SIDDAGANGA INSTITUTE OF TECHNOLOGY, TUMAKURU
School of Architecture

Vision

To establish as a pioneer institute in planning and design of built environment through excellence in teaching, research, consultancy and design innovation.

Mission

- To create conducive academic ambience that nurtures aesthetic attitude, technical confidence, and critical thinking among students.

- To develop research and design innovation skills in students to address various societal needs.

- To inculcate professional ethics based on values and entrepreneurial skills among students.

Program Educational Objectives (PEO's)

Graduates from school of Architecture will achieve the following Program Educational Objectives within few years of graduation

- Graduates will showcase capabilities for competent practice of Architecture and enhance career by pursuing higher education
- Graduates will exhibit strong design skills to solve complex real-time problems through high technical skills and strong communication along with the knowledge of various domains of architecture including landscape, architectural conservation, interior design, energy conscious architecture, urban design and planning, construction project management, alternative building techniques, building information modeling and digital architecture
- Graduates will demonstrate professionalism, ethical conduct, societal concerns, effective team work and adapt to dynamic global and local needs engaging in lifelong learning

Program Specific Outcomes (PSO's)

PSO1: Develop critical thinking to analyze, evaluate, synthesize and generate appropriate design solutions for varying scales and levels of complexity.

PSO2: Explore possibilities and application of various building materials, construction techniques, building systems and services.

PSO3: Draw inspiration from divergent architectural theories and history along with varied indigenous and vernacular settings.

PSO4: Demonstrate effective communication skills to present architectural works and comprehend professional practice.

Programme Outcomes (PO's)

1. **Architectural Knowledge:** Apply the knowledge of design principles, building systems & technologies, humanities and environmental aspects in design, planning and construction.
2. **Problem Analysis**: Identify, formulate, review research literature and analyse various scales of architectural projects to arrive at tangible conclusions.
3. **Design/ Development of solutions:** Design solutions to integrate interdisciplinary approach for contextual issues pertaining to built-environment.
4. **Conduct investigations of complex problems:** Use research-based knowledge and methodologies including context analysis, case studies, project requirements and synthesis of the information to provide context sensitive solutions.
5. **Modern tool usage:** Identify, select and apply the appropriate tools, techniques and resources to predict, design and simulate qualitative and quantitative outcomes with an understanding of its limitations.
6. **The Architect and Society:** Apply reasoning to address socio-cultural, legal and safety aspects relevant to the professional practice and social responsibility.
7. **Environment and Sustainability:** Understand the importance of the architectural design solutions in environmental and social contexts to demonstrate the need for sustainable built environment.
8. **Ethics:** Apply ethical principles and commit to professional ethics, responsibilities and norms of Architectural profession.
9. **Individual and teamwork:** Function effectively as an individual as well as a team member or a leader in diverse interdisciplinary settings.
10. **Communication:** Comprehend and effectively communicate issues related to architecture, community and society at large through documentation, graphical and verbal presentations.
11. **Project management and Finance:** Demonstrate knowledge and understanding of professional and management principles to apply to individual work, as a team member and as a leader, to manage projects in multidisciplinary environments.
12. **Life-Long learning:** Recognize the need for, have the preparation and ability to engage in independent and lifelong learning in the changing domain of societal and technological advancement and adopt it in individual's professional practice.

SYLLABUS

FOR

I and II semester B.ARCH

2026 -2027

School of Architecture

Siddaganga Institute of Technology

(An Autonomous Institution affiliated to V.T.U., Belagavi, Approved by AICTE, New Delhi Accredited by NAAC with 'A++' Grade and ISO 9001:2015 Certified)

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SIDDAGANGA INSTITUTE OF TECHNOLOGY, TUMAKURU

(An Autonomous Institution affiliated to VTU, Belagavi, Approved by AICTE, New Delhi, Accredited by NAAC with 'A++' Grade & ISO 9001:2015 Certified)

B.ARCHITECTURE

SCHEME OF TEACHING AND EXAMINATION (260 Credits Scheme)

(Applicable to the students admitted during 2026-27)

I Semester

Sl. No.	Course Category and Code		Course Title	TD	Teaching and Learning							Examination				Credits
					Lecture	Tutorial	Studio	Practical	TW, SE & SL	# TH/S	# H/W	Mode of Exam	CIE	SEE	Total Marks	
					L	T	S	P								
1.	IPCC	ATS101	ARCHITECTURAL DESIGN STUDIO I		28		98		144	270	9	Viva	50	50	100	**9**
2.	PCC	ATS102	MATERIALS AND CONSTRUCTION I		28		42		80	150	5	Viva	50	50	100	**5**
3.	PCCL	ATS103	DIGITAL TOOLS I		14			28	48	90	3	Term work	50	50	100	**3**
4.	SEC	ATS104	GRAPHICS & VISUAL REPRESENTATION		14		42		64	120	4	Term work	50	50	100	**4**
5.	PCC	ATT101	HISTORY OF ARCHITECTURE I		42				48	90	3	Theory	50	50	100	**3**
6.	NCMC	ATCC03 /ATCC04	BALAKE KANNADA / SAMSKRUTIKA KANNADA	Any Dept.	14				-	-	1	-	100	0	100	**PP**
7.	NCMC	MC01	TRAFFIC AWARENESS & SAFETY	Any Dept.	14				-	-	1	-	100	0	100	**PP**
			Total						**384**	**720**	**26**		**450**	**250**	**700**	**24**

Note: IPCC: Integrated Professional Core Course, **PCC**: Professional Core Course, **PCCL**: Professional Core Course Laboratory,
SEC: Skill Enhancement Course, **BSAC:** Building Science & Applied Engineering Course, **HSMC:** Humanities Science and Management Course,
PEC: Professional Elective Course, **PAEC:** Professional Ability Enhancement Course, **NCMC:** Non Credit Mandatory Course

TD – Teaching Department, **L** –Lecture, **T** - Tutorial, **S –** Studio, **P**-Practical, **TW** – Term Work, **SE** - Seminar, **SL –** Self Learning, **TH/S –** Teaching Hours per Semester,
H/W – Hours per Week, **CIE** - Continuous Internal Evaluation, **SEE** - Semester End Examination

SIDDAGANGA INSTITUTE OF TECHNOLOGY, TUMAKURU

(An Autonomous Institution affiliated to VTU, Belagavi, Approved by AICTE, New Delhi, Accredited by NAAC with 'A++' Grade & ISO 9001:2015 Certified)

B.ARCHITECTURE

SCHEME OF TEACHING AND EXAMINATION (260 Credits Scheme)

(Applicable to the students admitted during 2026-27)

II Semester

Sl. No.	Course Category and Code		Course Title	TD	Teaching and Learning							Examination				Credits
					Lecture	Tutorial	Studio	Practical	TW, SE & SL	# TH/S	# H/W	Mode of Exam	CIE	SEE	Total Marks	
					L	T	S	P								
1.	IPCC	ATS201	Architectural Design Studio II		28		98		144	270	9	Viva	50	50	100	**9**
2.	PCC	ATS202	Materials & Construction II		28		42		80	150	5	Viva	50	50	100	**5**
3.	PCCL	ATS203	Digital Tools II		14			28	48	90	3	Term work	50	50	100	**3**
4.	BSAC	ATS204	Site Survey: Theory and Tools	Civil	14			28	48	90	3	Viva	50	50	100	**3**
5.	PCC	ATT201	History of Architecture II		42				48	90	3	Theory	50	50	100	**3**
6.	BSAC	ATT202	Structures: Forces & Form	Civil	42				48	90	3	Theory	50	50	100	**3**
7.	NCMC	ATMC04	Communication & Writing in English	Any Dept.	14				-	-	1	-	100	0	100	**PP**
8.	NCMC	ATMC05	Indian Constitution	Any Dept.	14				-	-	1	-	100	0	100	**PP**
			Total						**416**	**780**	**28**		**500**	**300**	**800**	**26**

Note: IPCC: Integrated Professional Core Course, **PCC**: Professional Core Course, **PCCL**: Professional Core Course Laboratory,
SEC: Skill Enhancement Course, **BSAC:** Building Science & Applied Engineering Course, **HSMC:** Humanities Science and Management Course,
PEC: Professional Elective Course, **PAEC:** Professional Ability Enhancement Course, **NCMC:** Non Credit Mandatory Course

TD – Teaching Department, **L** –Lecture, **T** - Tutorial, **S –** Studio, **P**-Practical, **TW** – Term Work, **SE** - Seminar, **SL –** Self Learning, **TH/S –** Teaching Hours per Semester,
H/W – Hours per Week, **CIE** - Continuous Internal Evaluation, **SEE** - Semester End Examination

SIDDAGANGA INSTITUTE OF TECHNOLOGY
Tumakuru-572103

(An Autonomous Constituent Institution of Visvesvaraya Technological University, Belagavi)

SCHOOL OF ARCHITECTURE

DETAILED SYLLABUS FOR
FIRST SEMESTER
B. ARCHITECTURE

ARCHITECTURAL DESIGN STUDIO I

Contact Hours/ Week:	09	Credits:	9
Total Lecture Hours:	28	CIE Marks:	50
Total Studio Hours:	98	SEE Marks:	50
Course Code:	ATS101	Exam Mode:	Viva

Course objectives: This course will enable students to:	
1.	Acquaint with the fundamentals of visual thinking, design thinking, processes of ideation and processes of making.
2.	Cultivate a sense of design literacy through incremental exercises that balance intuitive approaches towards exploration with structured methods and iterative processes.
3.	Encourage curiosity and experimentation through inquiry that goes beyond problem-solving.

UNIT I
The Interrelationship between Art & Design: Understanding the basics of composition, the relationship between context, narrative and medium through studying selected works of art from various art movements or art cultures across time and geographies. The art studied will primarily be paintings. Introduction to colour theory and its applications in graphic design, space design and public installations.
8 Hours

UNIT II
Introduction to Principles of Design & Organization: Point, line, plane as the basic units of design-making. Studying patterns and textures in nature, art forms and buildings to understand the role of repetition, variation and disruption. Basic principles of design (including but not limited to balance, rhythm, contrast, restraint, symmetry, accentuation, etc.) and organization (linear, axial, radial, clustered, etc.) to be understood through studies and exercises.
8 Hours

UNIT III
Abstraction, Narrative-building & Form-making: Understanding the role of narratives in design, and how these narratives can be translated into 2-dimensional and 3-Dimensional explorations. Model-making as a tool for iterative design explorations and form-making through additive and subtractive methods. Working with the possibilities and limitations of various model-making materials.
8 Hours

UNIT IV
Space & Perception of Space through the Body: Discussing and exploring how space is experienced by our bodies. Size, Scale and the distinction between them. Understanding how the body's range of motion and functional requirements influence and determine the relative dimensions of designed space, while introducing the notion of degrees of comfort. Introduction to standards for designing spaces (Neufert's, Timesaver Standards, etc.
8 Hours

UNIT V
Interpreting User Needs, Constraints and Form-making to design Functional Space: Designing a single-user space / small multi-user space for up to 5 users (the typologies explored could include but not be limited to: a home for one person, office/study/studio space for 2-3 people, vending kiosk/small eatery/public pavilion/transit point etc.). The process of design must integrate function-based requirements, user studies and form exploration based on material systems.
8 Hours

NOTE
a. Exercises related to each aspect have to be carried out distinctively. b. Relevant case studies and literature studies can be given by the studio teachers and a repo must be compiled by the students. c. One or more design exercises can be carried out as group work to explore possibilities of students working as teams. d. Vertical studio involving other semesters can be encouraged to carry out one full or part project. e. The portfolio covering the above topics shall be presented viva.

REFERENCE BOOKS		
1	Bruno Munari	Design as Art: Bruno Munari (Penguin Modern Classics), Penguin UK, Publishers, 2008, ISBN-10 – 0141035811, ISBN-13 - 978-0141035819
2	Berger, John	Ways of Seeing. 2008 edition. Penguin Classics. ISBN-10: 014103579X; ISBN-13: 9780141035796
3	Albers, Josef	Interaction of Color. 1963. 50th Anniversary Edition, Yale University Press, 2020. ISBN-10: 0300247081; ISBN-13: 9780300247084
4	Bingham, Neil	100 Years of Architectural Drawing: 1900–2000. 1st ed. Laurence King Publishing, 2013. ISBN-10: 1780672721; ISBN-13: 9781780672724
5	Chitnis, Christine	Patterns of India: A Journey Through Colors, Textiles, and the Vibrancy of Rajasthan. 1st ed. Clarkson Potter/Ten Speed, 2020. ISBN-10: 0525577092; ISBN-13: 9780525577096
6	Wilson, Matthew	Art Unpacked: 50 Works of Art: Uncovered, Explored, Explained. 1st ed. Thames & Hudson, 2023. ISBN-10: 0500025673; ISBN-13: 9780500025673
7	Francis D. K. Ching	Architecture Form, Space, & Order; Wiley, 2014 ISBN : 9781118745083, 1118745086
8	Unwin, Simon	Analysing Architecture: The Universal Language of Place-Making. 5th ed. Routledge, 2020. ISBN-10: 0367524430; ISBN-13: 9780367524432
9	Jenkins, Eric J	Drawn to Design: Analyzing Architecture Through Freehand Drawing. Expanded and Updated ed. Birkhäuser, 2022. ISBN-10: 3035624658; ISBN-13: 9783035624656
10	Saito, Nao	Travels Through South Indian Kitchens. Illustrated ed. Tara Books, 2018. ISBN-10: 9383145595; ISBN-13: 9789383145591

Course Outcomes: Upon completion of this course the student will be able to:	
CO1	**Describe** basic sketching techniques and demonstrate familiarity with different mediums.
CO2	**Analyze** design principles through comparative studies and organize complex ideas into simplified diagrams.
CO3	**Interpret** textual and visual information, analyze material possibilities, and construct exploratory models based on given constraints.
CO4	**Apply** scaled drawing techniques and evaluate existing spatial standards in relation to human perception and bodily experience.
CO5	**Create** functional spatial solutions by synthesizing user requirements, constraints, material systems, and form-making strategies.

Course Articulation Matrix

		POs												**PSOs**			
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**
COs	**CO1**					3							3		3		
	CO2					3							3		3		
	CO3			3		3					3		3		3		
	CO4					3					3		3		3		
	CO5					3							3		3		

MATERIALS AND CONSTRUCTION – I

Contact Hours/ Week:	05	Credits:	5
Total Lecture Hours:	28	CIE Marks:	50
Total Studio Hours:	42	SEE Marks:	50
Course Code:	ATS102	Exam Mode:	Viva

Course objectives: This course will enable students to:	
1.	Understand stereotomic construction systems and the principles of mass, compression, and architectural expression.
2.	Explore masonry materials, construction assemblies, and traditional earth-based building systems and their influence on building form and envelope.
3.	Evaluate structural behaviour, climatic response, sustainability, and architectural expression of stereotomic construction systems.

UNIT I
Materials introduction: History and evolution of building materials and construction methods. Study the properties and behaviors of materials such as brick, stone, sand, lime, cement, mortar, PCC and concrete blocks. Awareness of Indian codes like IS 1077 - Common Burnt Clay Building Bricks, IS 1905 - Code of Practice for Structural Use of Unreinforced Masonry.
8 Hours

UNIT II
Introduction to the primary building components: Foundations, walls, floors, windows, doors, piers, arches and roofs. Understanding the types of mortars and their applications - lime-based, mud and cement mortar. Understanding the foundation system through the lens of load transfer, bearing capacity, settlement and selection criteria in brick and stone. Necessity of a damp-proof course and plinth.
8 Hours

UNIT III
Wall Assembly and Openings: Introduction to basic structural systems - Load Bearing, Framed and Composite Systems and their load path. Comparison of load-bearing wall systems including rat trap bond, cavity walls and multi-leaf (composite) walls through the lenses of structural logic, construction sequence and thermal performance. Spanning techniques for fenestrations - corbelling, arches, lintels and lattice screen windows (jaali). Understanding and application of Finishes & Wall Protection Measures - plastering, pointing and washes, using lime, mud & cement.
8 Hours

UNIT IV
Traditional Roof / Floor System and Staircases: Construction of Jack Arches, Madras Terrace, Rohtak Dome, Stone Slab Terrace, Lime Concrete, and Hollow Block Slabs. Floor finishes and Weatherproofing - Lime Concrete, Brick Bat Coba, stone, brick and oxides. Types of Staircases - Masonry Staircases and support systems - Arches, Vaults
8 Hours

UNIT V
Composite Masonry: Overview of Composite masonry assemblies - Kath Kuni, Geo-polymer Masonry, Interlocking Block Masonry, Earth Bags, 3D-printed Earth walls, Poured Earth, Rammed Earth, Precast Poured Earth, Reinforced Masonry, Gabions. **Sustainability:** Parameters of sustainability for Design Decisions - Material Origin, Embodied Energy, Thermal Performance, Density, Durability, and Life cycle thinking.
8 Hours

NOTE

a. Integrate with Architectural Design studio.
b. Hands on session on wall masonry with different materials in construction yard.
c. Site visits to manufacturing units of brick, cement block etc., stone quarries, and construction sites to be arranged by studio teachers and report to be compiled by students.
d. Market survey of materials should be carried out by students.

REFERENCE BOOKS

1	Ching, Francis D. K.	Building Construction Illustrated. 7th ed. Wiley, 2025. ISBN-10: 1394279272; ISBN-13: 9781394279272
2	Ching, Francis D. K., Barry S. Onouye, and Douglas Zuberbuhler.	Building Structures Illustrated: Patterns, Systems, and Design. 2nd ed. John Wiley & Sons, 2013. ISBN-10: 1118458354; ISBN-13: 9781118458358
3	Mehta, Madan L., Walter Scarborough, and Diane Armpriest	Building Construction: Principles, Materials, and Systems. 3rd ed. Pearson, 2017. ISBN-10: 0134454170; ISBN-13: 9780134454177
4	Frampton, Kenneth.	Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture. Edited by John Cava. Illustrated reprint ed. The MIT Press, 2001. ISBN-10: 0262561492; ISBN-13: 9780262561495
5	Höweler, Eric	Design for Construction: Tectonic Imagination in Contemporary Architecture. 1st ed. Routledge, 2025. ISBN-10: 1032562315; ISBN-13: 9781032562315
6	Kapfinger, Otto, and Marko Sauer, eds	Martin Rauch Refined Earth: Construction & Design of Rammed Earth. 3rd rev. and expanded ed. DETAIL, 2022. ISBN-10: 3955535738; ISBN-13: 9783955535735
7	Minke, Gernot	Building with Earth: Design and Technology of a Sustainable Architecture. 5th rev. ed. Birkhäuser, 2025. ISBN-10: 3035627665; ISBN-13: 9783035627664
8	Conway, Ed.	Material World: A Substantial Story of Our Past and Future. Paperback ed. London: WH Allen, 2024. ISBN-10: 075355917X; ISBN-13: 9780753559178
9	Gambhir, M. L., and Neha Jamwal	Building Materials: Products, Properties and Systems. 1st ed. New Delhi: McGraw Hill Education (India), 2013. ISBN-10: 007107760X; ISBN-13: 9780071077606
10	Central Building Research Institute (CBRI). Publications on Masonry, Earth Construction and Low-Cost Technologies.	

Course Outcomes:
Upon completion of this course the student will be able to:

CO1	**Explain** the relevance of stereotomic construction and its role in the historical evolution of masonry and earth-based construction.
CO2	**Identify** and explain the physical, structural, and thermal properties of masonry materials such as brick, stone, CSEB, clay, and rammed earth, and explain appropriate material-selection criteria for given construction conditions.
CO3	**Apply** principles of load paths and thrust behaviour to distinguish spanning and vertical circulation methods and analyze the structural suitability of different systems for given spans or loading conditions.
CO4	**Apply** and analyze material-selection criteria based on embodied energy, material life cycle, density, and durability to support informed architectural design decisions.
CO5	**Analyze** construction requirements and evaluate design alternatives to develop a complete and detailed masonry wall section integrating construction sequence, finishes, and sustainability considerations.

Course Articulation Matrix

		POs												**PSOs**			
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**
COs	**CO1**					3							3		3		
	CO2					3							3		3		
	CO3			3		3					3		3		3		
	CO4					3					3		3		3		
	CO5					3							3		3		

DIGITAL TOOLS - I

Contact Hours/ Week:	03	Credits:	3
Total Lecture Hours:	14	CIE Marks:	50
Total Studio Hours:	28	SEE Marks:	50
Course Code:	ATS103	Exam Mode:	Term work

Course objectives:
This course will enable students to:

1.	**Understand** the history, evolution, and fundamental concepts of Artificial Intelligence and its relevance to architecture and design
2.	**Explore** the applications of AI in architectural ideation, visualization, design evaluation, and digital workflows.
3.	**Develop** a conceptual understanding of generative AI, prompt writing, and responsible AI practices.
4.	**Develop** foundational skills in AutoCAD for creating accurate two-dimensional architectural drawings and digital documentation.

UNIT I

History and Fundamentals of Artificial Intelligence: History, evolution, and fundamental concepts of Artificial Intelligence (AI); transition from rule-based systems to modern Generative AI; AI in creative disciplines and architectural design workflows. Deterministic generation based on explicit rules and probabilistic generation based on learned patterns and data. Traditional Indian generative knowledge systems: Mayamata and Manasara proportional systems (Talamana), Śulba Sūtras, Hasta, Padmanabha, and Kolam grammars as examples of generative design thinking.

8 Hours

UNIT II

AI in Architectural Design and Creative Practice: AI applications in design ideation, concept development, visualization, image generation, performance analysis, design evaluation, documentation, and workflow automation. Introduction to conversational AI assistants, multimodal AI, text-to-image, image-to-image, and emerging AI-powered video generation tools. AI as a collaborative design partner; prompt writing as a design brief; iterative exploration, curation, critical evaluation, and refinement of AI-generated outputs.

8 Hours

UNIT III

Understanding Generative and Responsible AI: Conceptual working of Generative AI without programming; datasets, learned patterns, generative models, and the AI "black box." Generative image, video, and motion generation; relationship between computational design, rule-based generation, and Generative AI. Data quality, training datasets, cultural, stylistic, gender, and geographic bias. Ethical and responsible AI, limitations, authorship, originality, copyright, hallucinations, and validation of AI-generated outputs. Rule-based generative design, transformation rules, spatial organization, computational form generation, and critical evaluation of AI-assisted design.

8 Hours

UNIT IV

Introduction to AutoCAD for Architectural Drafting: AutoCAD interface, workspace, drawing

setup, and coordinate systems. Basic drawing and modification tools. Layers, object properties, object snaps, line weights, and drawing accuracy. Dimensioning, annotation, hatching, and text. Preparation of simple plans, elevations, and sections.
9 Hours

UNIT V
Advanced drawing and modification tools; drawing organization, layer management, blocks, and reusable architectural components. Preparation of plans, elevations, and sections; layouts, viewports, sheet sizes, scales, plotting, and printable drawings. Digital documentation and development of a small architectural project.
9 Hours

REFERENCE BOOKS		
1	Melanie Mitchell	Artificial Intelligence: A Guide for Thinking Humans, Farrar, Straus and Giroux, 1st Edition, 2019, ISBN: 978-0374257835
2	George Stiny	Shape: Talking about Seeing and Doing, The MIT Press, 1st Edition, 2006, ISBN: 978-0262195317
3	Kim Plofker	Mathematics in India, Princeton University Press, Illustrated Edition, 2009, ISBN: 978-0691120676
4	George Omura and Brian C. Benton	Mastering AutoCAD and AutoCAD LT, Wiley, 2021, ISBN: 978-1-119-71535-1
5	Randy H. Shih and Luke Jumper	AutoCAD 2026 Tutorial: First Level 2D Fundamentals, SDC Publications, 2026, ISBN: 978-1630577568

Course Outcomes: Upon completion of this course the student will be able to:	
CO1	**Interpret** the evolution and fundamental concepts of AI and distinguish between deterministic and probabilistic generative systems.
CO2	**Explore** AI-assisted tools for architectural ideation, visualization, design evaluation, and creative exploration.
CO3	**Analyze** Generative AI outputs considering underlying concepts, limitations, bias, ethical implications, and suitability for architectural design.
CO4	**Demonstrate** fundamental AutoCAD skills for accurate two-dimensional architectural drafting.
CO5	**Develop** architectural drawings and digital documentation using AutoCAD.

Course Articulation Matrix

		POs												**PSOs**			
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**
COs	**CO1**					3							3		3		
	CO2					3							3		3		
	CO3			3		3					3		3		3		
	CO4					3					3		3		3		
	CO5					3							3		3		

GRAPHICS AND VISUAL REPRESENTATION

Contact Hours/ Week:	04	Credits:	4
Total Lecture Hours:	14	CIE Marks:	50
Total Studio Hours:	42	SEE Marks:	50
Course Code:	ATS104	Exam Mode:	Term work

Course objectives: This course will enable students to:	
1.	Develop proficiency in the principles and techniques of manual architectural drafting.
2.	Apply geometric construction methods and graphical representation techniques to communicate architectural ideas.
3.	Demonstrate accuracy and clarity in architectural drawings using professional drafting conventions.

UNIT I
Foundations of Manual Drafting: Introduction to Drawing and Drafting Instruments and Conventions, Line Weights and Hierarchy, Sheet Composition / Sheet Template, Fonts and lettering
8 Hours

UNIT II
Geometric construction: Understanding the basics of Point, Line and Plane. Basics of solid geometry and surface Development: Cube, Cuboid, Pyramid, Prism, Cylinder etc.
8 Hours

UNIT III
Orthographic Representations: Projection Principles: Introduction to Orthographic Projections such as Plans, Sections and Elevations in Architectural representations. Introduction to Scales and Dimensions.
8 Hours

UNIT IV
Three dimensional Representation: Overview and Principles of Isometric drawings**,** Axonometric drawings and Exploded Isometric or Axonometric Drawings
8 Hours

UNIT V
Perspective and Presentation: Overview and Principles of One-point perspective, Two-point perspective, Overview of Principles of shade and shadow (basics of Sciography), Graphical presentation: Introduction to the basics of rendering.
8 Hours

REFERENCE BOOKS		
1	Paolo Belardi	Why Architects Still Draw. 2014. Paperback ed. ISBN-10: 0262525488; ISBN-13: 9780262525480
2	Neil Bingham	100 Years of Architectural Drawing: 1900–2000. 2013. 1st ed. ISBN-10: 1780672721; ISBN-13: 9781780672724

3	Francis D. K. Ching	Architectural Graphics. 2023. 7th ed. ISBN-10: 1394206260; ISBN-13: 9781394206261
4	Francis D. K. Ching & Steven P. Juroszek	Design Drawing. 2019. 3rd ed. ISBN-10: 1119508592; ISBN-13: 9781119508595
5	Edward Hutchison	Drawing for Landscape Architecture: Sketch to Screen to Site. 2019. Expanded ed. ISBN-10: 0500294887; ISBN-13: 9780500294888
6	Eric J. Jenkins	Drawn to Design: Analyzing Architecture Through Freehand Drawing. 2022. Expanded and Updated ed. ISBN-10: 3035624658; ISBN-13: 9783035624656
7	Paul Lewis, Marc Tsurumaki & David J. Lewis	Manual of Section. 2016. 1st ed. ISBN-10: 1616892552; ISBN-13: 9781616892555
8	Rendow Yee	Architectural Drawing: A Visual Compendium of Types and Methods. 2012. 4th ed. ISBN-10: 1118012879; ISBN-13: 9781118012871
9	Mo Zell	The Architectural Drawing Course: Understand the Principles and Master the Practices. 2017. Revised ed. ISBN-10: 0500293457; ISBN-13: 9780500293454

Course Outcomes: Upon completion of this course the student will be able to:	
CO1	**Apply** the principles and conventions of manual architectural drafting using appropriate drawing instruments, line hierarchy, lettering and scales.
CO2	**Construct** and represent geometrical forms and architectural elements with accuracy using manual drafting techniques.
CO3	**Represent** simple architectural forms through orthographic, isometric, axonometric and perspective drawings.
CO4	**Demonstrate** visual communication through manual drafting supported by freehand sketching and graphical presentation.
CO5	**Compile** a portfolio of manually drafted drawings that demonstrates precision, clarity and graphical quality in architectural representation.

Course Articulation Matrix

		POs												**PSOs**			
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**
COs	**CO1**					3							3		3		
	CO2					3							3		3		
	CO3			3		3					3		3		3		
	CO4					3					3		3		3		
	CO5					3							3		3		

HISTORY OF ARCHITECTURE-I

Contact Hours/ Week:	03	Credits:	3
Total Lecture Hours:	42	CIE Marks:	50
Total Studio Hours:	-	SEE Marks:	50
Course Code:	ATT101	Exam Mode:	Theory

Course objectives: This course will enable students to:	
1.	Get introduced to pragmatic early shelter forms & burial traditions of the Prehistoric era.
2.	Identify the socio-economic, culture, environment, demographic, political, regional influences on the evolution of ancient river valley civilization.
3.	Interpret architectural character, construction methods, materials and socio-religious character of Eastern Civilizations.
4.	Comprehend the theoretical and philosophies of Pre-classical architecture and Desert and Mountainous Cultures.
5.	Understand the evolution of architectural form with reference to technology, style and character during pre-classical and buddhist rise era.

UNIT I
Introduction to Pre-Historic Civilization (early cultures): Introduction to Architectural history. Primitive man - shelters, settlements, ritual centres (religious and burial systems) e.g.: Oval hut, Nice; settlement at Catal huyuk; Megalithic architecture (Dolmen tomb, gallery grave, passage grave); Henge Monuments, Stonehenge.
8 Hours

UNIT II
Introduction to architecture and planning of river valley civilizations of ancient Indus, Egypt, Mesopotamia. **Indus Valley Civilization (Indus and Ghaggar Hakra):** Forces shaping settlements and habitats, E.g.: Mehrgarh, Layout of Mohenjo-Daro, dwellings and monumental architecture (House plan, Community well, Great Bath, Granary). **Mesopotamia (Tigris and Euphrates):** Forces shaping settlements and habitats E.g.: Ziggurats at Warka, Ur and Tchoga Zanbil, Palace of Sargon.
9 Hours

UNIT III
Egyptian Civilization (Nile): Forces shaping settlements and habitats (funerary and sacred spaces), e.g.: Mastabas, Pyramid complex, Temple of Khons, Karnak.. **Introduction to Eastern Civilization:** Chinese Architecture-Forbidden city in Beijing, Mausoulea, Buddhist temples. Japanese Architecture-Imperial palace, Kyoto. Shinto shrines.
8 Hours

UNIT IV
Introduction to Pre-Classical Civilization: Mycenaean, Etruscan, Persian (Achaemenid) E.g.: Lion Gate and Treasury of Atreus, Mycenae; Palace of Tiryns (Megaron), Etruscan Temples (Juno Sospita, Lanuvium), Tomb of Cyrus, Pasargadae, Palace of Persepolis. **Introduction to Desert and Mountainous Cultures:** Forces shaping settlements and habitats (environmental and cultural influences) e.g.: Include first civilization of America, Andes, Mayans, early societies/cultures in the Sahara, Thar, and North America.
8 Hours

UNIT V
Introduction to Pre-Classical Architecture (Indian sub-continent): Aryan and early Mauryan E.g.: Vedic village, typologies in Vedic Town and Vedic house. Study of civic architecture, Domestic architecture, like palaces, tombs, temples and houses. e.g.: Palace at Pataliputra. **Rise and development of Buddhist phase:** Study of the early Hinayana and Mahayana phases. Types of structures and elements developed Eg: Stupas, Viharas, Chaityas, and Rock cut examples. Smaller elements like Stambas, railings, ornamental paintings etc.
9 Hours

NOTE
a. Assignments to include study of concepts relating to cultural and religious beliefs, structure, climatic interfaces and integration of all these in the resultant forms.
b. Models, analytical studies individually or in groups.

REFERENCE BOOKS		
1	Francis D. K. Ching, Mark M. Jarzombek, Vikramaditya Prakash	A Global History of Architecture, 3rd Edition, Wiley, 2017, ISBN-10: 9781118981337 ISBN-13 : 978-1118981337
2	Christopher Tadgell	The History of Architecture in India, From the Dawn of Civilization to the End of the Raj, Architecture Design and Technology Press, 1990, ISBN : 9781854543509, 1854543504
3	Banister Fletcher	A History of Architecture on the Comparative Method for Students, Craftsmen & Amateur;B.T. Batsford, Limited, 1901, ISBN: 9781343929623, 1343929628
4	Dora P. Crouch	History of Architecture - Stonehenge to Skyscrapers, McGraw-Hill, 1985, ISBN: 9780070145313, 0070145318
5	Talbot Hamlin	Architecture Through the Ages, Putnam, 1953, ISBN: 9780399300011, 0399300015
6	Leland M. Roth	Understanding Architecture - Its Elements, History and Meaning, Herbert Press, 1994, ISBN: 9781871569612, 1871569613
7	Cyril M. Harris	Illustrated Dictionary of Historic Architecture, Dover Publications, 1983, ISBN: 9780486244440, 048624444X
8	David Watkin	A history of Western architecture, Laurence King Publishing, 2005, ISBN: 9781856694599, 1856694593
9	Henri Stierlin	Persian Art & Architecture, Thames & Hudson, 2012, ISBN: 9780500516423, 0500516421

10	Percy Brown	Indian Architecture (Buddhist And Hindu Period), 2nd edition, Read Books , 2010, ISBN-10: 1446510212, ISBN-13: 978-1446510216

Course Outcomes: Upon completion of this course the student will be able to:	
CO1	**Explain** the architectural characteristics of pre-historic period
CO2	**Differentiate** the architecture and planning principles of various river valley civilizations.
CO3	**Identify** the vernacular characteristics of Asian civilizations.
CO4	**Analyse** the design and construction of buildings during Pre-Classical Civilization, Desert and Mountainous Cultures.
CO5	**Explore** the Vedic and Buddhist architecture phase of India.

Course Articulation Matrix

		POs												**PSOs**			
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**
COs	**CO1**	**3**														**3**	
	CO2	**3**														**3**	
	CO3	**3**														**3**	
	CO4	**3**														**3**	
	CO5	**3**														**3**	

ಬಳಕೆ ಕನ್ನ ಡ Balake Kannada (Kannada for Usage)

Contact Hours/Week	:	01	Credits	:	Audit
Total Lecture Hours	:	14	CIE Marks	:	100
Total Tutorial Hours	:	-	SEE Marks	:	-
Course Code	:	MC01	Exam Mode	:	-

Course objectives: This course will enable students to:	
1.	Create the awareness regarding the necessity of learning local language for comfortable and healthy life.
2.	Enable learners to Listen and understand the Kannada language properly.
3.	Speak, read and write Kannada language as per requirement.
4.	Train the learners for correct and polite conservation.
5.	Know about Karnataka state and its language, literature and General information about this state.

UNIT I

1. Introduction, Necessity of learning a local language, Methods to learn the Kannada language.

2. Easy learning of a Kannada Language: A few tips, Hints for correct and polite conservation, Listening and Speaking Activities, Key to Transcription.
ವೈಯಕ್ತಿ ಕ, ಸ್ವಾ ಮ್ಯ ಸೂಚಕ/ಸಂಬಂಧಿತ ಸರ್ವನಾಮ್ಗಳು ಮ್ತ್ತು ಪ್ರ ಶ್ನಾ ರ್ಥಕ ಪ್ದಗಳು - Personal Pronouns, Possessive Forms, Interrogative words.

3 Hours

UNIT II

1. ನಾಮ್ಪ್ದಗಳ ಸಂಬಂಧಾರ್ಥ ರೂಪ್ಗಳು, ಸಂದೇಹಾಸಪ ದ ಪ್ರ ಶ್ನಾ ಗಳು ಮ್ತ್ತು ಸಂಬಂಧವಾಚಕ ನಾಮ್ಪ್ದಗಳು - Possessive forms of nouns, doubtive question and Relative nouns.

2. ಗುಣ, ಪ್ರಮಾಣ ಮ್ತ್ತು ರ್ಣವ ಬಣಣ ವಿಶೇಷಣಗಳು, ಸಂಖ್ಯೆಯ ವಾಚಕಗಳು - Qualitative, Quantitative and Colour Adjectives, Numerals.
ಕಾರಕ ರೂಪ್ಗಳು ಮ್ತ್ತು ವಿಭಕ್ತಿ ಪ್ರ ತಯ ಯಗಳು - ಸಪ್ತಮಿ ವಿಭಕ್ತಿ ಪ್ರ ತಯ ಯ - (ಆ, ಅದು, ಅವು, ಅಲ್ಲಿ) - Predictive Forms, Locative Case.

3 Hours

UNIT III

1. ಚತ್ತರ್ಥವ ವಿಭಕ್ತಿ ಪ್ರ ತಯ ಯದ ಬಳಕೆ ಮ್ತ್ತು ಸಂಖ್ಯೆಯ ವಾಚಕಗಳು - Dative cases and Numerals.

2. ಸಂಖ್ಯೆಯ ಗುಣವಾಚಕಗಳು ಮ್ತ್ತು ಬಹುರ್ಚನ ನಾಮ್ಪ್ರತ್ಯಯ್ಗಳು - Ordinal Numerals and Plural markers.
ನ್ಯೆಯ ನ/ ನಿಷೇಧಾರ್ಥಕ ಕ್ತರ ಯಾಪ್ದಗಳು ಮ್ತ್ತು ರ್ಣವ ಗುಣವಾಚಕಗಳು - Defective / Negative verbs and Colour Adjectives.

3 Hours

UNIT IV
1. ಅಪ್ಪ ಣೆ/ಒಪ್ಪಪ ಗೆ, ನಿರ್ದೇಶನ, ಪ್ರ ೋತ್ಸಾ ಹ ಮತ್ತು ಒತ್ತು ಯ ಅರ್ೇರೂಪ್ ಪ್ದಗಳು ಮತ್ತು ವಾಕ್ಯ ಗಳು Permission, Commands, Encouraging and Urgin words (Imperative words and sentences) 2. ಸಾಮಾನಯ ಸಂಭಾಷಣೆಗಳಲ್ಲಿ ದ್ವಿ ತೋಯ ವಿಭಕ್ತು ಪ್ರ ತ್ಯ ಯಗಳು ಮತ್ತು ಸಂಭವನೀಯ ಪ್ರ ಕಾರಗಳು Accusative cases and Potential Forms used in General Communication. 3. "ಇರು ಮತ್ತು ಇರಲ್ಿ" ಸಹಾಯಕ್ ಕ್ತರ ಯಾಪ್ದಗಳು, ಸಂಭಾವಯ ಸೂಚಕ್ ಮತ್ತು ನಿಷೇಧಾರ್ೇಕ್ ಕ್ತರ ಯಾಪ್ದಗಳು Helping verbs 'iru and iralla'. Corresponding Future and Negation verbs. ಹೋಲ್ಲಕೆ (ತ್ರತ್ಯ), ಸಂಬಂಧ ಸೂಚಕ್, ವಸ್ತು ಸೂಚಕ್ ಪ್ರ ತ್ಯಯ ಯಗಳು ಮತ್ತು ನಿಷೇಧಾರ್ೇಕ್ ಪ್ದಗಳ ಬಳಕೆ Comparative, Relationship, Identification and Negation words
3 Hours

UNIT V
1. ಕಾಲ್ ಮತ್ತು ಸಮಯದ ಹಾಗೂ ಕ್ತರ ಯಾಪ್ದಗಳ ವಿವಿಧ ಪ್ರ ಕಾರಗಳು - Different types of Tense, Time and Verbs. 2. -ದ್, -ತ್, -ತ್ತ, -ಇತ್ತ, -ಆಗಿ, -ಅಲ್ಿ, -ಗ್, -ಕ್, ಇದೆ ಕ್ತರ ಯಾ ಪ್ರ ತ್ಯ ಯಗಳೊಂದ್ವಗೆ ಭೂತ್, ಭವಿಷಯ ತ್ ಮತ್ತು ವರ್ತೇಮಾನ ಕಾಲ್ ವಾಕ್ಯ ರಚನೆ - Formation of Past, Future and Present Tense Sentences with Verb Forms. ಸಂಭಾಷಣೆಯಲ್ಲಿ ದ್ವನೋಪ್ಯೋಗಿ ಕ್ನನ ಡ ಪ್ದಗಳು - Kannada Vocabulary List. Kannada Words in Conversation.
3 Hours

TEXT BOOKS	
1	ಬಳಕೆ ಕನ್ನ ಡ - ಡಾ. ಎಲ್. ತಿಮ್ಮ ೇಶ ಪ್ರ ಕಟಣೆ : ಪ್ರ ಸ್ವರಾಂಗ, ವಿಶಾ್ ೇಶಾ ರಯಯ ತಾಂತಿರ ಕ ವಿಶಾ ವಿದ್ಯಯ ಲಯ, ಬೆಳಗಾವಿ. ಸೂಚನೆ : ಹೆಚ್ಚಿ ನಮಾಹಿತಿ ವ್ತಿ್ತ ವಿರ್ಣಣೆಗಳಿಗೆ ಡಾ. ಎಲ್. ತಿಮ್ಮ ೇಶ (9900832331) ಇರ್ನಾ್ನ ಸಂಪ್ಕ್ತವಸಿ. ಮಾದರಿ ಪ್ರ ಶಾ್ನ ಪ್ತಿರ ಕೆ, ಕೇರ್ಸವ ಆಯ್ಕೆ ಮಾಹಿತಿ, ಅಧಯ ಯನ ಸ್ವಮ್ಸ್ರ ವ್ತಿ್ತ ಬಹು ಆಯ್ಕೆ ಮಾದರಿಯ ಪ್ರ ಶಾ್ನ ಗಳ ಕೈಪಿಡಿಗಾಗ್ರ ವಿಶಾವಿದ್ಯಯ ಲಯದ ವೆಬ್ಸೈಟ್ ನೇಡುವುದು.

Course Outcomes: Upon completion of this course the student will be able to:	
CO1	Familiarize the necessity of learning of local language for comfortable life.
CO2	Speak, read and write Kannada language as per requirement.
CO3	Communicate (converse) in Kannada language in their daily life with Kannada speakers.
CO4	Listen and understand the Kannada language properly.
CO5	Listen and understand the Kannada language properly

Course Articulation Matrix

		POs												PSOs			
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**
COs	**CO1**										**3**						**3**
	CO2										**3**						**3**
	CO3										**3**						**3**
	CO4										**3**						**3**
	CO5										**3**						**3**

ಸಾಂಸ್ಕೃತಿಕ ಕನ್ನಡ **Samskruthika Kannada**

Contact Hours/Week	**:**	01	Credits	**:**	Audit
Total Lecture Hours	**:**	14	CIE Marks	**:**	100
Total Tutorial Hours	**:**	-	SEE Marks	**:**	-
Course Code	**:**	MC02	Exam Mode	**:**	-

Course Objectives : This course will enable students to:

ಸಾಂಸ್ಕೃತಿಕ ಕನ್ನಡ ಪಠ್ಯ ಕಲಿಕೆಯ ಉದ್ದೇಶಗಳು:

- ವೃತ್ತಿಪರ ಪದವಿ ವಿದ್ಯಾರ್ಥಿಗಳಾಗಿರುವುದರಿಂದ ಕನ್ನಡ ಭಾಷೆ, ಸಾಹಿತ್ಯ ಮತ್ತು ಕನ್ನಡದ ಸಂಸ್ಕೃತಿಯ ಪರಿಚಯ ಮಾಡಿಕೊಡುವುದು.
- ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಪ್ರಧಾನ ಭಾಗವಾದ ಆಧುನಿಕ ಪೂರ್ವ ಮತ್ತು ಆಧುನಿಕ ಕಾವ್ಯಗಳನ್ನು ಸಾಂಕೇತಿಕವಾಗಿ ಪರಿಚಯಿಸುವುದು.
- ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಸಾಹಿತ್ಯ ಮತ್ತು ಸಂಸ್ಕೃತಿಯ ಬಗ್ಗೆ ಅರಿವು ಹಾಗೂ ಆಸಕ್ತಿಯನ್ನು ಮೂಡಿಸುವುದು.
- ತಾಂತ್ರಿಕ ವ್ಯಕ್ತಿಗಳ ಪರಿಚಯವನ್ನು ಹಾಗೂ ಅವರುಗಳು ಸಾಧಿಸಿದ ವಿಷಯಗಳನ್ನು ಪರಿಚಯಿಸುವುದು.
- ಸಾಂಸ್ಕೃತಿಕ, ಜನಪದ ಹಾಗೂ ಪ್ರವಾಸ ಕಥನಗಳ ಪರಿಚಯ ಮಾಡಿಕೊಡುವುದು.

ಘಟಕ - 1

ಕನ್ನಡ ಸಂಸ್ಕೃತಿ ಮತ್ತು ಭಾಷೆ ಕುರಿತಾದ ಲೇಖನಗಳು 03 ಗಂಟೆಗಳು

1. ಕರ್ನಾಟಕ ಸಂಸ್ಕೃತಿ – ಹಂ.ಪ. ನಾಗರಾಜಯ್ಯ
2. ಕರ್ನಾಟಕದ ಏಕೀಕರಣ – ಒಂದು ಅಪೂರ್ವ ಚರಿತ್ರೆ – ಜಿ. ವೆಂಕಟಸುಬ್ಬಯ್ಯ
3. ಆಡಳಿತ ಭಾಷೆಯಾಗಿ ಕನ್ನಡ – ಡಾ. ಎಲ್. ತಿಮ್ಮೇಶ ಮತ್ತು ಪ್ರೊ. ವಿ. ಕೇಶವಮೂರ್ತಿ

ಘಟಕ - 2

ಆಧುನಿಕ ಪೂರ್ವದ ಕಾವ್ಯ ಭಾಗ 03 ಗಂಟೆಗಳು

1. ವಚನಗಳು – ಬಸವಣ್ಣ, ಅಕ್ಕಮಹಾದೇವಿ, ಅಲ್ಲಮಪ್ರಭು, ಆಯ್ದಕ್ಕಿ ಮಾರಯ್ಯ, ಜೇಡರ ದಾಸಿಮಯ್ಯ, ಆಯ್ದಕ್ಕಿ ಲಕ್ಕಮ್ಮ
2. ಕೀರ್ತನೆಗಳು: ಅದರಿಂದೇನು ಫಲ ಇದರಿಂದೇನು ಫಲ – ಪುರಂದರದಾಸರು ತಲ್ಲಣಿಸದಿರು ಕಂಡ್ಯ ತಾಳು ಮನವೇ – ಕನಕದಾಸರು
3. ತತ್ವಪದಗಳು : ಸಾವಿರ ಕೊಡಗಳ ಸುಟ್ಟು – ಶಿಶುನಾಳ ಶರೀಫ

ಘಟಕ - 3

ಆಧುನಿಕ ಕಾವ್ಯ ಭಾಗ **03 ಗಂಟೆಗಳು**

1. ಡಿವಿಜಿ ರವರ ಮಂಕುತಿಮ್ಮನ ಕಗ್ಗದಿಂದ ಆಯ್ದ ಕೆಲವು ಭಾಗಗಳು
2. ಕುರುಡು ಕಾಂಚಾಣ: ದ.ರಾ. ಬೇಂದ್ರೆ
3. ಹೊಸಬಾಳಿನ ಗೀತೆ : ಕುವೆಂಪು

ಘಟಕ - 4

ತಾಂತ್ರಿಕ ವ್ಯಕ್ತಿಗಳ ಪರಿಚಯ **03 ಗಂಟೆಗಳು**

1. ಡಾ. ಸರ್ ಎಂ. ವಿಶ್ವೇಶ್ವರಯ್ಯ: ವ್ಯಕ್ತಿ ಮತ್ತು ಐತಿಹ್ಯ – ಎ.ಎನ್. ಮೂರ್ತಿರಾವ್
2. ಕರಕುಶಲ ಕಲೆಗಳು ಮತ್ತು ಪರಂಪರೆಯ ವಿಜ್ಞಾನ – ಕರೀಗೌಡ ಬೀಚನಹಳ್ಳಿ

ಘಟಕ – 5

ಸಾಂಸ್ಕೃತಿಕ, ಜನಪದ ಕಥೆ ಮತ್ತು ಪ್ರವಾಸ ಕಥನ **03 ಗಂಟೆಗಳು**

1. ಯುಗಾದಿ : ವಸುಧೇಂದ್ರ
2. ಮೆಗಾನೆ ಎಂಬ ಗಿರಿಜನ ಪರ್ವತ : ಹಿ.ಚಿ. ಬೋರಲಿಂಗಯ್ಯ

TEXT BOOKS :

1	**ಸಾಂಸ್ಕೃತಿಕ ಕನ್ನಡ** – ಡಾ. ಹಿ.ಚಿ. ಬೋರಲಿಂಗಯ್ಯ ಮತ್ತು ಡಾ. ಎಲ್. ತಿಮ್ಮೇಶ ಪ್ರಕಟಣೆ: ಪ್ರಸಾರಾಂಗ, ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೆಳಗಾವಿ. **ಸೂಚನೆ :** ಹೆಚ್ಚಿನ ಮಾಹಿತಿ ಮತ್ತು ವಿವರಣೆಗಳಿಗೆ ಡಾ. ಎಲ್. ತಿಮ್ಮೇಶ (9900832331) ಇವರನ್ನು ಸಂಪರ್ಕಿಸಿ. ಮಾದರಿ ಪ್ರಶ್ನೆಪತ್ರಿಕೆ, ಕೋರ್ಸ್ ಆಯ್ಕೆ ಮಾಹಿತಿ, ಅಧ್ಯಯನ ಸಾಮಗ್ರಿ ಮತ್ತು ಬಹು ಆಯ್ಕೆ ಮಾದರಿಯ ಪ್ರಶ್ನೆಗಳ ಕೈಪಿಡಿಗಾಗಿ ವಿಶ್ವವಿದ್ಯಾಲಯದ ವೆಬ್‌ಸೈಟ್ ನೋಡುವುದು.

Course Outcomes :

After the completion of this course, students will be able to:

ಸಾಂಸ್ಕೃತಿಕ ಕನ್ನಡ ಪಠ್ಯ ಕಲಿಕೆಯ ನಂತರ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ:

CO1 : ಕನ್ನಡ ಭಾಷೆ, ಸಾಹಿತ್ಯ ಮತ್ತು ಕನ್ನಡದ ಸಂಸ್ಕೃತಿಯ ಕುರಿತು ಅರಿವು ಮೂಡಿರುತ್ತದೆ.

CO2 : ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಪ್ರಧಾನ ಭಾಗವಾದ ಆಧುನಿಕ ಪೂರ್ವ ಮತ್ತು ಆಧುನಿಕ ಕಾವ್ಯಗಳನ್ನು ಸಾಂಕೇತಿಕವಾಗಿ ಕಲಿತು ಹೆಚ್ಚಿನ ಓದಿಗೆ ಮತ್ತು ಜ್ಞಾನಕ್ಕೆ ಸ್ಫೂರ್ತಿ ಮೂಡುತ್ತದೆ.

CO3 : ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಸಾಹಿತ್ಯ ಮತ್ತು ಸಂಸ್ಕೃತಿಯ ಬಗ್ಗೆ ಅರಿವು ಹಾಗೂ ಆಸಕ್ತಿ ಹೆಚ್ಚಾಗುತ್ತದೆ.

CO4 : ತಾಂತ್ರಿಕ ವ್ಯಕ್ತಿಗಳ ಪರಿಚಯವನ್ನು ಹಾಗೂ ಅವರುಗಳು ಸಾಧಿಸಿದ ವಿಷಯಗಳನ್ನು ತಿಳಿದುಕೊಂಡು ನಾಡಿನ ಇನ್ನಿತರ ವ್ಯಕ್ತಿಗಳ ಬಗ್ಗೆ ತಿಳಿದುಕೊಳ್ಳುವ ಕೌತುಕತೆ ಹೆಚ್ಚಾಗುತ್ತದೆ.

CO5 : ಸಾಂಸ್ಕೃತಿಕ, ಜನಪದ ಹಾಗೂ ಪ್ರವಾಸ ಕಥನಗಳ ಪರಿಚಯವಾಗುತ್ತದೆ.

TRAFFIC AWARENESS AND SAFETY

Contact Hours/Week	:	01	Credits	:	Audit
Total Lecture Hours	:	14	CIE Marks	:	100
Total Studio Hours	:	-	SEE Marks	:	-
Course Code	:	MC03	Exam Mode	:	-

Course objectives: This course will enable students to:	
1.	Familiarize with the road safety norms.
2.	Get introduced to the motor's vehicle act.
3.	Understand the traffic signs and markings.

UNIT I
Introduction to Road Safety. Road as an active space, Types of users, User behaviour, Sensory Factors like Vision and Hearing in User Behaviour. Types of Vehicles: Heavy Vehicles, Light Motor Vehicle, Two Wheelers, Auto- Rickshaw, Bicycles and Cycle Rickshaws, Non Motorised Vehicles. Vehicle Characteristics: Dimensions, Weight, Turning Radii, Braking Distance, Lighting System, Headlight sight distance, Tyres, etc. Types of Hazards: Conflicts and Accidents.
3 Hours

UNIT II
Typology of Roads: Components and Design Road Classification: National Highways, State Highways, District Roads (MDR and ODR), Village Roads. Urban Road Classification: Expressways, Arterial, Sub-Arterial, Collector, Local, Service Roads, One-Way, Two-Way etc. Mountainous Roads. Speed Limits of Road types. Design of Roads: Cross Sectional Elements- Right of Way, Carriageway, Median, Shoulders, Side Walks, Lanes, Cycling Track, Green Strip, Curbs, Camber, etc. Spatial Standards for the Cross-Section Design. Relationship between Road design and Road Safety. Intersections Types of Road Intersections: Basic forms of at-grade Junctions (T, Y, Staggered, Skewed, Cross, Scissors, Rotary, etc. Grade Separated Junctions (with or without interchange): Three –Leg, Four-Leg, Multi-Leg, etc. Design of Intersections: Design and Spatial Standards for Traffic Islands, Turns, Turning Radii, Directional Lanes, Pedestrian Crossings, Median Openings, Simple curve, reverse curve, Vertical Curve, Superelevation, Traffic Calming Components like Speed Breakers and Table-Top Crossings etc. Design Considerations for Diverging, Merging and Weaving Traffic. Location and Design for Traffic Signals.
3 Hours

UNIT III
Pedestrian Circulation and Barrier Free Design Requirement of Pedestrian Infrastructure: Sidewalks and footpaths, Recommended Sidewalk widths, Pedestrian Crossing, Pedestrian Bridges, Subways, Cycle Tracks, etc. Barrier free design: Location and Design Standards for Ramps for wheel Chair Access, Other Provisions like Tactile for Visually Challenged etc. Safety Provisions: Pedestrian Railings, Anti-skid Flooring, Pedestrian Signal, Walk Button, etc.
3 Hours

UNIT IV
Traffic Signs and Road Markings Types of Traffic Signs: Principles and Types of Traffic

Signs, Danger Signs, Prohibitory Signs, Mandatory Signs, Informatory Signs, Induction Signs, Direction Signs, Place Identification Signs, Route Marker Signs, etc. Reflective Signs, LED Signs, Static and Dynamic signs. Standards for Traffic Signs: Location, Height and Maintenance of Traffic Signs. Types of Road Markings: Centre Lines, Traffic Lane Lines, Pavement Edge Lines, No Overtaking Zone Markings, Speed Markings, Hazard Markings, Stop Lines, Pedestrian Crossings, Cyclist Crossings, Route Direction Arrows, Word Messages, Marking at Intersections, etc. Material, Colour, and Typography of the Markings.

Traffic Signals, Traffic Control Aids, Street Lighting Traffic Signals: Introduction, Advantages and Disadvantages Signal Indications: Vehicular, Pedestrian and Location of the Signals. Signal Face, Illustration of the Signals, Red, Amber, Green Signals and its significance, Flashing Signals Warrant of Signals, Co-ordinated Control of Signals. Traffic Control Aids: Roadway Delineators (Curved and Straight Sections) Hazard Markers, Object Markers, Speed Breakers, Table Top Crossings, Rumble Strips, Guard Rails and Crash Barriers etc. Street Lighting: Need for Street Lighting, Type of Lighting, Illumination Standard, Location and Intermediate Distance.

3 Hours

UNIT V

Road Accidents Nature and Types of Road Accidents (Grievously Injured, Slightly Injured, Minor Injury, Non injury, etc) The Situation of Road Accidents in India (yearly), Fatality Rates, etc Factors (and Violations) that cause accidents. Prevention and First Aid to Victims. Collision Diagrams and Condition Diagram exercises. Traffic Management Measures and their influence in Accident Prevention.

Road Safety and Civic Sense Need for Road Category of Road Users and Road Safety Suggestions. Precautions for Driving in Difficult Conditions (Night, Rain, Fog, Skidding Conditions, Non Functional Traffic lights, etc.) Type of Breakdowns and Mechanical Failures. Accident Sign (Warning Light, Warning Triangle, etc.) Introduction to Concept of Civic Sense and its relationship to Road Safety: Importance of Civic Sense, Road Etiquettes and Road User Behaviour, Rules of Road, Right of the Way. Providing Assistance to Accident Victim. Sensitisation against Road Rage.

Traffic Regulations, Laws & Legislations Indian Motor Vehicle Act (Chapter VIII: Control of Traffic to be discussed in detail) Regulation Concerning Traffic: Cycles, Motor Cycles and Scooters, Rules for Pedestrian Traffic, Keep to the Left Rule, Overtaking Rules, Turning Rules, Priority Rules, Hand Signals, etc. Speed and Hazard Management. Penal Provisions. National Road Safety Policy, Central Motor Vehicle Rules, State Motor Vehicle Rules. Introduction to Good Practices.

3 Hours

REFERENCE BOOKS

1	R Srinivasa Kumar	Introduction to Traffic Engineering, ISBN 13: 978-9386235473, The Orient Blackswan, 2018
2	L R Kadiyali	Traffic Engineering and Transport Planning, ISBN 13: 978-8174092205, Khanna Publishers, 1999
3	Ministry of Road Transport and Highways, Government of India.	Book on Road Safety Signage and Signs
4	MORT&H	Pocketbook of Highway Engineers, Third Revision, 2019
5	Publication by UTTIPEC namely, Street Design Guidelines, UTTIPEC guidelines for Road Marking, UTTIPEC guideline and specification for Crash Barriers, Pedestrian Railing and Dividers, UTTIPEC Standard Type Crossing Design.	

Course Outcomes: Upon completion of this course the student will be able to:	
CO1	Analyze road-user behaviour, vehicle characteristics, and traffic hazards to identify factors influencing road safety and recommend appropriate measures for safer road environments.
CO2	Apply road classification principles, cross-sectional standards, and intersection design criteria to develop safe and efficient road and junction designs incorporating appropriate traffic management and road-safety measures.
CO3	Design safe, accessible, and barrier-free pedestrian circulation systems by applying appropriate standards for footpaths, crossings, ramps, cycle tracks, tactile features, and pedestrian safety provisions.
CO4	Apply standards for traffic signs, road markings, signals, traffic-control aids, and street lighting to develop safe, legible, and efficient road environments for all users.
CO5	Evaluate the causes and consequences of road accidents and apply traffic regulations, road-safety practices, civic sense, accident-prevention measures, and relevant motor vehicle legislation to promote responsible and safe road-user behaviour.

Course Articulation Matrix

		POs												**PSOs**			
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**
COs	**CO1**	**3**														**3**	
	CO2	**3**														**3**	
	CO3	**3**														**3**	
	CO4	**3**														**3**	
	CO5	**3**														**3**	