

D. Y. Patil Education Society's

D. Y. Patil Technical Campus Faculty of Engineering & Faculty of Management Talsande

(An Autonomous Institute)

Approved by AICTE and Affiliated to Shivaji University, Kolhapur

(Accredited by NAAC 'A' Grade with 3.25 CGPA in First Cycle)

Curriculum Structure

With Effective from Academic Year 2024-25

LIST OF ABBREVIATIONS

Sr. No	Abbreviations	Courses
1	BSC	Basic Science Course
2	ESC	Engineering Science Course
3	PCC	Programme Core Course
4	PEC	Programme Elective Course
5	MDM	Multidisciplinary Minor
6	OE	Open Elective
7	VSEC	Vocational and Skill Enhancement Course
8	AEC	Ability Enhancement Course
9	HSSM	Humanities Social Science and Management
10	IKS	Indian Knowledge System
11	VEC	Value Education Course
12	FP	Field Project
13	ELC	Experiential Learning Courses
14	CC	Co-curricular Courses
15	MC	Mandatory Course
16	ISE	In Semester Evaluation
17	MSE	Mid Semester Examination
18	CA	Continuous Assessment
19	POE	Practical Oral Examination
20	ESE	END Semester Examination

CURRICULUM FRAMEWORK

The Course and Credit Distribution

Sr.	True of Course	No. of	Courses	Total N	o. Credit
No	Type of Course	Sem I	Sem II	Sem I	Sem II
1	Basic Science Course (BSC)	2	2	8	8
2	Engineering Science Course (ESC)	2	1	8	5
3	Programme Core Course (PCC)		1		2
4	Programme Elective Course (PEC)				
5	Multidisciplinary Minor (MDM)				
6	Open Elective (OE)				
7	Vocational and Skill Enhancement Course (VSEC)	1	1	2	2
8	Ability Enhancement Course (AEC)		1		1
9	Humanities Social Science and Management (HSSM)				
10	Indian Knowledge System (IKS)	1		2	
11	Value Education Course (VEC)				
12	Field Project (FP)				
13	Experiential Learning Courses (ELC)				
14	Co-curricular Courses (CC)	1	1	2	2
15	Mandatory Course (MC)				
	Total	7	7	22	20

Semester wise Course Distribution										
Sr.	Course Category	Nı			Cou		per S	eme		Total
No	Course Category	1	2	3	4	5	6	7	8	
1	Basic Science Course (BSC)	2	2							4
2	Engineering Science Course (ESC)	2	1							3
3	Programme Core Course (PCC)		1	3	3	3	3	2	2	17
4	Programme Elective Course (PEC)					1	2	2	1	6
5	Multidisciplinary Minor (MDM)			1	1	1	1	1	1	6
6	Open Elective (OE)			1	1	1				3
7	Vocational and Skill Enhancement Course (VSEC)	1	1		1		1			4
8	Ability Enhancement Course (AEC)		1		1					2
9	Entrepreneurship Management Courses			1	1					2
10	Indian Knowledge System (IKS)	1								1
11	Value Education Course (VEC)			1	1					2
12	Research Methodology							1		1
13	Field Project (FP)			1						1
14	Project							1		1
15	Internship								1	1
16	Co-curricular Courses (CC)	1	1							2
	Total	7	7	8	9	6	7	7	5	56

CREDIT DISTRIBUTION : SEMESTER WISE							1				Total
	1 Lecture hour = 1 Credit 2 Lab Hours =	= 1 Cr	edit 1	Tutor	ial Ho	our = 1	1 Cred	dit		Total	Credits
Sr.	Type of Course			No of	Credi	ts/ Sei	mestei	r			GR
No	Type of Course	1	2	3	4	5	6	7	8		
1	Basic Science Course (BSC)	8	8							16	14-18
2	Engineering Science Course (ESC)	8	5							13	16-12
3	Programme Core Course (PCC)		2	10	10	12	10	6	4	54	44-56
4	Programme Elective Course (PEC)					4	8	2	6	20	20
5	Multidisciplinary Minor (MDM)			2	2	4	2	2	2	14	14
6	Open Elective (OE)			4	2	2				8	8
7	Vocational and Skill Enhancement Course (VSEC)	2	2		2		2			7	8
8	Ability Enhancement Course (AEC)		1							4	4
9	Humanities Social Science and Management (HSSM)			2	2					4	4
10	Indian Knowledge System (IKS)	2								2	2
11	Value Education Course (VEC)			2	2					4	4
12	Research Methodology								4	4	4
13	Field Project			2						2	2
14	Project								4	4	4
15	Internship							12		12	12
16	Co-curricular Courses (CC)	2	2							4	4
	Total	22	20	22	22	22	22	22	20	172	160-176



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Department of Civil Engineering

Curriculum Structure

First Year Civil Engineering Program (Course 2024-25)

With Effective from Academic Year 2024-25

Curriculum Structure

First Year Civil Engineering



FACULTY OF ENGINEERING & FACULTY OF MANAGEMENT, TALSANDE

(An Autonomous Institute)
(Approved by AICTE, New Delhi, Recognized by DTE Maharashtra & Affiliated to Shivaji University, Kolhapur)
(Accredited by NAAC 'A' Grade with 3.25 CGPA in First Cycle)

SCHEME OF INSTRUCTION & CURRICULUM

Programme: - Civil Engineering Semester - I



Sr.	Course	Course Code	į	,	E		Course		EX	EXAMS CHEME	SME	
No.	Category		Course Title	Г			Credits	ISE	MSE	ESE	INT	TOTAL
1	,	AM24FE111	Applied Mathematics-I	3	1		4	20	30	90	25	125
,	BSC	CHEM24FE112	Applied Chemistry	3			3	20	30	50	ı	100
7		CHEM24FE112P	Applied Chemistry Laboratory	ı	1	2	1	1	1	ı	25	25
,		PSCL24FE113	Problem Solving with C- Language	3	-	1	3	20	30	50	1	100
<u></u>	ESC	PSCL24FE113P	Problem Solving with C-Language Laboratory.	ı	ı	2	1	1	1	1	25	25
		EGCAD24FE114	Engineering Graphics & Computer Aided Drawing	3	1	ı	3	20	30	90	ı	100
4		EGCAD24FE114P	Engineering Graphics & Computer Aided Drawing Laboratory	ı	-	2	1	ı	1	-	25	25
		DTTI24FE115	Design Thinking Through Innovation	1	-		1	25	-	-	-	25
S	VSEC	DTTI24FE115P	Design Thinking Through Innovation Laboratory	-	-	2	1	1	ı	ı	25	25
7	7	PC24FE116	Professional Communication	1	-	-	1	25	-	-	-	25
0	AEC	PC24FE116P	Professional Communication Laboratory	ı		2	1	ı	ı	-	25	25
7	CCA	NSS24FE117	NSS	1	-	2	2	-	-	-	50	50
		L	Total	15	1	12	22	130	120	200	200	650
			Non Credit Mandatory Course	Mandai	ory Cou	urse						
8	J.	MC24FE118	Finishing School Training I	3	-	-	NC	-	-	-	Grade	Grade
6	IMIC	MC24FE119	Rural/ Social Internship	-	-	-	NC	-	-		Grade	Grade

Note: This structure is approved by Academic Council in the meeting dated 03.09.2024



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(Accredited by NAAC 'A' Grade with 3.25 CGPA in First Cycle) SCHEME OF INSTRUCTION & CURRICULUM

Programme: - Civil Engineering



Semester - II

Sr.	Course	Course	Š		E	f	Course		EX	EXAM S CHEME	1E	
No.	Category	Code	Course litte	Т	1	L	Credits	ISE	MSE	ESE	INT	TOTAL
1		AM24FE121	Applied Mathematics II	3	1	ı	4	20	30	50	25	125
,	BSC	PHY24FE122	Applied Physics	ε	-	-	3	20	30	90	-	100
7		PHY24FE122P	Applied Physics Laboratory	ı	ı	2	1	1	1	1	25	25
,	ָבָבָּ בַּ	GENAI24FE123	Generative AI	3	-	-	3	20	30	50	-	100
c	ESC	GENAI24FE123P	Generative AI Laboratory	-	-	2	1	-	-	-	25	25
4	DCC	FCE24FE124	Fundamentals of Civil Engineering	2	-	ı	2	ı	-	50	-	50
5	Λ SEC	PES24FE125	Plumbing and Electrical Skills	1	-	2	2	25	-	-	25	50
9	IKS	ITPA24FE126	Indian Town Planning and Architecture	2	1	ı	2	20	-	30	-	50
7	CCA	YOGA24FE127	Yoga		'	2	2	1	ı	ı	50	50
			Total	15	1	8	20	105	06	230	150	575
			Non Credit Mandatory Course	edit M.	andato	y Cour	.se					
8	J.	MC24FE128	Finishing School Training II	3	-	-	NC	-	-	-	Grade	Grade
6	IMIC	MC24FE129	Capstone Project	ı	•		NC		1	ı	Grade	Grade

Note: This structure is approved by Academic Council in the meeting dated 03.09.2024



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Department of First Year Engineering F. Y. B. Tech. Curriculum (Programme- Civil Engineering) w. e. f. A.Y. 2024-2025





Course Title : Applied Mathematics II	
Course Code: AM24FE121	Semester: II
Teaching Scheme L-T-P: 3 – 1 – 0	Credits: 4
Evaluation Scheme: ISE-I (10 Marks), MSE (30 Marks), ISE-II (10 Marks)	ESE Marks: 50 marks

Prior Knowledge of:	Differentiation, Integration

Course Objectives:

1.	To teach mathematical methodology.
2.	To develop mathematical skills and enhance logical thinking power of students.
3.	To provide students with skills in Differential equation, Laplace Transform Vector Calculus and Integral Calculus.
	To imbibe graduates with mathematical knowledge, computational skills and the ability to
4.	deploy the skills effectively in solution of engineering problems.

Curriculum Details

Course Contents	Duration
Unit-I: Ordinary Differential Equations of First Order and First Degree	08 Hrs
 Definition of differential equation of First order and First degree. 	
Exact differential equations.	
Non-exact differential equations.	
Linear differential equations.	
Bernoulli's differential equations.	
Unit-II: Numerical methods to solve Ordinary Differential Equations	07 Hrs
• Introduction	
Picard's method.	
Taylor's series method.	
Euler's method.	
Runge-Kutta's method (Fourth order)	
Unit-III: Vector Calculus	07 Hrs
• Introduction.	
 Gradient of scalar point function. 	
Divergence of vector point function.	
Curl of a vector point function.	
Irrotational, Solenoidal vector field	
Unit-IV: Laplace Transform	08 Hrs



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Department of First Year Engineering

F. Y. B. Tech. Curriculum (Programme- Civil Engineering) w. e. f. A.Y. 2024-2025



Course Contents	Duration
Laplace transforms of elementary functions	
 Properties of Laplace transforms (First Shifting ,Change of scale property , 	
Multiplication & Division by t)	
Inverse Laplace transforms by partial fraction	
Unit-V: Numerical Integration	07 Hrs
Trapezoidal Rule.	
• Simpson's 1/3 rd Rule.	
• Simpson's 3/8 th Rule.	
Weddle's Rule.	
Unit-VI : Multiple Integrals	08 Hrs
Introduction of Double integrals	
Method of evaluation of Double integrals	
Change of order of integration	
Area enclosed by plane curves	
Mass of a plane lamina	

Course Outcomes (COs): After successful completion of the course, students will be able to:

CO	Statements
	solve ordinary differential equations of first order and first degree and apply the
1	methods to solve engineering problems also use the numerical methods to differential equations of first order and first degree
2	use knowledge of vector differentiation to find curl and divergence of vector fields.
3	understand Laplace Transform and to solve the problems on Laplace Transform
4	solve the integrals by numerical methods, apply multiple integrals to calculate areas
4	and mass of lamina



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Department of First Year Engineering





w. e. f. A.Y. 2024-2025

Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs)

POs Cos	BTL	1	2	3	4	5	6	7	8	9	10	11	12
1	3	3	3	3	-	-	-	-	-	-	-	-	-
2	3	2	2	2	-	-	-	-	-	-	-	-	-
3	2 ,3	2	2	2	-	-	-	-	-	-	-	-	-
4	3	3	3	3	-	-	-	-	-	-	-	-	-

Suggested Learning Resources:

Text Books:

Sr. No	Title	Edition	Author(s)	Publisher	Year
1	Advanced Engineering	7th	Peter V.O' Neil	Cengage	2012
	Mathematics	,		Learning	
2	Advanced Engineering	1st	H.K.Dass	S. Chand	2011
	Mathematics	1		Publications, New	
				Delhi	
3	A Text Book of Applied	7th	P.N.Wartikar,	Vidyarthi Griha	2006
	Mathematics	_ ′	J.N.Wartikar	Prakashan, Pune.	
4	Higher Engineering	36 th	B.S.Grewal	Khanna	2001
	Mathematics			Publishers	

Reference Books:

Sr. No	Title	Edition	Author(s)	Publisher	Year
1	Advanced Engineering Mathematics	5 th	Erwin Kreyszig	India Pvt., Ltd.	2014
2	Higher Engineering Mathematics	6 th	B.V.Ramana	Tata M/cGraw- Hill Publication	2010
3	Numerical Methods for Scientific and Engineering Computation	5 th	M.K.Jain	New Age International Pvt. Ltd. New Delhi	2007
4	A Textbook of Engineering Mathematics	6 th	N.P.Bali, Iyengar	Laxmi Publication	2004



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Department of First Year Engineering

F. Y. B. Tech. Curriculum (Programme- Civil Engineering) w. e. f. A.Y. 2024-2025



Useful Link /Web Resources:

- 1. DELNET- http://www.delnet.in
- 2. NDL-http://ndl.iitkgp.ac.in
- 3. N-LIST- http://www.nlist.inflib.ac.in

List of Tutorials:

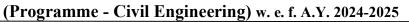
Tut. No	Title of Tutorials	Duration
01	Ordinary Differential Equations of First Order and First Degree	01 Hr
02	Ordinary Differential Equations of First Order and First Degree	01 Hr
03	Numerical methods to solve Ordinary Differential Equations	01 Hr
04	Numerical methods to solve Ordinary Differential Equations	01 Hr
05	Vector Calculus	01 Hr
06	Vector Calculus	01 Hr
07	Laplace Transform	01 Hr
08	Laplace Transform	01 Hr
09	Integral Calculus	01 Hr
10	Integral Calculus	01 Hr
11	Multiple Integrals	01 Hr
12	Multiple Integrals	01 Hr



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Department of First Year Engineering

F. Y. B. Tech. Curriculum





Course Title: Applied Physics	
Course Code: PHY24FE122	Semester: II
Teaching Scheme L-T-P: 3-0-0	Credits: 3
Evaluation Scheme: ISE-I (10 marks), MSE (30 marks), ISE-II (10 marks)	ESE Marks: 50 marks

Prior Knowledge of:	Fundamentals of optics, Newton's laws etc.
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Course Objectives:

1.	To provide basic concept of modern optics.
2.	To perceive the concepts of Moment of inertia, elasticity, and their applications in engineering fields
3.	To understand properties of fluid, and their applications in engineering fields.
4.	To understand the students, basic concepts of nanotechnology and quantum mechanics.

Curriculum Details

Course Contents	Duration
Unit I: Diffraction and Polarization of Light	
Diffraction:	
Diffraction- Concept and types (Fresnel and Fraunhofer diffraction),	
Diffraction grating – construction and theory,	
Resolving power of plane transmission grating.	7 11
Polarization:	7 Hrs
Introduction, double refraction,	
Huygens' theory (positive and negative crystals),	
Optical Activity, Specific Rotation,	
Laurent's half shade polarimeter.	
Unit -II: Rotational motion	
Definition of - M.I., K.E. of rotating body, Rolling motion,	
Physical significance of M.I.,	8 Hrs
Radius of gyration, Torque,	
Principle of parallel and perpendicular axes,	
M.I. of some regular shaped bodies about specific axes- rod, cylinder, sphere,	
Angular momentum and its conservation.	
Unit -III: Properties of materials	



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Department of First Year Engineering

F. Y. B. Tech. Curriculum

(Programme - Civil Engineering) w. e. f. A.Y. 2024-2025



Course Contents	Duration
Deforming Force and Restoring Force,	
Elasticity, Plasticity, Rigidity.	
Stress and Strain and their types,	8 Hrs
Elastic limit and Hooke's law,	
Types of moduli of elasticity.	
Stress -Strain diagram, Poisson's ratio,	
Behaviour of metal wire under increasing load,	
Factors affecting elasticity.	
Unit -IV: Properties of fluids	
• Pressure-depth relation ($P = \rho h g$),	
Atmospheric pressure, Pascal's law, Archimedes' principle.	
Viscous force, definition of viscosity, velocity gradient,	7 Hrs
Newton's law of viscosity, coefficient of viscosity and its SI unit,	
Streamline and turbulent flow with examples,	
• critical velocity, Reynold's number, and its significance.	
Up thrust force, terminal velocity, Stokes law.	
Derivation of coefficient of viscosity by Stoke's method.	
Unit -V: Nano Technology	
Introduction to nanotechnology, nanoscience, nanomaterials,	
Synthesis Method-Top-down Process: Ball milling method,	7 Hrs
Synthesis Method-Bottom-up Approach: Colloidal method,	
Tools- Scanning Tunneling Microscope and Atomic Force Microscope,	
Applications of nanomaterials	
Unit -VI: Quantum Mechanics	
Introduction to quantum physics,	
Black body radiation, Planck's law,	
Photoelectric effect, Compton effect,	
de-Broglie's hypothesis,	
Wave-particle duality,	
 Wave-particle duality, Heisenberg's Uncertainty principle, 	8 Hrs
 Born's interpretation of the wave function, 	
 Schrodinger's time independent wave equation. 	
Somounger's time independent wave equation.	



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Department of First Year Engineering

F. Y. B. Tech. Curriculum





Course Outcomes (COs): After successful completion of the course, students will be able to:

CO	Statements					
122.1	Describe the principle of diffraction and relate concepts in various engineering applications.					
122.2	Apply the concepts of moment of inertia, elasticity in various engineering applications.					
122.3	Apply the concepts of properties of fluids in various engineering applications.					
122.4	Explain the need for nanomaterials in science and technology and quantum mechanics					
122.4	concepts.					

Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs)

POs	BTL	1	2	3	4	5	6	7	8	9	10	11	12
122. 1	2	2	2	2	-	-	-	-	-	-	-	-	-
122. 2	3	3	3	3	-	-	-	-	-	-	-	-	-
122. 3	3	2	2	2	-	-	-	-	-	-	-	-	-
122.4	3	3	3	3	-	-	-	-	-	-	-	-	-

Suggested Learning Resources:

Text Books:

Sr. No	Title	Edition	Author(s)	Publisher	Year
1	Engineering Physics	1st	H. K. Malik	Tata McGraw Hill Education	2019
2	A Text Book of Engineering Physics	Revised	M. N. Avadhanulu, P. G. Kshirasagar	S. Chand Publications	2018
3	Engineering Physics	Revised	L.N. Singh	Synergy Knowledge Ware	2016
4	Engineering Physics	Revised	V. Rajendran	Tata McGraw Hill Education	2010

Reference Books:

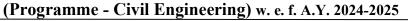


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F. Y. B. Tech. Curriculum





Sr. No	Title	Edition	Author(s)	Publisher	Year
1	Fundamentals of Physics	Revised	J. Walker, D. Halliday, R. Resnick	Wiley Publications	
2	Engineering Physics	1 st	B.K. Pandey and Chaturvedi	Cengage Learning Publications	
3	Nanotechnology- Principles & Practices	3rd	Sulabha K. Kulkarni	Capital Publication Co. New Delhi	2014
4	Introduction to Solid State Physics	8 th	Charles Kittel	John Willey and Sons Inc.	2009
5	Solid State Physics	6 th	S. O. Pillai	New edge Internationals	2009

Useful Link / Web Resources:

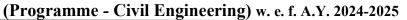
- 1. DELNET- http://www.delnet.in
- 2. NDL-http://ndl.iitkgp.ac.in
- 3. N-LIST- http://www.nlist.inflib.ac.in
- 4. http://hyperphysics.phy-astr.gsu.edu/hbase/index.html
- 5. https://en.wikipedia.org/wiki/Wave interference
- 6. https://en.wikipedia.org/wiki/Introduction to quantum mechanics



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Department of First Year Engineering

F. Y. B. Tech. Curriculum





Course Title: Applied Physics Laboratory	
Course Code: PHY24FE122P	Semester: II
Teaching Scheme: L-T-P: 0-0-2	Credit: 01
Evaluation Scheme: INT (25 marks)	ESE/POE/OE Marks:

Course Objectives:

	To make the students understand the physics concept for effective application in
	engineering and technology.
2	To use the knowledge of optics in a laboratory by using a spectrometer, diffraction
۷.	grating, etc. for their use in different applications

List of Experiments- Minimum 8 practical's need to perform from the following list

Exp. No	Title of Experiments	Duration
01	Calculate the wavelength of a monochromatic lightby using Bi-prism experiment	02Hrs
02	To study diffraction at Cylindrical obstacle.	02Hrs
03	Wavelength of different spectral lines of mercury using grating.	02Hrs
04	Calculation of R. P. of grating by using spectrometer	02Hrs
05	To find Resolving power of Telescope	02Hrs
06	Verification of inverse square law of intensity of light.	02Hrs
07	To find specific rotation by using half shaded Polarimeter.	02Hrs
08	Calculation of divergence of LASER beam.	02Hrs
09	Determine of surface tension of given liquid by Jeagers method	02Hrs
10	Determine coefficient of viscosity of given liquid using Stoke's method	02Hrs
11	Determine stiffness constant 'K' of a helical spring.	02Hrs
12	Modulus of rigidity by Torsional oscillations	02Hrs

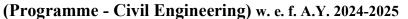


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Department of First Year Engineering

F. Y. B. Tech. Curriculum





Course Outcomes (COs): After successful completion of the course, students will be able to:

СО	Statements
122.1	Interpret knowledge related to optics to use for suitable purposes in applied physics
122.2	Interpret knowledge related to properties of fluids for suitable purposes in applied physics
122.3	Explain applications of M.I., elasticity, surface tension.
122.4	Interpret knowledge related to inverse square law for suitable purposes in applied physics

Course Articulation Matrix: Mapping of Course Outcomes (Cos) with Program Outcomes (PO's)

PO's	BTL	1	2	3	4	5	6	7	8	9	10	11	12
122.1	2	3	3	3	-	-	-	-	-	3	-	-	-
122.2	3	3	3	3	-	-	-	-	-	3	-	-	-
122.3	3	3	3	3	-	-	-	-	-	3	-	-	-
122.4	3	3	3	3	-	-	-	-	-	3	_	_	-

Suggested Learning Resources: --

Text Books:

Sr. No	Title	Edition	Author(s)	Publisher	Year
1	1 Engineering Physics		H.K. Malik	Tata McGraw Hill	2019
1	Engineering Thysics	_		Education	
2	A Text Book of	Revised	M. N. Avadhanulu,	S. Chand	2018
2	Engineering Physics		P. G. Kshirasagar	Publications	

Reference Books:

Sr. No	Title	Edition	Author(s)	Publisher	Year
3	Engineering Physics	Revised	L. N. Singh	Synergy Knowledge Ware	2016
4	Engineering Physics	Revised	V. Rajendran	Tata McGraw Hill Education	2010
5	Engineering Physics	1 st	R.K. Gaur, S.L. Gupta	Dhanpat Rai Publications	1993

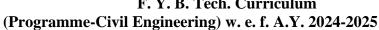
Useful Link /Web Resources:

- 1. https://vlab.amrita.edu/?sub=1
- 2. http://vlabs.iitb.ac.in/vlab/labsps.html



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Department of First Year Engineering F. Y. B. Tech. Curriculum





Course Title :-Generative AI	
Course Code:- CE24FE123	Semester: II
Teaching Scheme L-T-P: 3-0-0	Credits: 3
Evaluation Scheme: ISE-I (10 Marks), MSE (30 Marks), ISE-II (10 Marks)	ESE Marks: 50 marks

Prior Knowledge of:	Basic mathematics, Statistics
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Course Objectives:

1.	To explain the fundamental concepts, principles and technology of generative AI
2.	To prepare the students with demanding industry skills
3.	To provide an opportunity to develop expertise in AI tools & technologies.
4	To apply theoretical understanding to hands-on interdisciplinary projects, solving problems using Generative AI models

Curriculum Details:

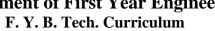
Course Contents	Duration
 Unit-I Introduction to Generative AI Basics of AI And ML. and DL Definition and scope of Generative AI Generative AI Origin Overview of generative models and their applications Difference between generative and discriminative models Understanding Risks & Limitations 	08 Hrs
 Unit-II Basics on NLP What is NLP? History of NLP Components of NLP- Syntax, Semantics, Pragmatics, Discourse Introduction to NLP techniques and methods Various NLP Tasks Application of NLP- Industry application and Everyday applications Challenges and future of NLP 	06 Hrs
 Unit-III Language Models and LLM Architectures Introduction to language models and their role in AI Traditional approaches to language modelling Deep learning-based language models and their advantages Overview of popular LLM architectures: RNNs, LSTMs, and Transformers 	07 Hrs
 Unit-IV Understanding GPT (Generative Pre-trained Transformer) and ChatGPT Introduction to GPT and its significance Pre-training and fine-tuning processes in GPT Architecture and working of GPT models 	09 Hrs



FACULTYOFENGINEERING& FACULTYOFMANAGEMENT,

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Department of First Year Engineering





(Programme-Civil Engineering) w. e. f. A.Y. 2024-2025

Course Contents	Duration
Overview of GPT variants and their use cases	
Introduction to ChatGPT and its purpose	
Training data and techniques for ChatGPT	
Handling user queries and generating responses	
Tips for improving ChatGPT's performance.	
Unit-V Prompt Engineering	
The Fundamentals of Prompt Engineering	
Components of a prompt	07 Hrs
Techniques for prompt engineering	0/1118
Applications of Prompt Engineering	
Potential prompt misuses	
Unit-VI Future of generative AI and Ethical Considerations in Generative AI	
Emerging trends in Generative AI	
Generative AI technology evolution	
Opportunities for innovations and growth	08 Hrs
Understanding the ethical implications of generative models	
Addressing bias and fairness in generative AI systems	
Ensuring responsible use and deployment of generative models	

Course Outcomes (COs): After successful completion of the course, students will be able to:

CO	Statements
1	Explain the fundamental concepts, principles and technology of generative AI.
2	Describe the generative AI landscape and its practical applications across various industries.
3	Apply prompt engineering from understanding its techniques and patterns.
4	Discuss emerging trends and future directions in generative AI, including ethical considerations and challenges associated with its use.

Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs)

POs	BTL	1	2	3	4	5	6	7	8	9	10	11	12
1	2	2	1	-	-	-	2	-	-	-	-	-	-
2	2	2	1	-	-	-	1	1	-	-	-	-	-
3	3	2	2	1	1	3	1	-	-	-	-	-	-
4	6	2	2	2	2	2	1	-	-	-	-	-	-



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Department of First Year Engineering





(Programme-Civil Engineering) w. e. f. A.Y. 2024-2025

Suggested Learning Resources:

Text Books:

Sr. No	Title	Edition	Author(s)	Publisher	Year
1	"Generative AI for everyone: Understanding the essentials and applications of this breakthrough technology".	-	Altaf Rehmani	-	ı
2	"Introduction to Generative AI".	Kindle Edition	Numa Dhamani		2024

Reference Books:

Sr. No	Title	Edition	Author(s)	Publisher	Year
1	"Generative Adversarial Networks Cookbook: Over 100 recipes to build generative models using Python, TensorFlow, and Keras" by Josh Kalin.	-	Josh Kalin	-	1
2	"Generative AI in Software Development: Beyond the Limitations of Traditional Coding" Jesse Sprinter, 2024.	-	Jesse Sprinter	-	2024

Useful Link / Web Resources:

- **1.** https://elearn.nptel.ac.in/shop/iit-workshops/completed/leveraging-generative-ai-for-teaching-programming-courses/?v=c86ee0d9d7ed
- **2.** https://elearn.nptel.ac.in/shop/iit-workshops/completed/introduction-to-language-models/?v=c86ee0d9d7ed



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Department of First Year Engineering

F. Y. B. Tech. Curriculum



(Programme-Civil Engineering) w. e. f. A.Y. 2024-2025

Course Title: Generative AI Laboratory								
Course Code: CE24FE123P	Semester: II							
Teaching Scheme: L-T-P: 0-0-2	Credit: 1							
Evaluation Scheme: ISE: INT-25 Marks	ESE/POE/OE Marks: -							

Prior Knowledge of:	Basic mathematics, Statistics

Course Objectives:

1.	To provide fundamental knowledge of AI
2.	To prepare the students with demanding industry skills
3.	To provide an opportunity to develop expertise in AI tools & technologies.
4.	To apply theoretical understanding to hands-on interdisciplinary projects, solving problems
	using Generative AI models

List of Experiments-

Exp. No	Title of Experiments	Duration
01	Generative AI tools and platforms	2 Hrs
02	NLP use cases in business- Social Media Monitoring, Autocorrect, Spell Check Speech Recognition, Machine Translation	2 Hrs
03	Study of ChatGPT to conduct a simple conversation and analyze the responses.	2 Hrs
04	Study of Scribe.	2 Hrs
05	Study of AlphaCode.	2 Hrs
06	Study of GitHub Copilot.	2 Hrs
07	Study of GPT-4.	2 Hrs
08	Study of Chatbots and Text Generators.	2 Hrs
09	Study of Colormind.	2 Hrs
10	Study of Kite.	2 Hrs

Course Outcomes (COs): After successful completion of the course, students will be able to:

CO	Statements
1	Understand with basic AI.
2	Understand the evolution of AI.
3	Apply AI tools to various business models.
4	Generate innovative ideas, contents & outputs for industry applications.



FACULTYOFENGINEERING& FACULTYOFMANAGEMENT,

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Department of First Year Engineering F. Y. B. Tech. Curriculum



(Programme-Civil Engineering) w. e. f. A.Y. 2024-2025

Course Articulation Matrix: Mapping of Course Outcomes (Cos) with Program Outcomes (PO's)

PO's CO's	BTL	1	2	3	4	5	6	7	8	9	10	11	12
1	2	2	1	-	-	-	2	-	-	-	-	-	2
2	2	2	1	-	-	-	1	1	-	-	-	-	2
3	3	2	2	1	1	3	1	-	-	1	-	-	2
4	6	2	2	2	2	2	1	-	-	-	-	-	2

Suggested Learning Resources: --

Text Books:

Sr. No	Title	Edition	Author(s)	Publisher	Year
1	"Generative AI for everyone: Understanding the essentials and applications of this breakthrough technology".	'	Altaf Rehmani	-	1
2	"Introduction to Generative AI'	Kindle Edition	Numa Dhamani		2024

Reference Books:

Sr. No	Title	Edition	Author(s)	Publisher	Year
1	"Generative Adversarial Networks Cookbook: Over 100 recipes to build generative models using Python, TensorFlow, and Keras" by Josh Kalin.	-	Josh Kalin	-	-
2	"Generative AI in Software Development: Beyond the Limitations of Traditional Coding" Jesse Sprinter, 2024.	-	Jesse Sprinter	-	2024

Useful Link /Web Resources:

- **1.** https://elearn.nptel.ac.in/shop/iit-workshops/completed/leveraging-generative-ai-for-teaching-programming-courses/?v=c86ee0d9d7ed
- **2.** https://elearn.nptel.ac.in/shop/iit-workshops/completed/introduction-to-language-models/?v=c86ee0d9d7ed



FACULTYOFENGINEERING& FACULTYOFMANAGEMENT,

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Department of First Year Engineering F. Y. B. Tech. Curriculum (Civil Engineering)

w. e. f. A.Y. 2024-2025



Course Title: Fundamentals of Civil Engineering	
Course Code: FCE24FE124	Semester: II
Teaching Scheme: L-T-P :2-0-0	Credits: 2
Evaluation Scheme ISE-I (10 Marks), MSE (30 Marks), ISE-II (10 Marks):	ESE Marks: 50 marks

Prior Knowledge of:	This course is to provide students with a strong foundation in the
	fundamental principles and concepts of civil engineering. This
	foundational knowledge is essential for understanding and applying
	advanced concepts in specialized areas of engineering. Engineering
	mechanics applies the principle of mechanics to design, taking into
	account the effects of forces.

Course Objectives:

1.	To learn basic concepts and system of forces
2.	To develop skills to use the basic principles of mechanics in engineering applications.
3.	To solve problems of statics and dynamics related to engineering domain using principles of mechanics.
4	To inculcate essentials of civil engineering field to the students of all branches of Engineering. And to provide the students an illustration of the significance of Civil Engineering profession in satisfying societal need.



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Department of First Year Engineering F. Y. B. Tech. Curriculum (Civil Engineering)

w. e. f. A.Y. 2024-2025



Curriculum Details

	Course Contents	Duration
Unit-I Resol	ution and composition of force system Introduction to Mechanics,	8 Hrs
ii.	Force system, concept of Resultant,	
iii.	Composition and Resolution of Forces, Equivalent force system,	
iv.	Moment of a force, Couple ,law of parallelogram,	
v.	Varignon's theorem, Resultant of a concurrent and non-concurring force	
	system	
Unit-II Equil	ibrium of rigid body	7 Hrs
i.	Concept of Equilibrium,	
ii.	Free Body Diagram, Lami's theorem,	
iii.	analytical conditions of equilibrium,	
iv.	engineering application to beams and trusses	
V.	Friction, types of friction, laws of Friction.	
Unit-II	I	7 Hrs
Linea	r and circular motion of a body	
i.	Rectilinear motion,	
ii. iii.	Equations of motion, motion diagrams, Motion in vertical direction.	
iv.	Circular motion, motion on curved path, supper elevation	
Unit-I	V Iuction to Civil engineering and Surveying	8 Hrs
i.	Introduction to civil engineering, various disciplines of civil engineering,	
ii.	relevance of civil engineering in overall infrastructural development of the	
	country,	
Surve	ying:	
iii.	Principle and objectives of surveying.	
iv.	Linear measurement: Instrument used, tapes, types of tapes.	
v.	Angular measurement: Instrument used, meridian, bearing.	
vi.	Problems based on open and closed traversing.	



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Department of First Year Engineering F. Y. B. Tech. Curriculum (Civil Engineering) w. e. f. A.Y. 2024-2025

Accredited with Grade

(3.25 CGPA)

NAAC CYCLE 7-

Course Outcomes (COs): After successful completion of the course, students will be able to:

CO	Statements
1	Calculate resultant force for coplanar concurrent and noncurrent force system.
2	Apply static conditions of equilibrium to calculate reactive forces of structures like beams, trusses etc.
3	Apply equations of motion on a body moving along straight path and circular path to determine the motion parameters.
4	Understand fundamental aspects of civil engineering and types of traversing for calculations of the included angle.

Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs)

POs COs	BTL	1	2	3	4	5	6	7	8	9	10	11	12
1	2	2	3										
2	3	2	3										
3	3	2	3										
4	2	2	3										



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Department of First Year Engineering F. Y. B. Tech. Curriculum (Civil Engineering)

w. e. f. A.Y. 2024-2025



Suggested Learning Resources:

Text Books:

Sr. No	Title	Edition	Author(s)	Publisher	Year
1	S. S. Bhavikattis, "Engineering	8	S. S. Bhavikatti	New Age	2021
	Mechanics", New Age			International	
	International Pvt. Ltd			Pvt. Ltd	
2	S. Timoshenko, "Engineering	5	S. Timoshenko	McGraw Hill	2017
	Mechanics", McGraw Hill			Education	
	Education				
4	S.S.Bhavikattis, "BasicCivilEngi	4	S.S. Bhavikatti	New Age	2024
	neering",NewAgeInternationalP			International	
	vt.Ltd			Pvt. Ltd	
5	G.K. Hiraskar," Basic Civil	I	G.K. Hiraskar	Dhanapat Rai	2018
	Engineering", Dhanapat Rai			Publications	
	Publications				

Reference Books:

Sr.No	Title	Edition	Author(s)	Publisher	Year
1	Meriam J. L., Kraige L. G.,	8	Meriam J.	Wiley	2017
	"Engineering Mechanics – Statics,		L., Kraige	Student	
	Vol.1", Wiley Student Edition,		L. G.	Edition	
	(8thEdition) 2017				
2	R.C. Hibbeler, "Engineering	14	R.C.	Pearson	2016
	Mechanics", Pearson		Hibbeler	Publication	
	Publication(14thedition)				
3	"Strength of Material"-F.L. Singer and	4	F.L.Singera	Harper and	2016
	Pytel, Harper and Row publication.		ndPytel	Row	
				publication.	
4	B.C. Punmia, "Surveying", VolI,	18	B.C.	Laxmi	2016
	VolII, VolIII, Laxmi Publication		Punmia,	Publication	



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Department of First Year Engineering F. Y. B. Tech. Curriculum (Civil Engineering)



w. e. f. A.Y. 2024-2025

Course Title: Plumbing and Electrical Skills				
Course Code: PES24FE125	Semester: II			
Teaching Scheme L-T-P:1-0-0	Credits: 1			
Evaluation Scheme : ISE-25	ESE Marks:			

Prior Knowledge of:	The formal education of plumbing and electrical skill will improve the
	plumbing and electrical system design and installation standards,
	thereby, ensuring health and safety of people and structures.

Course Objectives:

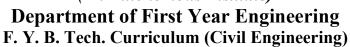
1.	To study the basic terminology of plumbing and its materials.
2.	To understand the Plumbing water supply system and drawings.
3.	To know the fundamentals of electricity and its materials used in work.
4	To discuss the alternating currents and earthing system.

CurriculumDetails

Course Contents	Duration				
Unit-I					
Plumbing	8Hrs				
1.Introduction to Plumbing Accessories:					
 Various type of pipes and their purpose, connectors, types of joints 					
Traps- Types and functions					
CP Fittings-					
Sanitary wares- Types and purpose					
2.Plumbing Systems:					
External plumbing and internal plumbing					
• Testing					
One pipe and Two pipe system					
Water supply and Drainage system, chambers					
Septic Tank- Purpose, Mechanism and Design					
Disposal of waste water, soak pit					
3. Rain Water Harvesting:					
Rain water harvesting system					
Bore well recharge					
Underground water tanks					
4.Plumbing codes:					
Plumbing codes and standards					



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w. e. f. A.Y. 2024-2025



Course Contents	Duration		
Unit-II			
Electrical skills			
Introduction to Electrical Systems			
Concept of E.M.F,			
Electrical Circuits:			
Basics and Components			
Potential Difference, Current, Resistance, Ohm's Law Kirchhoff's Laws,			
Comparison between Direct Current (D.C) and Alternating Current A.C,			
Wiring Methods and Materials			
types of wires, wiring system and wiring methods, Comparison of different			
types of wiring, Specifications of Different types of wiring materials,			
Accessories Different types of wiring tools.			
Electrical Lighting: Types and Installations			
Incandescent Lamp, Fluorescent tube, CFL, LED lamp, Mercury vapour lamp.			
Electrical Power Distribution: Single-Phase and Three-Phase			
Electrical Safety and Earthing			
Necessity of Earthing, Earthing methods, Fuse (rewireble and HRC). MCB			

Course Outcomes (COs):

After successful completion of the course, students will be able to

Electrical Codes and Standards

CO	Statements
125.1	Understand the fundamentals of plumbing and electrical systems
125.2	Identify various plumbing and electrical materials and fixtures
125.3	Learn installation and testing procedures
125.4	Acquirecompetencyin plumbing and electrical codes and standards



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w. e. f. A.Y. 2024-2025

Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs)

POs COs	BTL	1	2	3	4	5	6	7	8	9	10	11	12
1	2	3	2										
2	2	3	2										
3	2	3	2										
4	2	3	2										

Suggested Learning Resources:

Text Books:

Sr. No	Title	Edition	Author(s)	Publisher	Year
	V.N.MittalandArvindMittal"Basic		V.N.MittalandArvind	TataMcGrawHill	
1	ElectricalEngineering"TataMcGra	2	Mittal		2011
	wHill,(RevisedEdition)				
2	B.L.Theraja,"Electrical	23	B.L.Theraja	S.ChandPublicatio	2020
2	Engineering" Vol. –Iand II	23		ns	2020
	V.K.Mehta, "Fundamentals of Elect		V.K.Mehta	S.ChandPublicatio	
3	ricalTechnology",S.ChandPublica			ns	2008
	tions				

Reference Books:

Sr. No	Title	Edition	Author(s)	Publisher	Year
1	Uniform Illustrated Plumbing Code-India (UIPC-I) published by IPA and IAPMO(India)			IPA and IAPMO(India)	2017
2	'AGuidetoGoodPlumbingPractices',ab ookpublishedbyIPA.	2		IPA.	2016
3	L.S.Bobrow, Fundamentals of Electrical Engineering, Oxford University Press, 2011.		L.S.Bobrow	OxfordUniversityP ress	2011
4	D.C.Kulshreshtha, BasicElectricalEngineering, McGrawHill, 2009.		D.C.Kulshreshtha	McGrawHill	2009



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w. e. f. A.Y. 2024-2025

Course Title: Plumbing and Electrical Skill Laboratory					
Course Code : CE24FE127P Semester: II					
Teaching Scheme: L-T-P: 0-0-2	Credit :1				
Evaluation Scheme: INT: 25	ESE/POE/OE Marks:				

Prior Knowledge of:	The formal education of plumbing and electrical skill will improve							
	the plumbing and electrical system design and installation							
	standards, thereby, ensuring health and safety of people and							
	structures.							

Course Objectives:

1.	To study the plumbing joints and drawings.
2.	To understand the plumbing fitting and level system.
	Toexposethestudentsforpracticaltrainingthroughexperimentstounderstand about
3.	fundamental parameters such as resistance, inductance, capacitance andmagnetic,
	ACand DCcircuits.
4.	Tomakethemunderstandelectrical safetyprecautions

List of Experiments-

Exp.	Title of Experiments	Duration
No	True of Experiments	(Hrs)
01	Pipe Cutting and Threading	2
01	Cut and thread pipes using different tools and techniques	2
02	Pipe Fitting and Joining	2
02	Assemble and connect pipe fittings (elbows, tees, couplings)	2
03	Fixture Installation	2
03	Install sinks, toilets, and faucets	2
04	Water Supply System Assembly	2
04	Assemble a mock water supply system	2
05	Drainage System Assembly	2
0.5	Assemble a mock drainage system	2
06	Wire Stripping and Terminations	2
00	Strip and terminate wires using different tools and techniques	2
07	Circuit Assembly	2
07	Assemble simple electrical circuits	Δ
08	Lighting Installation	2
08	Install lighting fixtures and switches	Δ
09	Earthing and Bonding	2
09	Understand and demonstrate earthing and bonding techniques	2



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w. e. f. A.Y. 2024-2025

Exp. No	Title of Experiments	Duration (Hrs)
10	Electrical Testing and Measurement Use multimeters to measure voltage, current, and resistance	2

Additional Practical Activities

- Visit to a plumbing and electrical materials market
- Site visit to observe plumbing and electrical installations
- Group project: Design and propose a plumbing and electrical system for a small building

Course Outcomes (COs): After successful completion of the course, students will be able to:

CO	Statements
1	Develop hands-on skills in plumbing and electrical installations
2	Understand practical applications of theoretical concepts
3	Familiarize with tools, materials, and safety procedures
4	Enhance problem-solving and critical thinking skill

Course Articulation Matrix: Mapping of Course Outcomes (Cos) with Program Outcomes (PO's)

PO's	BTL	1	2	3	4	5	6	7	8	9	10	11	12
1	2	3	2										
2	2	3	2										
3	3	3	2										
4	2	3	2										



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w. e. f. A.Y. 2024-2025

Suggested Learning Resources: --Text Books:

Sr. No	Title	Edition	Author(s)	Publisher	Year
1	Fundamentalsof ElectricalEngineeringbyAshfaqHusain,DhanpatRai Company	4	AshfaqHusain	DhanpatRai Company	2007

Reference Books:

Sr. No	Title	Edition	Author(s)	Publisher	Year
1	AGuidetoGoodPlumbingPractice s',abookpublishedbyIPA.	2		IPA.	2016
2	L.S.Bobrow —FundamentalsofElectricalEngi neering,OxfordUniversityPress,2 011		L.S.Bobrow	OxfordUniversityPre ss	2011



FACULTY OF ENGINEERING & FACULTY OF MANAGEMENT, TALSANDE $(An\ Autonomous\ Institute)$

First Year Engineering Department F. Y. B. Tech. Curriculum (Civil Engineering) w.e.f. A. Y. - 2024-2025



Course Plan:

Course Title: Indian Town Planning and Architecture			
Course Code: ITPA24FE126	Semester: II		
Teaching Scheme: L-T-P:1-0-2	Credits: 02		
Evaluation Scheme: ISE 20 marks	ESE Marks: 30 marks		

Course Description:

Students would be introduced to the glorious past and achievements of the Indian subcontinent ranging from the "ancient period" to the "medieval period" concerning architecture and town planning. And develop a sense of pride and belongingness amongst the students towards Indian Knowledge Systems and further motivate them to bridge the gap between knowledge and application.

Course Objectives:

1	To develop the knowledge and analysis on the understanding of eco-friendly, robust and
1.	scientific planning and architecture system of ancient India.
2	To understand the importance of functional, aesthetic, psychological, culture and socio
2.	religious concept of ancient India architecture.
2	To help the learners to trace, identify and develop the approach, process and material used in
3.	town and planning, construction and architecture
4	To review and analyse the importance and significance of visual and performing arts and
4.	design in temples, houses, forts, caves and community places.
5.	To understand the various eco-friendly technologies accepted in ancient civilization.

Course Outcomes (COs): At the end of the course, the students should be able to:

CO	Statements	BTL
126.1	Learn the importance of functional, aesthetic, psychological, culture and socio religious concept of ancient India architecture & Understand scientific planning and architecture system of ancient India.	1
126.2	Understand the various eco-friendly technologies accepted in ancient civilization. And Inculcate the understanding of eco-friendly, robust and scientific planning.	2



FACULTY OF ENGINEERING & FACULTY OF MANAGEMENT, TALSANDE (An Autonomous Institute)

First Year Engineering Department F. Y. B. Tech. Curriculum

(Civil Engineering) w.e.f. A. Y. - 2024-2025



Course Content:

Content	Duration
Unit 1: The Introduction to ancient Architecture	
 Introduction to relationship between Man, Nature, Culture and city forms. Study of determinants (Natural and man-made) influencing location, growth & pattern of human settlements including types of settlements growth (Organic and Planned) and settlement forms. Architecture as satisfying human needs: functional, aesthetic and psychological outline of components and aspects of architectural form-site, structure, skin, materials, services, use, circulation, expression, character, experience 	05 Hrs
 Unit II: Ancient Architecture as Expression of Art & Design Pre-Harappa and Sindhu Valley Civilization, Engineering Science and Technology in the Vedic Age. Post-Vedic Records, Iron Pillar of Delhi, Rakhigarh, Mehrgarh. Marine Technology, and Bet–Dwarka, conventional building material, green building, heritage sites, fortification and maintenance, anthills. 	07 Hrs
 Unit III: Ancient Architecture Materials & Planning Clay products: Classification of bricks, Fire Brick, Fly Ash Bricks, Tiles, Terra-cotta, Earthenware, Porcelain, Stoneware. Stones: Uses of Stones, Qualities of Good Building Stones, Dressing, Common Building Stones of India. Glass: Different glass Forms and their Suitability, Timber: Different Forms and their Suitability Metals: Ferrous & Nonferrous Metals and Alloys, and, their Suitability, limitations, precautions Paints and Varnishes: Different types and their Suitability, limitations, precautions Planning: Residence- site selection, site orientation- aspect, prospect, grouping, circulation, privacy, furniture requirements, services and other factors. Vastu shastra and its importance in building interrelationship with human, nature and cosmos Town Planning: Town plans of Harappa, Mohenjodaro, Pataliputra, Delhi. Vastu shastra and its application in city layout. 	07 Hrs
 Unit IV: Ancient Architecture Important architecture: Walled towns, structures developed e.g.: Stupas, Stambhas, sacred railing etc. Study of worshipping places with special reference to Mahalaxmi Temple & KopeshwarTemple. Tradition Indian villages & House: Regional house construction, interior & importance. Scientific achievements though ancient architect: Musical Pillars of Vitthal temple, Sundial of KonarkTemple, construction of eight shiva temple in straight line from Kedarnath to Rameswaram, Veerbhadra temple with 70 hanging pillars, Ellora caves excavating the mountain, Jaipur plan pink city etc. 	07 Hrs



FACULTY OF ENGINEERING & FACULTY OF MANAGEMENT, TALSANDE (An Autonomous Institute)

First Year Engineering Department F. Y. B. Tech. Curriculum



(Civil Engineering) w.e.f. A. Y. - 2024-2025

Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs)

POs	BTL	1	2	3	4	5	6	7	8	9	10	11	12
126.1 P	1	-	1	1	-	-	-	-	1	1	-	-	2
126.2 P	2	-	-	-	-	-	-	-	-	-	-	-	2

Suggested Learning Resources:

Text Books:

Text books.								
Sr. No	Title	Author(s)	Publisher	Year				
1.	Indian Knowledge Systems, Vol. 1.	Kapur K and Singh A K	Central Chinmay mission trust, Bombay, 1995	2005				
2.	Mayamata: An Indian Treatise on Housing Architecture and Iconography	B Dagens,	Pustak Mahal, Delhi	2013				
3.	The Miracles of Vaastu Shastra	S S Das	O'Reilly	2017				
4.	Ancient India	R. C. Majumdar		2015				



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First Year Engineering Department F. Y. B. Tech. Curriculum



(Civil Engineering) w.e.f. A.Y. - 2024-2025

Course Title: Yoga			
Course Code: YOGA24FE127	Semester: II		
Teaching Scheme: L-T-P: 1-0-2	Credits: 02		
Evaluation Scheme: INT 50 marks	ESE:		

Course Objectives:

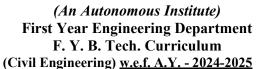
1.	To make the students understand the importance of sound health and fitness principles As they relate to better health.
2.	To expose the students to a variety of physical and yogic activities aimed at Stimulating their continued inquiry bout Yoga, physical education, health and fitness.
3.	To develop among students an appreciation of physical activity as a lifetime pursuitanda Means to better health.

Curriculum Details

Course Contents	Duration
Unit I: Physical Fitness, Wellness & Life style	
 Meaning & Importance of Physical Fitness & Wellness 	
Components of Physical fitness	
Components of Health related fitness	
Components of wellness	
Preventing Health Threats through Lifestyle Change	7 Hrs
Concept of Positive Lifestyle	
Meaning & Importance of Yoga	
Elements of Yoga	
Introduction- Asanas, Pranayama, Meditation & Yogic Kriyas	
Unit II: Physical Fitness, Wellness & Lifestyle	
 Yoga for concentration & related Asanas (Sukhasana; Tadasana; Padmasana & 	
Shashankana)	
Relaxation Techniques for improving concentration-Yog-nidra	
Asanasas preventive measures.	
Hypertension: Tadasana, Vajrasana, Pavan Muktasana, Ardha Chakrasana,	
Bhujangasana, Sharasana.	
Obesity: Procedure, Benefits & contra indications for Vajrasana, Hastasana,	8 Hrs
Trikonasana, Ardh Matsyendrasana.	0 1113
Back Pain: Tadasana, Ardh Matsyendrasana, Vakrasana, Shalabhasana,	
Bhujangasana.	
• Diabetes: Procedure, Benefits & contraindications for Bhujangasana,	
Paschimottasana, Pavan Muktasana, Ardh Matsyendrasana.	
Asthema: Procedure, Benefits & contra indications for Sukhasana, Chakrasana,	
Gomukhasana, Parvatasana, Bhujangasana, Paschimottasana, Matsyasana.	



FACULTY OF ENGINEERING & FACULTY OF MANAGEMENT,





Course Outcomes (COs): After successful completion of the course, students will be able to:

СО	Statements
117.1	To learn techniques for increasing concentration and decreasing anxiety this leads to stronger academic performance.
117.2	To understand basic skills associated with yoga and physical activities including Strength and flexibility, balance and coordination.
117.3	To perform yoga movements in various combination and forms.

Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs)

PO's	BTL	1	2	3	4	5	6	7	8	9	10	11	12
117.1	1	-	-	-	-	-	-	-	-	-	-	-	2
117.2	1	-	-	-	-	-	-	-	-	i	-	-	2
117.3	1	-	-	-	-	-	-	-	-	-	-	-	2

Suggested Learning Resources:

Text Books:

Sr. No.	Title
1	Modern Trends and Physical Education by Prof. Ajmer Singh.
2	Light On Yoga by B. K. S. Iyengar.



FACULTY OF ENGINEERING & FACULTY OF MANAGEMENT,

(An Autonomous Institute)
First Year Engineering Department
F. Y. B. Tech. Curriculum
(Civil Engineering) w.e.f. A.Y. - 2024-2025



Course Objectives:

1.	To make the students understand the importance of sound health and fitness principles As they relate to better health.
2.	To expose the students to a variety of physical and yogic activities aimed at Stimulating their continued inquiry about Yoga, physical education, health and fitness.
3.	To develop among students an appreciation of physical activity as a lifetime pursuitanda Means to better health.

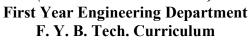
Curriculum Details

Course Contents	Duration
1. Introduction- Asanas, Pranayama, Meditation & Yogic Kriyas	2Hrs
2. Yoga for concentration & related Asanas (Sukhasana; Tadasana; Padmasana & Shashankasana)	2Hrs
3. Relaxation Techniques for improving concentration-Yog-nidra	2Hrs
4. Hypertension: Tadasana, Vajrasana, Pavan Muktasana, Ardha Chakrasana, Bhujangasana, Sharasana	2Hrs
5. Obesity: Procedure, Benefits & contraindications for Vajrasana, Hastasana, Trikonasana, Ardh Matsyendrasana	2Hrs
6. BackPain: Tadasana, Ardh Matsyendrasana, Vakrasana, Shalabhasana, Bhujangasana	2Hrs
7. Procedure, Benefits &contraindications for Sukhasana, Chakrasana, Gomukhasana, Parvatasana, Bhujangasana, Paschimottasana, Matsyasana	2Hrs
8. Procedure, Benefits & contra indications for Bhujangasana, Paschimottasana, Pavan Muktasana, Ardh Matsyendrasana	2Hrs



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(Civil Engineering) <u>w.e.f. A.Y. - 2024-2025</u>

Course Outcomes (COs): After successful completion of the course, students will be able to:

СО	Statements
117.1 P	To practice Physical activities and Hatha Yoga focusing on yoga for strength, flexibility, and relaxation.
117.2 P	To physically perform yoga movements in various combination and forms.

Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs)

PO's	BTL	1	2	3	4	5	6	7	8	9	10	11	12
117.1 P	1	-	-	-	-	-	-	-	-	-	-	-	2
117.2 P	1	-	-	-	-	-	-	-	-	-	-	-	2

Suggested Learning Resources:

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