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<p>Estd. 1962 "A++" Accredited by NAAC (2021) With CGPA 3.52</p>	<p>शिवजी विद्यापीठ, कोल्हापूर ४१६ ००४, महाराष्ट्र दूरध्वनी - इपीबीएक्स - २०६०९०००, अभ्यासमंडळे विभाग : ०२३१- २६०९०९४, २६०९४८७ वेबसाईट : www.unishivaji.ac.in ईमेल : bos@unishivaji.ac.in</p>		

जा.क. / शि.वि / अं.म. / इंजि / ६३

दिनांक:- 10 / 01 / 2024

प्रती,

मा. प्राचार्य / संचालक,
सर्व संलग्नित अभियांत्रिकी महाविद्यालये
शिवजी विद्यापीठ, कोल्हापूर

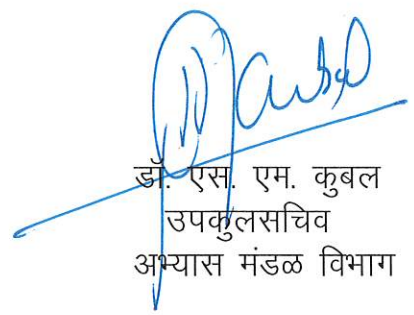
विषय:- राष्ट्रीय शैक्षणिक धोरण 2020 नुसार शैक्षणिक वर्ष 2024-25 पासून लागू करावयाच्या पदवी अभ्यासक्रमाच्या आराखड्या (Structure) बाबत.

संदर्भ:- शासन निर्णय उच्च व तंत्र शिक्षण विभाग एनईपी-2020 / (67 / 23) / तांशि-2 दि. 4 जुलै 2023.

महोदय / महोदया,

उपरोक्त विषयासंदर्भात आपणास आदेशान्वये कळविणेत येते की, राष्ट्रीय शैक्षणिक धोरण 2020 ची राज्यातील अंमलबजावणीच्या अनुषंगाने शासन आदेश व विद्यापीठ अधिकार मंडळाच्या मान्यतेनुसार अभियांत्रिकी पदवी अभ्यासक्रम शैक्षणिक वर्ष 2024-25 पासून लागू करावायाच्या श्रेयांक आराखडा (Structure) माहितीसाठी व योग्यत्या कार्यवाहीसाठी सोबत जोडला आहे.

कळावे,


डॉ. एस. एम. कुबल
उपकुलसचिव
अभ्यास मंडळ विभाग

प्रत :-

1. प्र. अधिष्ठाता, विज्ञान व तंत्रज्ञान विद्याशाखा
2. अध्यक्ष, सर्व इंजिनिअरिंग अभ्यास मंडळ
3. मा. संचालक, परीक्षा व मुल्यमापन मंडळ
4. इतर परीक्षा 4 विभागास.
5. परीक्षक नियुक्ती ए व बी विभागास.

यांना माहितीसाठी व पुढील कार्यवाहीसाठी

Shivaji University, Kolhapur

Faculty of Science and Technology

B. Tech. Curriculum Structure as per NEP 2020

From Academic Year: 2024-25

Programme Educational Objectives (PEO):

PEO1	
PEO2	
PEO3	
PEO4	

Programme Outcomes (PO):

Engineering Graduates will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

13. Program Specific Outcomes (PSO):

PSO	
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SCHEME OF INSTRUCTION & SYLLABI

Branch :.....Engineering

Scheme of Instructions: First Year B. Tech. in Engineering

Semester – I (w.e.f. 2024-25)

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	EXAM SCHEME			
									MSE	ISE/CA	ESE	TOTAL
1	BSC			3	--	--	3	3	30	10	60	100
2	BSC			3	1	--	4	4	30	10	60	100
3	ESC			3	--	--	3	3	30	10	60	100
4	ESC			3	--	--	3	3	30	10	60	100
5	ESC			1	--	2	3	2	--	50	--	50
6	BSC			--	--	2	2	1	-	50	-	50
7	ESC			--	--	2	2	1	-	25	25	50
8	HSSM			1	--	2	3	2	-	50	50	100
9	VSEC			--	--	2	2	1	-	25	25	50
10	CCA		NCC/NSS/CSP /Yoga	--	--	2	2	1	-	50	-	50
11	ESC			--	--	2	2	1		25	25	50
			Total	14	1	14	29	22	120	315	365	800

L- Lecture

T-Tutorial

P-Practical

MSE- Mid Semester Examination

ISE/CA- In Semester Evaluation/Continuous Assessment

ESE- End Semester Examination (For Laboratory End Semester performance external Examination)

Course Category	Basic Science Courses (BSC)	Engineering Science Courses (ESC)	Programme Core Course (PCC)	Programme Elective Course (PEC)	Open Elective other than particular program (OE/MDM)	Vocational and Skill Enhancement Course (VSEC)	Humanities Social Science and Management (HSSM)	Experiential Learning (EL)	Co-curricular And Extracurricular Activities (CCA)
Semester Credits	08	10	-	-	-	01	02	-	01
Cumulative Sum	08	10	-	-	-	01	02	-	01

PROGRESSIVE TOTAL CREDITS: 00+22 =22

SCHEME OF INSTRUCTION & SYLLABI

Branch: Engineering

Scheme of Instructions: First Year B. Tech. in Engineering

Semester – II (w.e.f. 2024-25)

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	EXAM SCHEME			
									MSE	ISE/CA	ESE	TOTAL
1	BSC	CE0121		3	1	--	4	4	30	10	60	100
2	BSC	CE0122		3	--	--	3	3	30	10	60	100
3	ESC			3	--	--	3	3	30	10	60	100
4	ESC			3	--	--	3	3	30	10	60	100
5	HSSM			-	-	-	-	2	-	-	-	100
6	ESC			--	--	2	2	1		25	25	50
7	BSC			-	-	2	2	1	-	25	25	50
8	ESC			--	--	2	2	1	-	25	25	50
9	VSEC			-	--	4	4	2	-	50	-	50
10	CCA		NCC/NSS/CSP /Yoga	--	--	2	2	1	-	50	-	50
11	VSEC			-	--	2	2	1		25	25	50
			Total	12	1	14	27	22	120	240	340	800

L- Lecture

T-Tutorial

P-Practical

MSE- Mid Semester Examination

ISE/CA- In Semester Evaluation/Continuous Assessment

ESE- End Semester Examination (For Laboratory End Semester performance)

Course Category	Basic Science Courses (BSC)	Engineering Science Courses (ESC)	Programme Core Course (PCC)	Programme Elective Course (PEC)	Open Elective other than particular program (OE/MDM)	Vocational and Skill Enhancement Course (VSEC)	Humanities Social Science and Management (HSSM)	Experiential Learning (EL)	Co-curricular And Extracurricular Activities (CCA)
Last Sem. Cumulative Sum	08	10	-	-	-	01	02	-	01
Semester Credits	08	08	-	-	-	03	02	-	01
Cumulative Sum	16	18	-	-	-	04	04	-	02

PROGRESSIVE TOTAL CREDITS: 22+22 =44

Exit Course

Exit option : Award of UG Certificate in Major with 44 credits and an additional 8 credits from following Exit Courses

Sr. No	Course Code	Course Title	Mode	Credits
1			Online/offline certification Course or project of total 8 credits	8
OR				
2				8

SCHEME OF INSTRUCTION & SYLLABI

Programme: Engineering

Scheme of Instructions: Second Year B. Tech. in Engineering

Semester – III

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	EXAM SCHEME			
									MSE	ISE/CA	ESE	TOTAL
1	PCC			3	1	-	4	4	30	10	60	100
2	PCC			3	--	--	3	3	30	10	60	100
3	PCC			3	--	--	3	3	30	10	60	100
4	PCC			--	--	2	2	1	--	50	25	75
5	MDM		Multi-disciplinary Minor – 01	2	--	--	2	2	30	10	60	100
6	OE		Open Elective -01	3	--	--	3	3	30	10	60	100
7	HSSM			2	--	--	2	2	-	50	-	50
8	PCC			--	--	2	2	1	-	50	25	75
9	HSSM			2	--	--	2	2	-	50	-	50
10	OE		Open Elective -01 Lab	--	--	2	2	1	-	25	25	50
			Total	18	1	6	25	22	150	275	375	800

L- Lecture

T-Tutorial

P-Practical

MSE- Mid Semester Examination

ISE/CA- In Semester Evaluation/Continuous Assessment

ESE- End Semester Examination (For Laboratory End Semester performance)

Course Category	Basic Science Courses (BSC)	Engineering Science Courses (ESC)	Programme Core Course (PCC)	Programme Elective Course (PEC)	Open Elective other than particular (OE/MDM)	Vocational and Skill Enhancement Course (VSEC)	Humanities Social Science and Management (HSSM)	Experiential Learning (EL)	Co-curricular And Extracurricular Activities (CCA)
Last Sem. Cumulative Sum	16	18	--	-	-	04	04	--	02
Semester Credits	--	-	12	-	06	-	04	-	-
Cumulative Sum	16	18	12	-	06	04	08	-	02

PROGRESSIVE TOTAL CREDITS: 44+22 =66

SCHEME OF INSTRUCTION & SYLLABI

Programme: Engineering

Scheme of Instructions: Second Year B. Tech. in Engineering

Semester – IV

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	EXAM SCHEME			
									MSE	ISE/CA	ESE	TOTAL
1	PCC			3	--	--	3	3	30	10	60	100
2	PCC			3	--	--	3	3	30	10	60	100
3	PCC			3	1	--	4	4	30	10	60	100
4	MDM		Multi-disciplinary Minor – 02	2	--	--	2	2	30	10	60	100
5	OE		Open Elective -02	2	--	--	2	2	30	10	60	100
6	HSSM			2	--	--	2	2	-	50	-	50
7	HSSM			2	--	--	2	2	-	25	-	25
8	PCC			--	--	2	2	1	-	50	25	75
9	PCC			--	--	2	2	1	-	25	25	50
10	PCC			--	--	2	2	1	--	25	25	50
11	BSC		Environmental Science	2	--	--	2	Audit	30	10	60	100
12	VSEC			--	--	2	2	1		50	--	50
			Total	19	1	8	28	22	180	285	435	800+100(Audit)

L- Lecture

T-Tutorial

P-Practical

MSE- Mid Semester Examination

ISE/CA- In Semester Evaluation/Continuous Assessment

ESE- End Semester Examination (For Laboratory End Semester performance)

Course Category	Basic Science Courses (BSC)	Engineering Science Courses (ESC)	Programme Core Course (PCC)	Programme Elective Course (PEC)	Open Elective other than particular program (OE/MDM)	Vocational and Skill Enhancement Course (VSEC)	Humanities Social Science and Management (HSSM)	Experiential Learning (EL)	Co-curricular And Extracurricular Activities (CCA)
Last Sem. Cumulative Sum	16	18	12	-	06	04	08	-	02
Semester Credits	-	-	13	-	04	01	04	--	-
Cumulative Sum	16	18	25	-	10	05	12	--	02

PROGRESSIVE TOTAL CREDITS: 66+22 =88

Exit Course

Exit option : Award of UG Diploma in Major with 88 credits and an additional 8 credits from following Exit Courses				
Sr. No	Course Code	Course Title	Mode	Credits
1			Online/offline certification Course or project of total 8 credits	8
		OR		
2				8

SCHEME OF INSTRUCTION & SYLLABI

Programme: Engineering

Scheme of Instructions: Third Year B. Tech. inEngineering

Semester – V

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	EXAM SCHEME			
									MSE	ISE/CA	ESE	TOTAL
1	PCC			3	--	--	3	3	30	10	60	100
2	PCC			3	--	--	3	3	30	10	60	100
3	PCC			3	--	--	3	3	30	10	60	100
4	PEC			3	--	--	3	3	30	10	60	100
5	MDM		Multi-disciplinary Minor – 03	3	--	--	3	3	30	10	60	100
6	OE		Open Elective -03	2	--	--	2	2	30	10	60	100
7	PCC			--	--	2	2	1	-	25	25	50
8	PCC			--	--	2	2	1	-	25	25	50
9	PEC			--	--	2	2	1	-	25	--	25
10	MDM		Multi-disciplinary Minor– 03 Lab	--	--	2	2	1	-	50	--	50
11	EL			--	--	2	2	1	-	25	--	25
			Total	17	--	10	27	22	180	210	410	800

L- Lecture

T-Tutorial

P-Practical

MSE- Mid Semester Examination

ISE/CA- In Semester Evaluation/Continuous Assessment

ESE- End Semester Examination (For Laboratory End Semester performance)

Course Category	Basic Science Courses (BSC)	Engineering Science Courses (ESC)	Programme Core Course (PCC)	Programme Elective Course (PEC)	Open Elective other than particular program (OE/MDM)	Vocational and Skill Enhancement Course (VSEC)	Humanities Social Science and Management (HSSM)	Experiential Learning (EL)	Co-curricular And Extracurricular Activities (CCA)
Last Sem. Cumulative Sum	16	18	25	-	10	05	12	--	02
Semester Credits	-	-	11	04	06	-	-	01	-
Cumulative Sum	16	18	36	04	16	05	12	01	02

PROGRESSIVE TOTAL CREDITS: 88+22=110

SCHEME OF INSTRUCTION & SYLLABI

Programme:Engineering

Scheme of Instructions: Third Year B. Tech. in Engineering

Semester – VI

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	EXAM SCHEME			
									MSE	ISE/CA	ESE	TOTAL
1	PCC			3	--	--	3	3	30	10	60	100
2	PCC			3	1	--	4	4	30	10	60	100
3	PCC			3	--	--	3	3	30	10	60	100
4	PEC			3	--	--	3	3	30	10	60	100
5	PEC			3	--	--	3	3	30	10	60	100
6	MDM		Multi-disciplinary Minor – 04	2	--	--	2	2	30	10	60	100
7	PCC			--	--	2	2	1	-	50	25	75
8	PCC			--	--	2	2	1	-	50	25	75
9	EL			--	--	4	4	2	-	50	--	50
			Total	17	1	8	26	22	180	210	410	800

L- Lecture

T-Tutorial

P-Practical

MSE- Mid Semester Examination

ISE/CA- In Semester Evaluation/Continuous Assessment

ESE- End Semester Examination (For Laboratory End Semester performance)

Course Category	Basic Science Courses (BSC)	Engineering Science Courses (ESC)	Programme Core Course (PCC)	Programme Elective Course (PEC)	Open Elective other than particular (OE/MDM)	Vocational and Skill Enhancement Course (VSEC)	Humanities Social Science and Management (HSSM)	Experiential Learning (EL)	Co-curricular And Extracurricular Activities (CCA)
Last Sem. Cumulative Sum	16	18	36	04	16	05	12	01	02
Semester Credits	-	-	12	06	02	--	-	02	-
Cumulative Sum	16	18	48	10	18	05	12	03	02

PROGRESSIVE TOTAL CREDITS: 110+22 =132

Exit option : Award of B. Vocational in Major with 132 credits and an additional 8 credits from following Exit Courses

Sr. No	Course Code	Course Title	Mode	Credits
1			Online/offline certification Course or project of total 8 credits	8
OR				
2				8

SCHEME OF INSTRUCTION & SYLLABI

Programme: Engineering

Scheme of Instructions: Final Year B. Tech. in Engineering

Semester – VII

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	EXAM SCHEME			
									MSE	ISE/CA	ESE	TOTAL
1	PCC			3	--	--	3	3	30	10	60	100
2	PCC			3	--	--	3	3	30	10	60	100
3	PEC			3	--	--	3	3	30	10	60	100
4	EL			3	--	--	3	3	30	10	60	100
5	MDM		Multi-disciplinary Minor – 05	2	--	--	2	2	30	10	60	100
6	PCC			-	-	2	2	1		25	25	50
7	PCC			-	-	2	2	1		25	25	50
8	EL			--	--	12	12	6	-	100	100	200
			Total	14	0	16	30	22	150	200	450	800

L- Lecture

T-Tutorial

P-Practical

MSE- Mid Semester Examination

ISE/CA- In Semester Evaluation/Continuous Assessment

ESE- End Semester Examination (For Laboratory End Semester performance)

Course Category	Basic Science Courses (BSC)	Engineering Science Courses (ESC)	Programme Core Course (PCC)	Programme Elective Course (PEC)	Open Elective other than particular program (OE/MDM)	Vocational and Skill Enhancement Course (VSEC)	Humanities Social Science and Management (HSSM)	Experiential Learning (EL)	Co-curricular And Extracurricular Activities (CCA)
Last Sem. Cumulative Sum	16	18	48	10	18	05	12	03	02
Semester Credits	-	-	08	03	02	-	-	09	-
Cumulative Sum	16	18	56	13	20	05	12	12	02

PROGRESSIVE TOTAL CREDITS: 132+22 =154

SCHEME OF INSTRUCTION & SYLLABI

Programme: Engineering

Scheme of Instructions: Final Year B. Tech. in Engineering

Semester – VIII

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	EXAM SCHEME			
									MSE	ISE/CA	ESE	TOTAL
1	PCC			3	--	--	3	3	30	10	60	100
2	PCC			3	--	--	3	3	30	10	60	100
3	PEC			3	--	--	3	3	30	10	60	100
4	PEC			3	--	--	3	3	30	10	60	100
5	MDM		Multi-disciplinary Minor-06	2	--	--	2	2	30	10	60	100
6	PCC			--	--	2	2	1	-	50	50	100
7	EL			--	--	14	14	7	-	100	100	200
			Total	14	0	16	30	22	150	200	450	800

L- Lecture

T-Tutorial

P-Practical

MSE- Mid Semester Examination

ISE/CA- In Semester Evaluation/Continuous Assessment

ESE- End Semester Examination (For Laboratory End Semester performance)

Course Category	Basic Science Courses (BSC)	Engineering Science Courses (ESC)	Programme Core Course (PCC)	Programme Elective Course (PEC)	Open Elective other than particular program (OE/MDM)	Vocational and Skill Enhancement Course (VSEC)	Humanities Social Science and Management (HSSM)	Experiential Learning (EL)	Co-curricular And Extracurricular Activities (CCA)
Last Sem. Cumulative Sum	16	18	56	13	20	05	12	12	02
Semester Credits	-	-	07	06	02	-	-	07	-
Cumulative Sum	16	18	63	19	22	05	12	19	02

PROGRESSIVE TOTAL CREDITS = 176

Following Degrees will begin with effect from Academic Year 2026-27.

- A) Bachelor's Engg./ Tech. Honours Degree in chosen Major Engg./ Tech. Discipline with Multidisciplinary Minor (194 credits)
- B) Bachelor's Engg./ Tech. Honours with Research Degree in chosen Major Engg./ Tech. Discipline with Multidisciplinary Minor (194 credits)
- C) Bachelor's Engg./ Tech. Degree in chosen Major Engg./ Tech. Discipline with Double Minor (Multidisciplinary and Specialisation Minor (194 credits)

List of Electives: Verticals

Specialization				
Elective-I				
Elective-II				
Elective-III				
Elective-IV				
Elective-V				
Elective-VI				

List of Open Electives

Open Elective-I	
Open Elective-II	
Open Elective-III	

Instructions regarding Examinations:

1. Compulsory passing with 40% marks is mandatory in ESE examinations and combined passing marks (MSE+ISE/CA+ESE) for theory course is 40 %
2. Mid sem. examination will be based on 50 % syllabus from beginning (First Three Units).
3. No compulsory passing for **MSE**.
4. ESE paper setting weightage will be, **25 % on syllabus covered for MSE (First Three Units) and 75 % on remaining syllabus (Last Three Units).**
5. Passing percentage for ESE practical examination 40%.

