulae for trigonometric functions. Taylor's Theorem - Maxima and Minima (Simple Problems).

9 periods

Ordinary Differential Equations: Linear equations of second order with constant coefficients. Simultaneous first order linear equations with constant coefficients. Homogeneous equation of Euler type. Equations reducible to homogeneous form.

9 periods

Basic Statistics and Probability: The arithmetic mean, median, mode, standard deviation and variance. Regression and correlation. Elementary probability. Laws of addition and multiplication of probabilities. Conditional probability. Independent events.

9 periods

Total : 45 periods

Weightage: Continuous Internal Assessment: 40%, End Semester Examinations:60%.

Assessment Methodology: Two Assessments with equal weightage.

One Assessment as Internal written Test /Examination (50%), second as Assignment (50%) of any mode such as study, seminar, and or a combination of modes, etc.

References:

1. Bali, N., Goyal, M., & Watkins, C. (2009). Advanced engineering mathematics (7th ed.). Firewall Media (An imprint of Lakshmi Publications Pvt. Ltd.).

2. Ramana, B. V. (2010). Higher engineering mathematics (11th reprint). Tata McGraw Hill Co. Ltd.
3. Greenberg, M. D. (2009). Advanced engineering mathematics (2nd ed., 5th reprint). Pearson Education.
4. Gupta, S. C., & Kapoor, V. K. (1996). Fundamentals of mathematical statistics (9th ed.). Sultan Chand and Sons.
5. Sivaramakrishna Das, P., & Vijayakumari, C. (2017). Engineering mathematics. Pearson India Education Services Pvt. Ltd.
6. Vittal, P. R. (2002). Mathematical statistics. Margham Publishers.

E –resources:

1. https://www.math.utah.edu/lectures/math1060.php
2.https://www.youtube.com/watch?v=WUvTyaaNkzM&list=PLZHQObOWTQDMsr9K-rj53DwVRMYO3t5Yr
3.https://www.youtube.com/watch?v=XDhJ8lVGbl8&list=PLEC88901EBADDD980
4.https://www.youtube.com/watch?v=KbB0FjPg0mw&list=PL2SOU6wwxB0uwwH80KTQ6ht66KWxbzTIo

Required Reading

- Grewal B.S., 'Higher Engineering Mathematics', Khanna Publishers, New Delhi, 44th Edition, 2011.
- T Veerarajan., ' Engineering Mathematics ', Tata McGraw-Hill Publishers , 3rd edition, 2012.
- Murray R Spiegel., Larry J Stephens, 'Schaum's outlines of Theory and Problems of Statistics', 4th edition , Schaum's outline series and McGraw –Hill publishers , 2008.

	Description of CO	PO2	PO6	PO10
CO1	Ability to understand the mathematical properties of geometric figures and objects.	2	3	2
CO2	Skill in solving mathematical problems that would be useful for the field of architecture.	2	3	2
CO3	Ability to analyse and interpret data.	2	3	2

UC25H01	தமிழர் மரபு	L	T	P	C
		1	0	0	1

மொழி மற்றும் இலக்கியம்: இந்திய மொழிக் குடும்பங்கள், திராவிட மொழிகள், தமிழ் ஒரு செம்மொழி, தமிழ் செவ்விலக்கியங்கள், சங்க இலக்கியத்தின் சமயச் சார்பற்ற தன்மை, சங்க இலக்கியத்தில் பகிர்தல் அறம், திருக்குறளில் மேலாண்மைக் கருத்துக்கள், தமிழ்க் காப்பியங்கள், தமிழகத்தில் சமண பௌத்த சமயங்களின் தாக்கம், பக்தி இலக்கியம், ஆழ்வார்கள் மற்றும் நாயன்மார்கள், சிற்றிலக்கியங்கள், தமிழில் நவீன இலக்கியத்தின் வளர்ச்சி, தமிழ் இலக்கிய வளர்ச்சியில் பாரதியார் மற்றும் பாரதிதாசன் ஆகியோரின் பங்களிப்பு.

மரபு – பாறை ஓவியங்கள் முதல் நவீன ஓவியங்கள் வரை – சிற்பக்கலை: நடுகல் முதல் நவீன சிற்பங்கள் வரை, ஐம்பொன் சிலைகள், பழங்குடியினர் மற்றும் அவர்கள் தயாரிக்கும் கைவினைப் பொருட்கள், பொம்மைகள் , தேர் செய்யும் கலை, சுடுமண் சிற்பங்கள், நாட்டுப்புறத் தெய்வங்கள், குமரிமுனையில் திருவள்ளுவர் சிலை, இசைக் கருவிகள், மிருதங்கம், பறை, வீணை, யாழ், நாதஸ்வரம், தமிழர்களின் சமூக பொருளாதார வாழ்வில் கோவில்களின் பங்கு.

நாட்டுப்புறக் கலைகள் மற்றும் வீர விளையாட்டுகள்: தெருக்கூத்து, கரகாட்டம், வில்லுப்பாட்டு, கணியான் கூத்து, ஒயிலாட்டம், தோல்பாவைக் கூத்து, சிலம்பாட்டம், வளரி, புலியாட்டம், தமிழர்களின் விளையாட்டுகள்.

தமிழர்களின் திணைக் கோட்பாடுகள்: தமிழகத்தின் தாவரங்களும், விலங்குகளும், தொல்காப்பியம் மற்றும் சங்க இலக்கியத்தில் அகம் மற்றும் புறக் கோட்பாடுகள், தமிழர்கள் போற்றிய அறக்கோட்பாடு, சங்ககாலத்தில் தமிழகத்தில் எழுத்தறிவும், கல்வியும், சங்ககால நகரங்களும் துறை முகங்களும், சங்ககாலத்தில் ஏற்றுமதி மற்றும் இறக்குமதி, கடல்கடந்த நாடுகளில் சோழர்களின் வெற்றி.

இந்திய தேசிய இயக்கம் மற்றும் இந்திய பண்பாட்டிற்குத் தமிழர்களின் பங்களிப்பு: இந்திய விடுதலைப்போரில் தமிழர்களின் பங்கு, இந்தியாவின் பிறப்பகுதிகளில் தமிழ்ப் பண்பாட்டின் தாக்கம் , சுயமரியாதை இயக்கம் இந்திய மருத்துவத்தில், சித்த மருத்துவத்தின் பங்கு, கல்வெட்டுகள், கையெழுத்துப்படிகள், தமிழ்ப் புத்தகங்களின் அச்சு வரலாறு.

References:

1. தமிழக வரலாறு, மக்களும் பண்பாடும், கே.கே. பிள்ளை (வெளியீடு: தமிழ்நாடு பாடநூல் மற்றும் கல்வியியல் பணிகள் கழகம்).
2. கணினித் தமிழ், முனைவர் இல. சுந்தரம். (விகடன் பிரசுரம்).
3. கீழடி, வைகை நதிக்கரையில் சங்ககால நகர நாகரிகம் (தொல்லியல் துறை வெளியீடு)
4. பொருநை, ஆற்றங்கரை நாகரிகம். (தொல்லியல் துறை வெளியீடு)
5. Social Life of Tamils (Dr.K.K.Pillay) A joint publication of TNTB & ESC and RMRL – (in print)
6. Social Life of the Tamils - The Classical Period (Dr.S.Singaravelu) (Published by: International Institute of Tamil Studies.
7. Historical Heritage of the Tamils (Dr.S.V.Subatamanian, Dr.K.D. Thirunavukkarasu) (Published by: International Institute of Tamil Studies).
8. The Contributions of the Tamils to Indian Culture (Dr.M.Valarmathi) (Published by: International Institute of Tamil Studies.)
9. Keeladi - 'Sangam City C ivilization on the banks of river Vaigai' (Jointly Published by: Department ofArchaeology & Tamil Nadu Text Book and Educational Services Corporation, Tamil Nadu)
10. Studies in the History of India with Special Reference to Tamil Nadu (Dr.K.K.Pillay) (Published by: The Author)
11. Porunai Civilization (Jointly Published by: Department of Archaeology & Tamil Nadu Text Book and Educational Services Corporation, Tamil Nadu)
12. Journey of Civilization Indus to Vaigai (R.Balakrishnan) (Published by: RMRL) – Reference Book.

UC25H01	Heritage of Tamils	L	T	P	C
		1	0	0	1

Language and Literature: Language Families in India, Dravidian Languages, Tamil as a Classical Language - Classical Literature in Tamil – Secular Nature of Sangam Literature, Distributive Justice in Sangam Literature, Management Principles in Thirukural, Tamil Epics and Impact of Buddhism & Jainism in Tamil Land, Bakthi Literature Azhwars and Nayanmars - Forms of minor Poetry - Development of Modern literature in Tamil, Contribution of Bharathiyar and Bharathidhasan.

Heritage - Rock art Paintings to Modern Art – Sculpture: Hero stone to modern sculpture, Bronze icons, Tribes and their handicrafts,- Art of temple car making, Massive Terracotta sculptures, Village deities, Thiruvalluvar Statue at Kanyakumari, Making of musical instruments, Mridhangam, Parai, Veenai, Yazh and Nadhaswaram, Role of Temples in Social and Economic Life of Tamils.

Folk and Martial Arts: Therukoothu, Karagattam, Villu Pattu, Kaniyan Koothu, Oyillattam, Leather puppetry, Silambattam, Valari, Tiger dance - Sports and Games of Tamils

Thinai Concept of Tamils : Flora and Fauna of Tamils & Aham and Puram Concept from Tholkappiyam and Sangam Literature, Aram Concept of Tamils, Education and Literacy during Sangam Age - Ancient Cities and Ports of Sangam Age, Export and Import during Sangam Age - Overseas Conquest of Cholas.

Contribution of Tamils to Indian National Movement and Indian Culture: Contribution of Tamils to Indian Freedom Struggle, The Cultural Influence of Tamils over the other parts of India, Self-Respect Movement, Role of Siddha Medicine in Indigenous Systems of Medicine, Inscriptions & Manuscripts, Print History of Tamil Books.

References:

1. தமிழக வரலாறு – மக்களும் பண்பாடும் – கே.கே. பிள்ளை (வெளியீடு: தமிழ்நாடு பாடநூல் மற்றும் கல்வியியல் பணிகள் கழகம்).
2. கணினித் தமிழ் – முனைவர் இல. சுந்தரம். (விகடன் பிரசுரம்).
3. கீழடி – வைகை நதிக்கரையில் சங்ககால நகர நாகரிகம் (தொல்லியல் துறை வெளியீடு)
4. பொருநை – ஆற்றங்கரை நாகரிகம். (தொல்லியல் துறை வெளியீடு)
5. Social Life of Tamils (Dr.K.K.Pillay) A joint publication of TNTB & ESC and RMRL – (in print)
6. Social Life of the Tamils - The Classical Period (Dr.S.Singaravelu) (Published by: International Institute of Tamil Studies.
7. Historical Heritage of the Tamils (Dr.S.V.Subatamanian, Dr.K.D. Thirunavukkarasu) (Published by: International Institute of Tamil Studies).
8. The Contributions of the Tamils to Indian Culture (Dr.M.Valarmathi) (Published by: International Institute of Tamil Studies.)
9. Keeladi - 'Sangam City C ivilization on the banks of river Vaigai' (Jointly Published by: Department ofArchaeology & Tamil Nadu Text Book and Educational Services Corporation, Tamil Nadu)
10. Studies in the History of India with Special Reference to Tamil Nadu (Dr.K.K.Pillay) (Published by: The Author)

11. Porunai Civilization (Jointly Published by: Department of Archaeology & Tamil Nadu Text Book and Educational Services Corporation, Tamil Nadu)
12. Journey of Civilization Indus to Vaigai (R.Balakrishnan) (Published by: RMRL) – Reference Book.

AR25103	Geometrical Drawing	L	T	P/S	C
		1	0	3	4

Course Objectives:

- To introduce geometrical understanding as one of the bases of architecture.
- To give an understanding of basic and derived geometry of form in terms of their generation and attributes.
- To give skills of representation of forms in terms of technical drawing and projections.

Relation between geometry and form. Introduction to point, line, plane, solid. Definition of geometrical drawing. Drawing lines and angles. Drawing shapes/ planar surfaces - triangle, square, rhombus, rectangle, polygon, hexagon, etc). Drawing of circles, tangents, curves, conic sections (hyperbola, parabola, ellipse).
Construction of physical planar models of all the above. Viewing the physical planar models from different angles and sketching them with light and shade, shadow as a prelude to understanding the concepts of different types of projections and sciography. Introduction and explanation of terminologies - orthographic, isometric, axonometric, perspective projections and sciography.

10 periods

Drawing problems on orthographic, isometric and axonometric projections of lines and planes of different types in different positions. Sciography for the same.
Types of perspective projections- one point, two point, three point. Terminologies- picture plane, stationary point, vanishing point, cone of vision, eye level, etc., Methods of constructing perspectives.
Drawing perspective projections of simple planar surfaces/ shapes. Sciography for the same.

20 periods

Introduction to geometric solids- cube, prism, pyramids, cones, cylinders. Generation of geometric solids through construction of physical models from lines and planar surfaces (including concept of development). Construction of block models of solids. Viewing the models from different angles and sketching them with light and shade, shadow in order to understand them in different types of projections.

Drawing problems on orthographic, isometric and axonometric projection of solids of different types in different positions. Sciography for the same.
Perspective projection of simple solids. Sciography for the same

20 periods

Understanding sections of solid and true shape of sections through cutting of block models, viewing them from different angles and sketching them. Understanding simple intersection of solids and composite forms through making block models and viewing them from different angles and sketching them.
Simple drawing problems on orthographic, isometric and axonometric projection of the above.

10 periods

Total : 60 periods

Weightage:

Continuous Internal Assessment: 50%, End Semester Examinations: 50%.

End Semester examination duration: 4 hours

Assessment Methodology:

Three Assessments with equal weightage.

One Assessment as Internal written Test /Examination (33.33%), other two assessment (each assessment weightage - 33.33%) as continuous marking of the work and performance during the particular assessment period such as drawings, models, study, seminar, etc.,

References:

1. Martin, L. C. (1978). Architectural graphics. Macmillan.
2. Reekie, F. (1999). Reekie's architectural drawing. Viva Books Private Limited.
3. Burrows, R. (2018). 3D thinking in design and architecture. Thames and Hudson.
4. Bhatt, N. D. (2023). Engineering drawing (54th ed.). Charotar Publishing House Pvt. Ltd.
5. Grant, H. E. (2014). Engineering drawing. McGraw-Hill Book Company.
6. Taffesse, W., & Kessaa, L. M. (2005). Engineering drawing.
7. Mulir, S. (1994). Perspective and sciography. Allied Publishers Ltd.
8. White, G. (2003). Perspective: A guide for artists, architects and designers. Batsford (Anova Books Imprints).

E - Resources:

1. https://link.springer.com/book/10.1007/978-981-10-5358-0 - A First Course in Engineering Drawing Textbook , 2018
2. https://openlibrary.org/works/OL10569620W/Geometrical_drawing_for_art_students?edition=key%3A/books/OL59009463M - Geometrical Drawing for Art students , 1967.
3. https://archive.org/details/sciographyorradi00puck -Sciography or Radial Projection of shadows by R. Campbell Pucket,1968

Required reading

- Morris I.H., 'Geometrical Drawing for Art Students', Orient Longman, Madras, 2004.
- Francis D. K. Ching, 'Architectural Graphics', John Wiley and Sons, 2012.
- Natarajan K.V, 'A Textbook of Engineering Graphics', Dhanalakshmi Publishers, Chennai, 2006.

	Description of CO	PO2	PO6
CO1	Ability to understand the relationship between geometry and architectural form.	3	2
CO2	Understanding of various attributes of geometric forms and skill in their creation and dissection.	3	2
CO3	Ability to represent geometric forms through technical drawings.	3	2

AR25104	Art as Cognition and Expression	L	T	P/S	C
		0	0	4	4

Course Objectives:

- To give understanding of the role and importance of art as a means of understanding the world.
- To give skills in techniques and media of art.
- To enable expression of ideas, thoughts and experience through various visual modes both in terms of realism and abstraction.

Introduction to Art: Origin and evolution of art as human cognition, representation, expression. Role of art. Understanding representation in art - naturalistic, realistic, symbolic, stylistic, abstract, non- objective art, etc., through study of important works across history from different cultures of the world. Looking at common design principles and intersections between art and architecture. Simple studio exercises in basic modes of representation through observation or thought. **10 periods**

Art as Observation and Recording of Human Experience: Properties and uniqueness of different media for art. Studio exercises to observe and record the nature of simple indoor and outdoor subjects through techniques of line, colour, light and shade, texture, etc., using different media- drawing, sketching, painting, sculpture, watercolour, tempera, oil, acrylic, pencils, pastels, crayons, paper, canvas, brush, airbrush, pen and ink, mixed media, clay, Plaster of Paris, wire, papiermache. **20 periods**

Art as Heightened Representation of Reality: Understanding role of art in heightening reality through accentuation of line, colour, light and shade, texture, emphasis, contrast, balance, etc., by the study of examples from the world of art. Comparison between line drawing and form drawing in art and architecture.Studio exercises to understand and bring out the essential characteristics of landscapes, people, places, built environment, situations and objects by heightened reality through appropriate ideas/ tools/techniques.

15 periods

Art as Abstraction of Reality: The power and role of abstraction as a way of expressing experience and reality through understanding exemplary artists' works and art movements. Studio exercises in abstract expression of real environment, thoughts and emotions through any appropriate media and technique **15 periods**

Total: 60 Periods

Weightage: Continuous Internal Assessment: 60%, End Semester Examinations: 40%.

Assessment Methodology: Three Assessments with equal weightage.

Each assessment shal incorporate continuous marking of the work and performance during the particular assessment period. Each assessment weightage – approx. 33%.

References:

1. Myers, B. S. (1964). Understanding the arts. Holt, Rinehart and Winston Inc.
2. Kleiner, F. S. (2012). Gardner's art through the ages. Wadsworth Publishing.
3. Dewey, J. (2005). Art as experience. Penguin.

4. Kandinsky, W. (2013). Point and line to plane. Dover.
5. Swann, A. (1997). Graphic design school. HarperCollins.

E -resources:

- https://www.thoughtco.com/
- https://mymodernmet.com/
- https://www.thoughtco.com/
- The Art Story – Art Insight - https://www.theartstory.org/
- Drawspace – Free Drawing Lessons - https://www.drawspace.com/

(Learn drawing, shading, and sketching techniques step-by-step)

Required Reading

- H. Gombrich, 'Art and Illusion', Phaidon, 2002.
- E.H. Gombrich, 'The Story of Art', Phaidon, 2002.
- ParthaMitter, 'Indian Art', Oxford University Press, 2001.
- Nathan Cabot Hale, ‘Abstraction in Art and Nature’, Dover, 2003.
- Robert L. Solso, ‘Cognition and the Visual Arts’, MIT Press, 1994.
- Webb, Frank, ‘The Artist Guide to Composition’, David and Charles, U.K., 1997.
- Francis Ching, ‘Drawing a Creative Process’, Van Nostrand Reinhold, New York,1990.
- Lucy Watson, ‘Complete Painting and Drawing Handbook’, DK Adult, 2009.
- JuhaniPallasma, ‘The Thinking Hand’, John Wiley, 2009.

	Description of CO	**PO3**
CO1	Sensitivity and knowledge of art as basic human endeavour.	3
CO2	Ability and skill to record experience through art.	3
CO3	Ability to abstract thought, observation and experience through art.	3

AR25105	Foundational Design Studio	L	T	P/S	C
		0	0	9	9

Course Objectives:

- To give an understanding of design as creating form towards a purpose at various scales.
- To enable exploration of the universal visual, experiential and cognitive aspects of design through engaging elements and principles of form.
- To give an insight into the ways in which form/ morphology and use/effect can come together.
- To give an appreciation of what makes something attractive

The explorations in the foundational studio would be of two types. One would be to understand and break down form to its component elements and principles in order to get insight into the most important aspects that give a totality of cognitive effect(perceptive, behavioural, cultural etc.,) or use (anthropometrics, activities, scale, etc.,).Design exploration would continue after this to create a form for use/effect. Another would be to explore component elements like point, line, planes, volume, shape, colour, texture light, pattern, etc., using principles such as balance, unity, dominance, transparency, proportion, scale, solid, void, fluidity, movement, fractal, order, chaos, gestalt, etc., This exploration could be an end in itself or could lead to the creation of a higher level of or composite form/design through using elements and principles in conjunction towards human need/ use (perceptive, behavioural, cultural, anthropometrics, activities, scale, etc.,).

Architecture as a discipline starts with ~~morphology~~ the study of buildings : their shape, size, layout, proportions, etc. and understanding how each aspect of these relates to the function they serve as the answer to questions and needs of human society. While the needs are multifarious, including shelter and comfort, social and psychological wellbeing, culture and meaning, expression of time and context, etc., the means are negotiated through the fundamentals of form in its various attributes. In the foundational studio, the exploration would be on understanding these fundamentals as universals as well as in terms of particular manifestations in specific cultural and temporal contexts. The word form here means all physical manifested aspects.

The whole studio would be conducted through a series of related design exercises with multiple stages as well as standalone independent exercises. Observational/ analytical study and design exploration could go hand in hand or one could precede the other, based on the specific project. The exercises would be mediated through situations and contexts, historic and contemporary references, local or global character, aesthetics, basics of human response and behaviour, etc., Different media would be explored in 2D and 3D. The final exercise(s) would be focussed towards small product/ furniture/ architectural design/ component design in urban context, etc.

Total: 135 Periods

Weightage: Continuous Assessment: 60%, End Semester Examinations: 40%.

Assessment Methodology: Three Assessments with equal weightage.

Each assessment shall incorporate continuous marking of the work and performance during the particular assessment period. Each assessment weightage - 33.33%.

References:

1. Miyasaka, T. (2013). *Seeing and making in architecture: Design exercises*. Routledge.
2. Pramar, V. S. (1997). *Design fundamentals in architecture*. Somaiya Publications.
3. Ching, F. D. K. (1979). *Architecture: Form, space, and order*. Van Nostrand Reinhold Co.
4. Roth, L. M. (n.d.). *Understanding architecture: Its elements, history, and meaning*. [Publisher info missing—please provide if available].
5. Coates, N. (n.d.). *Narrative architecture*. [Publisher info missing—please provide if available].

E - Resources

1. https://doi.org/10.4324/9780080454979 - How Designers Think by Bryan Lawson, 2005.
2. https://www.wiley.com/en-us/Graphic+Thinking+for+Architects+and+Designers%2C+3rd+Edition-p-x000202516 - Graphic Thinking for Designers and Architects by Paul Leasau, 2000
3. https://doi.org/10.4324/9780203882436 - Understanding Architecture Through the Art of Drawing by Brian Edwards, 2008
4. https://www.bloomsbury.com/in/basics-design-08-design-thinking-9782940439386/ - Basics Design 08: Design Thinking Gavin Ambrose (Author) , Paul Harris (Author)

Required Reading

- Kumar Vyas, ‘Design and Environment- A Primer’, National Institute of Design, 2009.
- Pierre von Meiss, ‘Elements of Architecture: From Form to Place’, Routledge, 2014.
- James F. Eckler,’ Language of Space and Form: Generative Terms for Architecture’, Wiley, 2012.
- Owen Cappleman and Michael Jack Jordon, ‘Foundations in Architecture: An Annotated Anthology of Beginning Design Project’, Van Nostrand Reinhold New York, 1993.
- Charles Wallschlacgerm and Cynthia Busic-Snyder, ‘Basic Visual Concepts and Principles for Artists, Architects and Designers’, McGraw Hill, New York 1992.
- Victor Papanek, 'Design for the Real world, Human Ecology and Social Change', Chicago Review Press, 2005.
- ‘Elements of Spacemaking’ by Yatin Pandya. ISBN 978180206796 2007 edition Mapin Publishing P Ltd.
- ‘Architecture Thought: The Design Process and the Expectant Eye’ 2003 edition Ebserier, Architectural Press
- ‘Experiencing Architecture’ Unwin Simon Routledge 2018

	Description of CO	PO1	PO2	PO3	PO4	PO5
CO1	Awareness of the totality and components of form in the creation of design.	3	2	2	2	3
CO2	Ability to explore the visual/ cognitive language and grammar of the universal elements and principles of design.	3	2	2	2	3
CO3	Ability to understand needs as encompassing functional, behavioural, cultural, experiential, etc.	3	2	2	2	3
CO4	Ability to engage awareness towards creating a morphology that fulfils stated intents and needs	3	2	2	2	3

Semester II

AR25201	World Architecture: Early Civilizations to Renaissance	L	T	P/S	C
		3	0	0	3

Course Objectives:

- To introduce the timeline and geography of human societal evolution establishing a context for the study of architecture and urbanism across the ~~ages~~. historical periods.
- To give knowledge about early civilisations and their productions.
- To enable an understanding of the architectural contributions of Classical Greece and Rome.
- To enable understanding of the intersecting forces in shaping European Architecture and urbanism such as religion, trade, technology, etc. from the decline of Roman empire to the Medieval period To create awareness of the emergence of Renaissance and humanism in Europe and their influence in architecture and urbanism.

Prehistory to River Valley Civilisations: Chronological phases and geographic spread of human history. Elements and determinants of human settlements. Prehistoric habitats and art. River Valley civilisations of Nile, Indus, Tigris/Euphrates and Yellow River; their geographical context; their political, social, religious, cultural and economic systems; settlement patterns, dwellings and other buildings.

8 periods

Persia, Greece and Rome: Early Persian empire, its cities and Architectural character.

Origin of Greek civilisation. Nature of settlements and dwellings. Political, social, religious, cultural and economic systems. Greek philosophy. Greek polis and democracy. Evolution of the Greek temple and the building of the Acropolis. Public architecture - Theatre and Agora. Other building types. Optical illusions in architecture.

Origin of Roman civilization. Nature of settlements and dwellings. Political, social, religious, cultural and economic systems. Republic and Empire. Urban planning. Domestic architecture. Architecture as imperial propaganda. Forums and basilicas. Other building types. Structural forms: materials and techniques of construction spanning large spaces.

Political empires of Persia, Greece and Rome and their larger effects.

10 periods

Judaism, Christianity and Islam: Judaism and Christianity- Birth and geographic spread. Transformation of the Roman Empire. Early Christian worship and burial. Church planning- Basilica concept. Byzantine empire. Centralised plan concept in churches. Birth and spread of Islam in the first millennium. Outline of building types of Islam. Commonality in forms and ideas across Southern/ Eastern Europe and Western/ Central Asia.

9 periods

Medieval Europe: Outline history of medieval Europe- Population explosion, feudalism and rural manorial life, development of trade/ commerce and medieval cities, rise of nation states and technology of warfare, religious aspects- papacy, monasticism and crusades. Art and architecture in Medieval Europe. Craft and merchant guilds. Domestic

Architecture. Romanesque and Gothic architecture including. Vaulting systems. Late medieval Europe and ~~its problems.~~ transitions.

9 periods

Renaissance in Europe: Renaissance and Humanism in Europe, its causes and its various facets in society. Trade and exploration. Protestant Reformation. Cities and their transformation. Character and building types of Early Renaissance, High Renaissance, Mannerism, Baroque and Rococo. Renaissance in different nations. Works of Brunelleschi, Michelangelo, Christopher Wren, Andrea Palladio, Inigo Jones.

9 periods

Total: 45 Periods

Weightage: Continuous Internal Assessment: 40%, End Semester Examinations: 60%.

Assessment Methodology: Two Assessments with equal weightage.
One Assessment as Internal written Test /Examination (50%), second as Assignment (50%) of any mode such as study, seminar, and or a combination of modes, etc.

References:

1. Watkin, D. (2015). *A history of western architecture*. Laurence King Publishing.
2. Nervi, P. L. (Ed.). (1972). *History of world architecture series*. Harry N. Abrams.
3. Lloyd, S., & Muller, H. W. (1986). *History of world architecture series*. Faber and Faber.
4. Samdstrom, G. E. (1975). *Man the builder*. McGraw Hill Book Company.
5. Scully, V. (1991). *Architecture: The natural and the man-made*. Harper Collins.

Required Reading

- Ching, F. D. K., Jarzombek, M. and Prakash, V, 'A Global History of Architecture', 2nd Ed. John Wiley and Sons, 2010.
- Sir Banister Fletcher, 'A History of Architecture', CBS Publications (Indian Edition),1999.
- Spiro Kostof, 'A History of Architecture – Setting and Rituals', 2nd Ed, Oxford University Press, 1995.
- Leland M Roth, 'Understanding Architecture: Its Elements, History and Meaning', Westview Press, 2013.

E-Resources

- https://doi.org/10.4324/9780203449509 - Ancient architecture (History of world Architecture series) – Seton Lloyd Early Civilizations of the Old World The Formative Histories of Egypt, The Levant, Mesopotamia, India and China, 1999
- https://catalog.hathitrust.org/Record/000451390 - Greek buildings- represented by fragments – by.W.R.Lethaby .1990.
- https://www.electa.it/en/?post_type=es_product&s&type=es_product_book - Ancient architecture (History of world Architecture series) 2003
- https://archive.org/details/classicalarchite0000gabr_t7r6 - Classical Architecture for the 21st Century - Jean-Francois Gabriel, 2004

Required Reading

- Riggs, Christina. Ancient Egyptian Art and Architecture: A Very Short Introduction. OUP Oxford, 2014.
- Owens, Edwin John. The city in the Greek and Roman world. Routledge, 2018.
  Patricios, Nicholas N. The sacred architecture of Byzantium: art, liturgy and symbolism in early Christian churches. Bloomsbury Publishing, 2014
- Azad, Mir Mohammad, and Abhik Barua. "A Case Studies of Ancient Egyptian Architecture." International Journal of Engineering and Applied Sciences 4, no. 10 (2017): 257364.
- Darwish, Mahmoud Ahmed. "Architectural Planning Of Byzantine Churches and Their Decorative and Applied Elements."
- Bucher, François. "Design in Gothic architecture: a preliminary assessment." Journal of the Society of Architectural Historians 27, no. 1 (1968): 49-71.
- De Raedt, Nele. "Architecture and Renaissance." In Encyclopedia of Renaissance Philosophy, pp. 1-14. Springer, Cham, 2019.

	Description of CO	**PO4**	**PO5**
CO1	An overall understanding of the timelines and early histor y of civilisations and their contributions across the world.	3	2
CO2	Knowledge about the contributions of Greece and Rome to architecture and urbanism.	3	2
CO3	Familiarity with the intersecting forces in Europe from decline of Roman empire to Medieval times and their manifestation in cities and architecture.	3	2
CO4	An understanding of Renaissance and humanism and the resultant architecture and urbanism	3	2

AR25202	Structural Mechanics	L	T	P/S	C
		3	0	0	3

Course Objectives:

- To give familiarity about structural resolutions and its important in realisation of architectural design concepts
- To give exposure to forces, moments and resolution of forces.
- To give understanding of geometrical properties such as centroid, moment of inertia, etc of sections of different shapes.

Force System: Principles of statics. Forces and their effects. Types of force systems. Resultant of concurrent and parallel forces. Principle of moments. Varignon's theorem. Principle of equilibrium (no reaction problems). **8 Periods**

Analysis of trusses: Analysis of plane trusses. Introduction to Determinate and Indeterminate plane trusses. Analysis of simply supported and cantilevered trusses by method of joints. **9 Periods**

Sectional Properties: Properties of section – Centre of gravity, Moment of Inertia, Section modulus, Radius of gyration for various structural shapes. Theorem of perpendicular axis. Theorem of parallel axis. **10 Periods**

Elastic Properties and Constants: Elastic properties of solids. Concept of stress and strain. Deformation of axially loaded simple bars. Types of stresses. Concept of axial and volumetric stresses and strains. Elastic constants. Elastic Modulus. Shear Modulus. Bulk Modulus. Poisson's ratio. Relation between elastic constants (excluding composite bar and tapered Section). **10 Periods**

Complex Stresses: Principal stresses and strain. Numerical and Graphical method.Mohr's diagram. **8 Periods**

Total: 45 Periods

Weightage: Continuous Internal Assessment: 40%, End Semester Examinations: 60%.

Assessment Methodology: Two Assessments with equal weightage.

One Assessment as Internal written Test /Examination (50%), second as Assignment (50%) of any mode such as study, seminar, and or a combination of modes, etc.

E-resources (Videos):

1.https://www.youtube.com/playlist?list=PLyqSpQzTE6M_MEUdn1izTMB2yZgP1NLfs

2. https://www.youtube.com/watch?v=Bls5KnQOWkY

3. https://www.youtube.com/watch?v=A4KhJYrt4-s

4. https://www.youtube.com/watch?v=aQf6Q8t1FQE

5. https://www.youtube.com/watch?v=C-FEVzI8oe8

6. https://www.youtube.com/watch?v=_DH3546mSCM

References:

1. Punmia, P. C. (2018). *Strength of materials and theory of structures: Vol. I*. Lakshmi Publications.
2. Ramamrutham, S. (2014). *Strength of materials*. Dhanpatrai and Sons.
3. Nash, W. A. (1989). *Strength of materials* (Schaum's series). McGraw Hill Book Company.
4. Rajput, R. K. (2017). *Strength of materials*. S.K. Kataria and Sons.

Required Reading

- R.K. Bansal, 'A Text book on Engineering Mechanics', Lakshmi Publications, Delhi,2008.
- R.K. Bansal, 'A textbook on Strength of Materials', Lakshmi Publications, Delhi 2010.
- Paul W. McMullin, 'Jonathan S. Price, 'Introduction to Structures', Routledge, 2016.

	Description of CO	PO6
CO1	Ability to apply the concepts of action of forces on a body and should be able to apply the equilibrium concepts.	3
CO2	Understanding the concept of bending moment and shear force of beam.	3
CO3	Understanding of the basic geometrical properties of sections.	3
CO4	Knowledge about elastic properties of solids	

AR25203	Environmental Studies	L	T	P/S	C
		3	0	0	3

Course Objectives:

- To introduce the basic concepts of environment, ecosystems and biodiversity and emphasise on the biodiversity of India and its conservation.
- To impart knowledge on the causes, effects and control or prevention measures of environmental pollution and natural disasters.
- To facilitate the understanding of global and Indian scenario of renewable and non-renewable resources, causes of their degradation and measures to preserve them.
- To familiarise about influence of societal use of resources on the environment and introduce the legal provisions, National and International laws and conventions for environmental protection.
- To inculcate the effect of population dynamics on human and environmental health and inform about human right, value education and role of technology in monitoring human and environmental issues.

Environment, Ecosystems and Biodiversity : Definition, scope and importance of environment – need for public awareness - concept of an ecosystem – structure and function of an ecosystem – producers, consumers and decomposers – energy flow in the ecosystem – ecological succession – food chains, food webs and ecological pyramids – Introduction, types, characteristic features, structure and function of the (a) forest ecosystem (b) grassland ecosystem (c) desert ecosystem (d) aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries) – Introduction to biodiversity definition: genetic, species and ecosystem diversity – bio geographical classification of India – value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values – Biodiversity at global, national and local levels – India as a mega-diversity nation – hot-spots of biodiversity – threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts – endangered and endemic species of India – conservation of biodiversity: In-situ and ex-situ conservation of biodiversity. Field study of common plants, insects, birds Field study of simple ecosystems – pond, river, hill slopes, etc.
Introduction to the design of built environment with consideration of environment, ecosystems and biodiversity.

Environmental Pollution: Definition – causes, effects and control measures of: (a) Air pollution (b) Water pollution (c) Soil pollution (d) Marine pollution (e) Noise pollution (f) Thermal pollution (g) Nuclear hazards – soil waste management: causes, effects and control measures of municipal solid wastes – role of an individual in prevention of pollution – pollution case studies – disaster management: floods, earthquake, cyclone and landslides. Field study of local polluted site – Urban / Rural / Industrial / Agricultural. Built environment and its relation to environmental pollution, both as a cause and as a response.

Natural Resources: Forest resources: Use and over-exploitation, deforestation, case studies- timber extraction, mining, dams and their effects on forests and tribal people – Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems – Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case

studies – Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies – Energy resources: Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources. case studies – Land resources: Land as a resource, land 47 degradation, man induced landslides, soil erosion and desertification – role of an individual in conservation of natural resources – Equitable use of resources for sustainable lifestyles. Field study of local area to document environmental assets – river / forest / grassland / hill / mountain.
The use of natural resources in architecture and the built environment through principles and case studies.

Social Issues and the Environment: From unsustainable to sustainable development – urban problems related to energy – water conservation, rain water harvesting, watershed management – resettlement and rehabilitation of people; its problems and concerns, case studies – role of non-governmental organization- environmental ethics: Issues and possible solutions – climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, case studies. – wasteland reclamation – consumerism and waste products – environment protection act – Air (Prevention and Control of Pollution) act – Water (Prevention and control of Pollution) act – Wildlife protection act – Forest conservation act – enforcement machinery involved in environmental legislation- central and state pollution control boards- Public awareness.
Socially and environmentally sensitive design of built environment through case studies.

Human Population and the Environment : Population growth, variation among nations – population explosion – family welfare programme – environment and human health – human rights – value education – HIV / AIDS – women and child welfare – role of information technology in environment and human health – Case studies.
Architectural design and density.

Weightage: Continuous InternalAssessment: 40%, End Semester Examinations: 60%.

Assessment Methodology: Two Assessments with equal weightage.

One Assessment as Internal written Test /Examination (50%), second as Assignment (50%) of any mode such as study, seminar, and or a combination of modes, etc.

References:

1. Trivedi, R. K. (n.d.). *Handbook of environmental laws, rules, guidelines, compliances and standards* (Vols. I & II). Enviro Media.
2. Cunningham, W. P., Cooper, T. H., & Gorhani, S. D. (2001). *Environmental encyclopedia*. Jaico Publishing House.
3. Sengar, D. S. (2007). *Environmental law*. Prentice Hall of India Pvt. Ltd.
4. Rajagopalan, R. (2005). *Environmental studies: From crisis to cure*. Oxford University Press.
5. Bharucha, E. (2013). *Textbook of environmental studies for undergraduate courses*. Orient Blackswan Pvt. Ltd.

Required Reading

- Anubha Kaushik and C. P. Kaushik, ‘Perspectives in Environmental Studies’, 6th Edition, New Age International Publishers (2018).

- Benny Joseph, 'Environmental Science and Engineering', Tata McGraw-Hill, New Delhi, (2016).
- Gilbert M.Masters, 'Introduction to Environmental Engineering and Science', 2nd edition, Pearson Education (2004).

	Description of CO	**PO8**
CO1	To introduce the basic concepts of environment, ecosystems and biodiversity and emphasise on the biodiversity of India and its conservation.	3
CO2	To impart knowledge on the causes, effects and control or prevention measures of environmental pollution and natural disasters.	3
CO3	To facilitate the understanding of global and Indian scenario of renewable and non-renewable resources, causes of their degradation and measures to preserve them.	3
CO4	To familiarise about influence of societal use of resources on the environment and introduce the legal provisions, National and International laws and conventions for environmental protection.	3
CO5	To inculcate the effect of population dynamics on human and environmental health and inform about human right, value education and role of technology in monitoring human and environmental issues.	3

AR25204	Building Components and Measured Drawing	L	T	P/S	C
		1	0	3	4

Course Objectives:

- To introduce the components of a typical building and their nomenclature.
- To introduce the concept of scale and enable understanding of a building through measured drawing.
- To give skills of representing physical characteristics of materials.
- To give skills in isometric and perspective projections of the measured building.

Introduction to Building Components and their Nomenclature: Building as act of construction for human use layered over the earth - foundation, structural systems, enclosures, weather protection. Understanding building components and their nomenclature using historic and contemporary examples from literature study, site visits, sketches. The nomenclature to include 1) basic types of construction such as load bearing/framed/space structure 2) basic components in a building such as foundation, plinth, walls, floors, roofs(flat, sloped, vaulted),roof covering, ceilings, staircases (principles and different geometric types), doors, windows and ventilators, lintel, sunshade, coping, cornice, stringcourse, parapet, waterproofing, finishing, mortar, decoration, paving3) basic materials for the components. **12 Periods**

Measured Drawing and Projections of Basic Components: Introduction to concept of scale and measured drawing through basic components such as handrails, furniture, arches, etc., Orthographic (plan, elevation, section) and isometric projection of the simple components. Representation of different materials through rendering, Perspective projection of simple components. **16 Periods**

Measured Drawing of Historical Building: Understanding a historic building in totality or in part through measuring drawing. **18 Periods**

Measured Drawing of Contemporary Building: Understanding a contemporary building in totality or in part through measuring drawing. **14 Periods**

Total: 60 Periods

Weightage: Continuous Internal Assessment: 50%, End Semester Examinations: 50%.

Assessment Methodology: Three Assessments with equal weightage.
One Assessment as Internal written Test /Examination (33.33%), other two assessment (each assessment weightage - 33.33%) as continuous marking of the work and performance during the particular assessment period such as drawings, models, study, seminar, etc.,

References:

1. John M. Holmes, 'Applied Perspective', 2nd edition, Sir Isaac, Pitman and Sons Ltd., London 1967.
2. Robert W. Gill, 'Basic Perspective', Thames and Hudson, London, 2006.
3. Leslie Martin C., 'Architectural Graphics', 2nd edition, The Macmillan Company, New York,1970.

4. Natascha Meuser, 'Drawing for Architects: Construction and Design Manual', Dom Pub, 2015.
5. Emmitt, Stephen, *Barry's Introduction to Construction of Buildings*, 4th Edition, Wiley-Blackwell, United Kingdom, 2018.
6. Merritt, F.S. and Ricketts, J.T., *Building Design and Construction Handbook*, Sixth Edition, McGraw-Hill Professional, New York, 2000.
7. Swallow, P., Dallas, R., Jackson, S. and Watt, D., *Measurement and Recording of Historic Buildings*, 2nd Edition, Routledge, London and New York, 2013.
8. Edwards, B., *Understanding Architecture Through Drawing*, 2nd Edition, Routledge, London and New York, 2003.
9. Ching, F.D.K. and Juroszek, S.P., *Design Drawing*, 3rd Edition, Wiley, New Jersey, 2019.

E Resources/ E Books :

1. Architects' drawings – A selection of sketches by world famous architects through history by Kendra Schank Smith, 2005
2. Drawing with pen & ink – A word concerning the brush by Arthur.l.Guptill with an introduction by Franklin Booth, 1930
3. Building construction hand book tenth edition by Roy Chudleyand Roger Greeno, 2014.

Required Reading

- Francis D. K. Ching, 'Architectural Graphics' John Wiley and Sons, 2009.
- Rendow Yee, 'Architecture Drawing: A Visual Compendium of Types and Methods', John Wiley and Sons, 2012.
- Francis D. K. Ching, Steven P. Juroszek, 'Design Drawing', John Wiley and Sons, 2010.

	Description of CO	PSO2	PSO6	PSO8
CO1	Ability to recognise and name components of a building.	2	3	2
CO2	Ability to measure and draw components of a building.	2	3	2
CO3	Ability to make isometric and perspective projections of components of a building.	2	3	2
CO4	Understanding a building in total or in part through the process of measured drawing.	2	3	2

AR25205	Tools for Design Thinking	L	T	P/S	C
		0	0	4	4

Course Objectives:

- To enable the ability to perceive the built environment through multiple modes of exploration such as observation, analysis, speculation , interpretation and representation.
- To introduce fundamentals of human cantered design thinking, including basic user interface ~~(UI)~~ and user experience ~~(UX)~~ concepts in the physical world.
- To foster design thinking using both digital and physical modes of representation.
- To equip students with tools to interpret, transform, and communicate architectural ideas from observation to speculation

This studio lays the foundation for design thinking by guiding students to understand how we perceive the world through sensory exploration and reflective observation. It begins by developing the ability to observe spatial, tactile, visual, and acoustic stimuli in both natural and built environments, and reflect critically on them. Students will investigate subjective and objective views, and differentiate between intuitive and analytical modes of understanding space. Through a sequence of structured modules, the studio transitions into diagrammatic and model-based analysis. Students will engage in exercises involving memory mapping, sketching, journaling, and intuitive representations. These help cultivate sensitivity to everyday spatial experiences and build awareness of how people perceive and navigate their environments.

The second phase explores basic concepts of user interactions and experience focussing on how people interact with spatial elements in real world. Students will analyze simple spatial settings such as corridors, parks, and waiting areas to identify user needs and behaviours. Design as a continuous process in time as in streets and public spaces They will create interaction maps and touchpoint diagrams to understand human-scale interface within space, materials, and circulation patterns, laying the foundation for human-cantered design.

The third phase delves into diagrammatic thinking, where students learn to abstract ideas, spatial relationships, and functions through graphic tools. They will experiment with bubble diagrams, functional zoning, conceptual sketches, and movement mapping. Case studies of buildings and spaces will be analysed using visual storytelling to reinforce critical thinking and clarity in communication. Illustrator, Photoshop, and hand-drafting methods will be integrated during this stage. In the following module, the studio explores the built environment through analytical diagrams, layering spatial parameters such as circulation, zoning, light, thermal comfort, and use-patterns to decode complex environments. Case studies and comparative methods will be employed, with outputs in both digital and analog formats.

In the final phase, students will transition to model making as a means to test and express design ideas in three dimensions. They will explore physical materials and simple digital tools to investigate form, scale, and massing. Students will create conceptual, realistic, and generative models using foam, wire, clay, cardboard, and resin, POP and different tactile materials as well as tools like Sketch Up, etc..

Students will then integrate insights from observation, user interaction, and diagrammatic analysis to develop a small conceptual project. The course will conclude with a reflective portfolio and oral presentation highlighting their design journey and thinking process.

Weightage: Continuous Internal Assessment: 60%, End Semester Examinations: 40%.

Assessment Methodology: Three Assessments with equal weightage.

Each assessment shall incorporate continuous marking of the work and performance during the particular assessment period. Each assessment weightage - 33.33%.

References:

1. Norman, D. (2013). The design of everyday things. Basic Books.
2. Cook, P. (2014). Drawing: The motive force of architecture. Wiley.
3. Lupton, E. (2017). Design is storytelling. Cooper Hewitt / Smithsonian Design Museum.
4. Pallasmaa, J. (2009). The thinking hand. Wiley.
5. Vidler, A. (2000). Diagrams of diagrams: Architectural abstraction and modern representation. Representations, (72), 1–20.
6. Shin, S.-J., Lemon, O., & Mumma, J. (2018). Diagrams. In E. N. Zalta (Ed.), The Stanford encyclopedia of philosophy (Winter 2018 Edition). https://plato.stanford.edu/archives/win2018/entries/diagrams/
7. Bua, M. (2012). Architectural inventions: Visionary drawing of buildings. Laurence King Publishing.
8. Farrelly, L. (2011). Representational techniques. AVA Publishing.
9. Eisenman, P. (1999). Diagram diaries. Thames & Hudson.
10. Unwin, S. (1997). Analysing architecture. Routledge.

E Resources/ e-books

1. Architectural Thought-The Design Process and the Expectant Eye-Micheal Brawne, 2003
2. Graphic Thinking for Architects and Designers- Paul Lesean, 2000
3. Virtual reality and Built Environment-Jennifer Whyte, 2018
4. Precedents in Architecture-Analytical Diagrams , Formative Ideas and Partis-Roger H Clark and Micheal Pause, 2012
5. Operative Design-A Catalogue of spatial verbs-Anthony DiMari and Nora Yoo, 2013.
6. Folding Techniques-From Sheet to Form-Paul Jackson, 2011.

Required Reading

- Mark Garcia, 'The Diagrams of Architecture', Wiley 2010.
- Iain Fraser and Rod Henmi, ‘Envisioning Architecture – An Analysis of Drawing, 1991’,John Wiley and Sons, 1993.
- Alan F. Blackwell, ‘Thinking with Diagrams’, Springer, 2001.
- Nikolaus Gansterer, ‘Drawing A Hypothesis: Figures of Thought’, Springer, 2011.
- Neil Spiller, ‘Visionary Architecture: Blueprints of the Modern Imagination’, Thames and Hudson, 2008.
- Mo Zell, ‘The Architectural Drawing Course’, Thames and Hudson, 2017.
- Marc Treib, ‘Drawing/Thinking Confronting an Electronic Age’, Routledge, 2008.
- Mo Zell – The Architectural Design course, Understand the Principles and Master the Practices, Thames, and Hudson, 2008.

	Description of CO	PO1	PO2	PO3	PO4	PO5	PO6
CO1	An understanding of diagrams and models as tools for observing, recording, and reinterpreting spatial and conceptual realities.	2	3	3	2	2	2
CO2	An ability to understand important attributes of the built environment through diagrams/models	2	3	2	3	2	2
CO3	Ability to project thoughts and strategies through models, sketches, abstracts, and digital tools for conceptual ideation , communication and design thinking.	2	3	3	2	2	2

UC25H02	தமிழர்களும் தொழில்நுட்பமும்	L	T	P	C
		1	0	0	1

நெசவு மற்றும் பானைத் தொழில்நுட்பம்: சங்க காலத்தில் நெசவுத் தொழில், பானைத் தொழில்நுட்பம், கருப்பு சிவப்பு பாண்டங்கள், பாண்டங்களில் கீறல் குறியீடுகள்.

வடிவமைப்பு மற்றும் கட்டிடத் தொழில்நுட்பம்: சங்க காலத்தில் வடிவமைப்பு மற்றும் கட்டுமானங்கள் & சங்க காலத்தில் வீட்டுப் பொருட்களில் வடிவமைப்பு- சங்க காலத்தில் கட்டுமான பொருட்களும் நடுகல்லும், சிலப்பதிகாரத்தில் மேடை அமைப்பு பற்றிய விவரங்கள், மாமல்லபுரச் சிற்பங்களும், கோவில்களும், சோழர் காலத்துப் பெருங்கோயில்கள் மற்றும் பிற வழிபாட்டுத் தலங்கள், நாயக்கர் காலக் கோயில்கள், மாதிரி கட்டமைப்புகள் பற்றி அறிதல், மதுரை மீனாட்சி அம்மன் ஆலயம் மற்றும் திருமலை நாயக்கர் மஹால், செட்டிநாட்டு வீடுகள், பிரிட்டிஷ் காலத்தில் சென்னையில் இந்தோ-சாரோசெனிக் கட்டிடக் கலை.

உற்பத்தித் தொழில் நுட்பம்: கப்பல் கட்டும் கலை, உலோகவியல், இரும்புத் தொழிற்சாலை, இரும்பை உருக்குதல், எஃகு, வரலாற்றுச் சான்றுகளாக செம்பு மற்றும் தங்க நாணயங்கள், நாணயங்கள் அச்சடித்தல், மணி உருவாக்கும் தொழிற்சாலைகள், கல்மணிகள், கண்ணாடி மணிகள், சுடுமண் மணிகள், சங்கு மணிகள், எலும்புத்துண்டுகள், தொல்லியல் சான்றுகள், சிலப்பதிகாரத்தில் மணிகளின் வகைகள்.

வேளாண்மை மற்றும் நீர்ப்பாசனத் தொழில் நுட்பம்: அணை, ஏரி, குளங்கள், மதகு, சோழர்காலக் குமுழித் தூம்பின் முக்கியத்துவம், கால்நடை பராமரிப்பு, கால்நடைகளுக்காக வடிவமைக்கப்பட்ட கிணறுகள், வேளாண்மை மற்றும் வேளாண்மைச் சார்ந்த செயல்பாடுகள், கடல்சார் அறிவு, மீன்வளம், முத்து மற்றும் முத்துக்குளித்தல், பெருங்கடல் குறித்த பண்டைய அறிவு, அறிவுசார் சமூகம்.

அறிவியல் தமிழ் மற்றும் கணித்தமிழ்: அறிவியல் தமிழின் வளர்ச்சி, கணித்தமிழ் வளர்ச்சி, தமிழ் நூல்களை மின்பதிப்பு செய்தல், தமிழ் மென்பொருட்கள் உருவாக்கம், தமிழ் இணையக் கல்விக்கழகம் – தமிழ் மின் நூலகம், இணையத்தில் தமிழ் அகராதிகள், சொற்குவைத் திட்டம்.

References:

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2. கணினித் தமிழ் – முனைவர் இல. சுந்தரம். (விகடன் பிரசுரம்).
3. கீழடி – வைகை நதிக்கரையில் சங்ககால நகர நாகரிகம் (தொல்லியல் துறை வெளியீடு)
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5. Social Life of Tamils (Dr.K.K.Pillay) A joint publication of TNTB & ESC and RMRL – (in print)
6. Social Life of the Tamils – The Classical Period (Dr.S.Singaravelu) (Published by: International Institute of Tamil Studies.
7. Historical Heritage of the Tamils (Dr.S.V.Subatamanian, Dr.K.D. Thirunavukkarasu) (Published by: International Institute of Tamil Studies).
8. The Contributions of the Tamils to Indian Culture (Dr.M.Valarmathi) (Published by: International Institute of Tamil Studies.)
9. Keeladi – 'Sangam City C ivilization on the banks of river Vaigai' (Jointly Published by: Department ofArchaeology & Tamil Nadu Text Book and Educational Services Corporation, Tamil Nadu)
10. Studies in the History of India with Special Reference to Tamil Nadu (Dr.K.K.Pillay) (Publishedby: The Author)
11. Porunai Civilization (Jointly Published by: Department of Archaeology & Tamil Nadu Text Bookand Educational Services Corporation, Tamil Nadu)
12. Journey of Civilization Indus to Vaigai (R.Balakrishnan) (Published by: RMRL) – Reference Book.

UC25H02	Tamils and Technology	L	T	P	C
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Weaving and Ceramic Technology: Weaving Industry during Sangam Age, Ceramic technology, Black and Red Ware Potteries (BRW), Graffiti on Potteries.

Design and Construction Technology: Designing and Structural construction House & Designs in household materials during Sangam Age, Building materials and Hero stones of Sangam age, Details of Stage Constructions in Silappathikaram, Sculptures and Temples of Mamallapuram, Great Temples of Cholas and other worship places - Temples of Nayaka Period -Type study (Madurai Meenakshi Temple), Thirumalai Nayakar Mahal -Chetti Nadu Houses, Indo-Saracenic architecture at Madras during British Period.

Manufacturing Technology : Art of Ship Building - Metallurgical studies, Iron industry, Iron smelting, steel -Copper and gold- Coins as source of history - Minting of Coins, Beads making-industries Stonebeads, Glass beads, Terracotta beads -Shell beads/ bone beats, Archeological evidences - Gem stone types described in Silappathikaram.

Agriculture and Irrigation Technology: Dam, Tank, ponds, Sluice, Significance of Kumizhi Thoompuof Chola Period, Animal Husbandry - Wells designed for cattle use - Agriculture and Agro Processing -Knowledge of Sea, Fisheries, Pearl, Conche diving - Ancient Knowledge of Ocean -Knowledge Specific Society.

Scientific Tamil & Tamil Computing: Development of Scientific Tamil, Tamil computing, Digitalization of Tamil Books, Development of Tamil Software, Tamil Virtual Academy,Tamil Digital Library, Online Tamil Dictionaries, Sorkuvai Project.

References:

1. தமிழக வரலாறு – மக்களும் பண்பாடும் – கே.கே. பிள்ளை (வெளியீடு: தமிழ்நாடு பாடநூல் மற்றும் கல்வியியல் பணிகள் கழகம்).
2. கணினித் தமிழ் – முனைவர் இல. சுந்தரம். (விகடன் பிரசுரம்).
3. கீழடி – வைகை நதிக்கரையில் சங்ககால நகர நாகரிகம் (தொல்லியல் துறை வெளியீடு)
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10. Studies in the History of India with Special Reference to Tamil Nadu (Dr.K.K.Pillay) (Publishedby: The Author)
11. Porunai Civilization (Jointly Published by: Department of Archaeology & Tamil Nadu Text Bookand Educational Services Corporation, Tamil Nadu)
12. Journey of Civilization Indus to Vaigai (R.Balakrishnan) (Published by: RMRL) – Reference Book.

AR25206	Basic Space Design Studio	L	T	P/S	C
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Course Objectives:

- To enable the understanding of the qualitative and quantitative aspects of basic space design for human use.
- To facilitate exploration of ways to address timeless aspects involved in the design of human built habitat in a micro scale.
- To enable a sensitivity towards the cultural, particular and temporal aspects of architecture.

Humans create and shape spaces/ forms for use. Use includes all aspects of human life- starting from containing the human as a unit (anthropometrics), the needs for carrying out of basic activities, spatial requirements for them, relationship between spaces, requirements of shelter, privacy, social and cultural factors, environmental response, psychological well being, light and air, meaning and symbolism, structure and economy, and so on. Architecture as a discipline brings all these needs together into a coherent totality through the act of conscious design. Conscious design involves the study/analysis of the existing and extrapolating towards the future through speculation.

In the Basic Space Design Studio, the focus would be on simple architectural design projects that would enable the learning of the fundamentals of space with respect to all the above. The projects would be based on small, everyday situations involving simple circulation, materials and use. It could be a typology of private or public nature. Some suggestive projects are bedroom, bathroom, kitchen, shop, pavilion, creche, snack bar, residence, petrol bunk, fire station, bus stop. There would be a maximum of three projects.

The techniques used for study and presentation can align themselves towards the above, such as cognitive maps, sketches, manual drawings, physical models with simple materials.

Total: 135 Periods

Weightage: Continuous Assessment: 60%, End Semester Examinations: 40%.

Assessment Methodology: Three Assessments with equal weightage.

Each assessment shall incorporate continuous marking of the work and performance during the particular assessment period. Each assessment weightage - 33.33%.

References:

1. Hareguchi, H. (1988). A comparative analysis of 20th century houses. Academy Editions.
2. Miller, S. F. (1995). Design process: A primer for architectural and interior design. Van Nostrand Reinhold.
3. Neufert, E. (2012). Architects' data. Wiley.
4. Plowright, P. (2014). Revealing architectural design: Methods, frameworks and tools. Routledge.

E-Resources

1. https://www.degruyterbrill.com/document/doi/10.1515/9783034608923/html - Fundamental Concepts of Architecture by Alban Janson & Florian Tigger, 2014

2. https://doi.org/10.4324/9780080490489 - Architecture Design Notebook by A Peter Fawrett, 2003
3. https://www.bloomsbury.com/in/basics-design-08-design-thinking-9782940439386/ - Design Thinking, the Art or Practice of Using Your Mind to Consider Design by Gabin Ambrose and Paul Harris.

Required Reading

- Kent C. Bloomer, Charles W. Moore, 'Body, Memory and Architecture', Yale, 1977.
- Gaston Bachelard, 'Poetics of Space', Beacon Press, 1994.
- JuhaniPallasmaa, 'The Eyes of the Skin - Architecture and the Senses', John Wiley,2012.
- Joseph De Chiara, Michael J Crosbie, 'Time Saver Standards for Building Types', McGraw Hill Professional 2001.
- Julius Panero, Martin Zelnik, 'Human Dimension and Interior Space,' Whitney Library of Design, 1975.
- Joseph De Chiara, Julius Panero, Martin Zelnik, Time Saver Standards for Interior Design and Space Planning, McGraw Hill 2017.

	Description of CO	PO1	PO2	PO3	PO4	PO5	PO6	PO8	PO10
CO1	Ability to design simple spaces for human use addressing spatial, social, cultural and temporal human needs.	3	2	2	2	3	2	2	1
CO2	Ability to consider the particular context in the process of designing.	3	2	2	2	3	2	2	1