

An Autonomous Institute



Shree Warana Vibhag Shikshan Mandal's

**Tatyasaheb Kore Institute of
Engineering And Technology,
Warananagar**

NBA Accredited Institute

Department of Civil Engineering

B. Tech. in Civil Engineering

Syllabus Structure and Curriculum under Autonomy as per the NEP 2020



**Tatyasaheb Kore Institute of Engineering and
Technology, Warananagar
An Autonomous Institute
Department of Civil Engineering**

❖ VISION

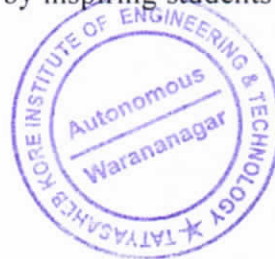
To produce competent civil engineers through sound technical and ethical education who can fulfill industry demands and support sustainable development.

❖ MISSION

- To enhance technical knowledge, engineering skills through curriculum advancement.
- To mentor the students in relevance to higher education, employable professionals, and entrepreneurship.
- To instill principles that enhances creativity and societal concern through sustainable views.

❖ QUALITY POLICY

To promote excellence in academic and training activities by inspiring students for becoming competent professionals to cater industrial and social needs.



**Tatyasaheb Kore Institute of Engineering and Technology,
Warananagar
An Autonomous Institute
Department of Civil Engineering**

❖ **PROGRAM EDUCATIONAL OBJECTIVES**

Graduates will be able to,

1. Become competent professional to make notable career in Public and private sector of civil engineering.
2. Explore the study in order to improve the knowledge with strong base in engineering, ethical and innovation skills.
3. Develop entrepreneurial and leadership qualities with capacity to raise variety of topic in context with societal needs.

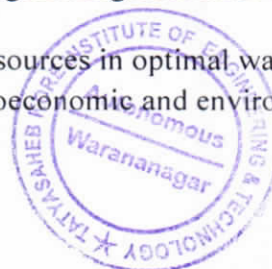
❖ **PROGRAM OUTCOMES**

After completion of the Program, graduates will,

1. **Engineering Knowledge:** Demonstrate knowledge in mathematics, basic sciences & civil engineering.
2. **Problem Analysis:** Identify, formulate, and solve civil engineering problems.
3. **Design/Development of Solution:** Prepare structural design such that fulfills design specification, durability, economy & safety.
4. **Conduct Investigation of Complex Problems:** Design and conduct experiment, analyze data & also interpret result to provide conclusion.
5. **Modern Tool Usage:** Use appropriate engineering techniques & software tools to analyze civil engineering problems.
6. **The Engineer and Society:** Apply civil engineering knowledge for construction site in all respect like planning, execution, and supervision.
7. **Environment and Sustainability:** Sensitive towards ethical, societal & environmental issue along with professional work.
8. **Ethics:** Exhibit understanding of professional & ethical responsibility.
9. **Individual and Team Work:** Ability to function as a leader of multidisciplinary team.
10. **Communications:** Communicate effectively in both verbal & written form.
11. **Project Management and Finance:** Develop engineering research ability & project management skill.
12. **Lifelong Learning:** Possess confidence for self-education & ability for lifelong learning.

❖ **PROGRAM SPECIFIC OUTCOMES**

1. Capable to Design, Estimate, and Execute a variety of civil engineering structures considering a sustainable way.
2. Work effectively in a team with leadership skill to manage resources in optimal way.
3. Develop a perspective to formulate solutions consider in socioeconomic and environmental concern.



SWVSM'S

Tatyasaheb Kore Institute of Engineering and Technology, Warananagar An Autonomous Institute

Abbreviations

Sr.No.	Acronym	Definition
1	ISE	In-Semester Examination
2	ISE-I	In-Semester Examination-I
3	ISE-II	In-Semester Examination-II
4	ESE	End Semester Examination
5	ISA	In-Semester Assessment (Term Work)
6	L	Lecture
7	T	Tutorial
8	P	Practical
9	CH	Contact Hours
10	C	Credit

Course/ Subject Categories

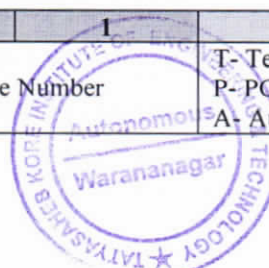
Sr.No.	Acronym	Definition
1	BSC	Basic Science Course
2	HSC	Humanity Science Course
3	ESC	Engineering Science Course
4	PCC	Professional Core Course
5	OEC	Open Elective Course
6	MC	Mandatory Course
7	PEC	Professional Elective Course
8	PW	Project Work (Mini and Major Project)
9	II	Industrial Internship

Course/ Subject Code

C	E	7	0	1
Branch Code		Semester	Course Number	

Course Term work and POE Code

C	E	3	0	1	T / P / A
Branch Code		Semester	Course Number		T- Term work P- POE A- Audit Course



Tatyasaheb Kore Institute of Engineering and Technology, Warananagar
An Autonomous Institute

**Semester wise Credit Distribution for
B.Tech. Civil Engineering Program**

Sem.	I	II	III	IV	V	VI	VII	VIII	Total
Credits	21	21	21	21	21	21	21	21	168

Honor Program in under Civil Engineering

Sem.	V	VI	VII	VIII	Total
Credits	5	5	5	5	20



Second Year B.Tech. in Civil Engineering

Proposed Structure and Syllabus Under Autonomy as per the NEP Policy 2020



TatyasahebKore Institute of Engineering and Technology, Warananagar

Second Year B. Tech. (Civil Engineering)

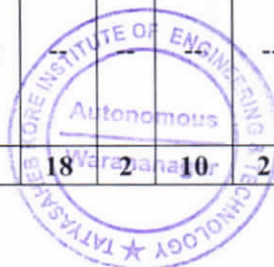
Semester-III

(To be implemented from 2024 - 25)

Credit Scheme as per NEP Policy

S. Y. B. Tech. Civil Engineering Sem -III

Sr. No.	Category	Sub Category	Course Code	Name of Course	Teaching Scheme			C	CH	Examination & Evaluation Scheme			
					L	T	P			Component	Marks	Min for Passing	
1	Program Course	PCC	23UGPCC-CE301	Strength of Materials	3*	--	--	2	3	ESE	60	24	40
										ISE	40	16	
2		PCC	23UGPCC-CE302	Surveying	3*	--	--	2	3	ESE	60	24	40
										ISE	40	16	
3		PCC	23UGPCC-CE303	Fluid Mechanics	3*	--	--	2	3	ESE	60	24	40
										ISE	40	16	
4	Program Course	PCC	23UGPCC-CE304	Engg. Mathematics for Civil Engineering	2	--	--	2	2	ESE	60	24	40
										ISE	40	16	
5		PCC	23UGPCC-CE305	Building Construction and Drawing	3*	--	--	2	3	ESE	60	24	40
										ISE	40	16	
6		MDM-1	23UGMD M1-CE306T	Construction Materials	1	1	--	2	2	ISA	50	20	20
7	Humanities Social Science and Management	Entrepreneurship/Economics/Management Courses	23UGEEC 1-CE3073	Professional Leadership & Interpersonal Skills	2	--	--	2	2	ISA	25	10	10
8		Value Education Course(VEC)	23UGVEC 1-CE3081	Personal Values and Ethics	1	1	--	2	2	ISA	25	10	10
9	Experiential Learning Courses	Comm. Engg. Project (CEP)/Field Project (FP)	23UGFP-CE302 LP	Field Project (Surveying)	--	--	4	2	4	ISA	25	10	20
										POE	25	10	
10	Program Course	PCC	23UGPCC-CE301 LP	Strength of Materials	--	--	2	1	2	ISA	25	10	20
										POE	25	10	
11		PCC	23UGPCC-CE303 LP	Fluid Mechanics	--	--	2	1	2	ISA	25	10	20
										POE	25	10	
12	Program Course	PCC	23UGPCC-CE305 L	Building Construction and Drawing	--	--	2	1	2	ISA	50	20	20
13	Audit Course	A	23UGPCC-CE309 A	Audit Course – III (General Proficiency as per the need of Industry depending on Program & no repetition from the course)				--	--	--	--	--	--
					18	2	10	21	30	--	800	320	320



Second Year B. Tech. (Civil Engineering)

Semester-IV

(To be implemented from 2024 - 25)

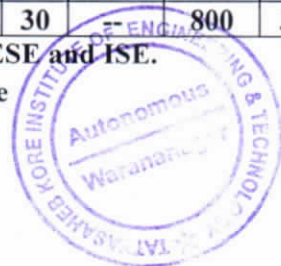
Credit Scheme as per NEP Policy

S. Y. B. Tech. Civil Engineering Sem - IV

Sr. No.	Category	Sub Category	Course Code	Name of Course	Teaching Scheme			C	C H	Examination & Evaluation Scheme			
					L	T	P			Com ponent	Mark s	Min for Passing	
1	Program Course	PCC	23UGPCC-CE401	Mechanics of Structures	3*	--	--	2	3	ESE	60	24	40
										ISE	40	16	
2		PCC	23UGPCC-CE402	Advanced Surveying	3*	--	--	1	3	ESE	60	24	40
										ISE	40	16	
3		PCC	23UGPCC-CE403	Concrete Technology	2	--	--	2	2	ESE	60	24	40
										ISE	40	16	
4		PCC	23UGPCC-CE404	Hydraulics	2*	--	--	1	2	ESE	60	24	40
										ISE	40	16	
5	Multidisciplinary Courses	MDM-2	23UGMDM2-CE405T	Disaster Management	1	1	--	2	2	ISA	50	20	20
6		OE - I	23UGOE1-CE4061	Energy & Environment	3	--	--	3	3	ESE	60	24	40
									ISE	40	16		
7	Skill Courses	Vocational and Skill Enhancement Course (VSEC)	23UGVSEC-CE407 L	Computer Aided Design and Drawing	1	--	2	2	3	ISA	25	10	10
8	Humanities Social Science and Management	Ability Enhancement Course	23UGAEC1-CE4083 L	Modern Indian Language	1	--	2	2	3	ISA	25	10	10
		Entrepreneurship/Economics/Management Courses	23UGEEC2-CE4091	Human Resource Management	2	--	--	2	2	ISA	25	10	10
		Value Education Course (VEC)	23UGVEC2-CE4101	Ethics and Moral Philosophy	1	--	--	1	1	ISA	25	10	10
10	Program Course	PCC	23UGPCC-CE402 LP	Advanced Surveying	--	--	2	1	2	ISA	25	10	20
										POE	25	10	
11		PCC	23UGPCC-CE403LP	Concrete Technology	--	--	2	1	2	ISA	25	10	20
										POE	25	10	
12	Program Course	PCC	23UGPCC-CE404 LP	Hydraulics	--	--	2	1	2	ISA	25	10	20
										POE	25	10	
13	Audit Course	A	23UGPCC-CE411 A	Audit Course – IV (Environmental Studies)	--	--	--	--	--	--	--	--	--
					19	1	10	21	30	800	320	320	

Note: In theory examination, there will be separate passing of ESE and ISE.

***Indicates the extra lectures provided for the course**



Humanities Social Science and Management (HSSM)**Course Basket Sem -III****Entrepreneurship / Economics Course (EEC-I)**

Category	Sub Category	Course Code	Name of Course
Humanities Social Science and Management	EEC - I	23UGEEC1-CE3071	1)Leadership & Management
		23UGEEC1-CE3072	2)Entrepreneurship
		23UGEEC1-CE3073	3)Professional Leadership & Interpersonal Skills

Value Education Course (VEC-I)

Category	Sub Category	Course Code	Name of Course
Humanities Social Science and Management	VEC-I	23UGVEC1-CE3081	1)Personal Values and Ethics
		23UGVEC1-CE3082	2)Respect and Empathy
		23UGVEC1-CE3083	3)Leadership and Ethical Decision Making

Humanities Social Science and Management (HSSM)**Course Basket Sem -IV****Ability Enhancement Course (AEC-I)**

Category	Sub Category	Course Code	Name of Course
Humanities Social Science and Management	AEC - I	23UGAEC1-CE4081 L	1)Professional Communication Skills
		23UGAEC1-CE408 2L	2)Critical Thinking and Problem Solving
		23UGAEC1-CE4083 L	3)Modern Indian Language (Marathi, Hindi, Sanskrit, Kanada)

Entrepreneurship / Economics Course (EEC-II)

Category	Sub Category	Course Code	Name of Course
Humanities Social Science and Management	EEC - II	23UGEEC2-CE4091	1)Human Resource Management
		23UGEEC2-CE4092	2)Project Management
		23UGEEC2-CE4093	3)Plumbing and Electrical Skill

Value Education Course (VEC-II)

Category	Sub Category	Course Code	Name of Course
Humanities Social Science and Management	VEC-II	23UGVEC2-CE4101	1)Ethics and Moral Philosophy
		23UGVEC2-CE4102	2)Social Responsibility and Citizenship
		23UGVEC2-CE4103	3)Values in Education Policies and Practice

Multidisciplinary Courses (MDM)**Course Basket Sem -IV****Open Elective – OE - I**

Category	Sub Category	Course Code	Name of Course
Multidisciplinary Courses	Open Elective - OE	23UGOE1-CE4061	1)Energy and Environment
		23UGOE1-CE4062	2)Engineering Geology



