



Vivekanand Education Society's Institute of Technology

(Autonomous Institute Affiliated to University of Mumbai, Approved by AICTE &
Recognized by Govt. of Maharashtra)
NAAC accredited with 'A' Grade

Department of Humanities & Applied Sciences

Detailed Curriculum with Credit and Examination Scheme

First-year Bachelor of Technology

SEM 1 & SEM 2

Group A

Computer Engineering

Information Technology

Group B

Electronics and Computer Science

Electronics and Telecommunications

Automation and Robotics

Artificial Intelligence and Data Science

(w.e.f. Academic Year 2024-25)



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Summary

	Credit	Credit	Examination Marks	Examination Marks									
	Group A	Group B	Group A	Group B									
	CMPN,INFT	AI & DS, EXTC, ETCS,AU & RO	CMPN,INFT	AI & DS, EXTC, ETCS,AU & RO									
2023-24													
Sem 1	22	22	590	690									
Sem 2	22	22	770	670									
2024-25													
	Credit	Credit	Examination Marks	Examination Marks									
	Group A	Group B	Group A	Group B									
	CMPN, INFT	EXTC,ETCS AU & RO,AI & DS	CMPN ,INFT	EXTC,ETCS, AU & RO,AI & DS									
Sem 1	20	22	565	665									
Sem 2	22	20	745	645									
<p>Changes in 2023-24 scheme; Following changes have been made and approved for A.Y 2024-25.</p>	<ul style="list-style-type: none"> Syllabus updation for Vedic Mathematics (Sem 1), Biology for Engineers(Sem 1 & Sem 2), Mathematics(Sem1 & Sem 2), Physics (Sem 1 & Sem 2) Nomenclature has been changed for the following subjects :- <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 15%;">Sem 1</td> <td style="width: 40%;">Matrices and Differential Calculus (MDC)</td> <td style="width: 45%;">Fundamentals of Engineering Mathematics-1 (FEM-1)</td> </tr> <tr> <td>Sem 2</td> <td>Integral Calculus and Complex Numbers(ICC)</td> <td>Fundamentals of Engineering Mathematics-2 (FEM-2)</td> </tr> <tr> <td>Sem 1 & 2</td> <td>C-Programming</td> <td>Fundamentals of Programming(C /Java)</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Programme Core course(PCC) scheme has been changed from (1Th+2 hr Pr) to (02+02*) with the same credit of 2 and Instructions should be conducted for the entire class.Due to this change, 25 marks of Teamwork of PCC from the total weightage of Group B (Sem 1) and Group A(Sem 2) will be deducted. Python Programming Lab is shifted from first year to second year, due to this change 25 marks of Termwork of subject from the total weightage of Group B (Sem 1) and Group A(Sem 2) will be deducted. 				Sem 1	Matrices and Differential Calculus (MDC)	Fundamentals of Engineering Mathematics-1 (FEM-1)	Sem 2	Integral Calculus and Complex Numbers(ICC)	Fundamentals of Engineering Mathematics-2 (FEM-2)	Sem 1 & 2	C-Programming	Fundamentals of Programming(C /Java)
Sem 1	Matrices and Differential Calculus (MDC)	Fundamentals of Engineering Mathematics-1 (FEM-1)											
Sem 2	Integral Calculus and Complex Numbers(ICC)	Fundamentals of Engineering Mathematics-2 (FEM-2)											
Sem 1 & 2	C-Programming	Fundamentals of Programming(C /Java)											



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Group A (CMPN & INFT)

Teaching & Credit Scheme for Autonomous Programme 2024-25

Semester I -Teaching Scheme

Course Type	Course code	Course Name	Teaching Scheme (Contact hrs)			Credits Assigned			
			Th	Pr	Tut	Th	Pr	Tut	Total
Basic Science Course (BS)	NBS11	Fundamentals of Engineering Mathematics-1	02	--	01	02	--	01	03
Basic Science Course (BS)	NBS12	Engineering Physics	02	02	-	02	01	--	03
Engineering Science Course (ES)	NES11	Engineering Mechanics	02	--	-	02	--	--	02
Engineering Science Course (ES)	NES12	Engineering Drawing	-	*02 (DH)+ 02(Auto CAD)	-	-	02	--	02
Engineering Science Course (ES)	NES13	Basic Electrical Engineering	03	02	-	03	01	--	04
Indian Knowledge System (IK)	NIK11	Fundamentals of Vedic Mathematics	02	--	-	02	--	--	02
Value Education (VE)	NVE11	Universal Human Values-1	02	--	--	02	--	--	02
Co curricular Activity (CC)	NCC11	Co curricular Course	--	04	-	-	02	--	02
Total Credit									20

Tutorials batchwise

** Instructions should be conducted for the entire class*



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Group B (AI & DS, EXTC, ETCS,AU & RO)

Teaching & Credit Scheme for Autonomous Programme 2024-25

Semester I - Teaching Scheme									
Course Type	Course code	Course Name	Teaching Scheme (Contact hrs)			Credits Assigned			
			Th	Pr	Tut	Th	Pr	Tut	Total
Basic Science Course (BS)	NBS11	Fundamentals of Engineering Mathematics-1	02	--	01	02	--	01	03
Basic Science Course (BS)	NBS13	Engineering Chemistry	02	02	-	02	01	--	03
Basic Science Course (BS)	NBS14	Biology for Engineers	02	--	-	02	--	--	02
Engineering Science Course (ES)	NES14	Fundamentals of Programming (C/Java)	03	02	-	03	01	--	04
Programme Core Course (PC)	NPC11	Programme Core Course	02	-	-	02	-	-	02
	NPC12								
	NPC13								
	NPC14								
Indian Knowledge System (IK)	NIK11	Fundamentals of Vedic Mathematics	02	--	-	02	--	--	02
Value Education (VE)	NVE11	Universal Human Values-1	02	--	--	02	--	--	02
Vocational/Skill Enhancement course (VS)	NVS11	Basic Workshop Practice	-	04	-	-	02	-	02
Co curricular Activity (CC)	NCC11	Co curricular Course	--	04	--	-	02	--	02
Total Credit									22

Tutorials to be conducted batchwise

NPC11-Programme Core Course for AI & DS- Digital logic and Computer Organization & Architecture

NPC12- Programme Core Course for EXTC-Digital System

NPC13- Programme Core Course for ETCS-Digital Electronics

NPC14-Programme Core Course for AU & RO-Electronic measurement and instrumentation

NES14-Fundamentals of Programming-OOPM (JAVA Programming)(AI & DS)

NES14-Fundamentals of Programming-C Programming)(EXTC, ETCS and AU & RO)



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Group A (CMPN & INFT)

Examination Scheme for Autonomous Programme 2024-25

Semester I - Examination Scheme								
Course Type	Course code	Course Name	TH	MT	CA	TW	PR/OR	Total
Basic Science Course (BS)	NBS11	Fundamentals of Engineering Mathematics-1	60	20	20	--	-	100
Basic Science Course (BS)	NBS12	Engineering Physics	60	20	20	25	-	125
Engineering Science Course (ES)	NES11	Engineering Mechanics	60	20	20	--	-	100
Engineering Science Course (ES)	NES12	Engineering Drawing	-	-		25	25	50
Engineering Science Course (ES)	NES13	Basic Electrical Engineering	60	20	20	25	-	125
Indian Knowledge System (IK)	NIK11	Fundamentals of Vedic Mathematics	-	-	20	--	-	20
Value Education (VE)	NVE11	Universal Human Values-1	-	-	20	--	-	20
Co curricular Activity (CC)	NCC11	Co curricular Course	-	-	-	-	25	25
Total Marks								565



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Group B (AI & DS, EXTC, ETCS,AU & RO)

Examination Scheme for Autonomous Programme 2024-25

Semester I - Examination Scheme								
Course Type	Course code	Course Name	TH	MT	CA	TW	PR/OR	Total
Basic Science Course (BS)	NBS11	Fundamentals of Engineering Mathematics-1	60	20	20	--	-	100
Basic Science Course (BS)	NBS13	Engineering Chemistry	60	20	20	25	-	125
Basic Science Course (BS)	NBS14	Biology for Engineers	60	20	20	--	-	100
Engineering Science Course (ES)	NES14	Fundamentals of Programming (C/Java)	60	20	20	25	-	125
Programme Core Course (PC)	NPC11	Programme Core Course	60	20	20	-	-	100
	NPC12							
	NPC13							
	NPC14							
Indian Knowledge System (IK)	NIK11	Fundamentals of Vedic Mathematics	-	-	20	--	-	20
Value Education (VE)	NVE11	Universal Human Values-1	-	-	20	--	-	20
Vocational/Skill Enhancement course (VS)	NVS11	Basic Workshop Practice	-	-	-	50	-	50
Co curricular Activity (CC)	NCC11	Co curricular Course	-	-	-	-	25	25
Total Marks								665

NPC11-Programme Core Course for AI & DS- Digital logic and Computer Organization & Architecture

NPC12- Programme Core Course for EXTC-Digital System

NPC13- Programme Core Course for ETCS-Digital Electronics

NPC14-Programme Core Course for AU & RO-Electronic measurement and instrumentation

NES14-Fundamentals of Programming-OOPM (JAVA Programming)(AI & DS)

NES14-Fundamentals of Programming-C Programming)(EXTC, ETCS and AU & RO)



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Group A (CMPN & INFT)

Teaching & Credit Scheme for Autonomous Programme 2024-25

Semester II - Teaching Scheme									
Course Type	Course code	Course Name	Teaching Scheme (Contact hrs)			Credits Assigned			
			Th	Pr	Tut	Th	Pr	Tut	Total
Basic Science Course (BS)	NBS21	Fundamentals of Engineering Mathematics-2	02	--	01	02	--	01	03
Basic Science Course (BS)	NBS23	Engineering Chemistry	02	02	-	02	01	--	03
Basic Science Course (BS)	NBS24	Biology for Engineers	02	--	-	02	--	--	02
Engineering Science Course (ES)	NES24	Fundamentals of Programming (Java)	03	02	-	03	01	--	04
Programme Core Course (PC)	NPC21	Programme Core Course	02	-	-	02	-	-	02
Ability Enhancement Course (AE)	NAE11	Professional Communications and Ethics-I	01	--	02	01	--	01	02
Value Education (VE)	NVE22	Universal Human Values-2	02	--	--	02	--	--	02
Vocational/Skill Enhancement course (VS)	NVS21	Basic Workshop Practice	-	04	-	-	02	-	02
Co curricular Activity (CC)	NCC22	Co curricular Course	--	04	--	-	02	--	02
Total Credit									22

Tutorials to be conducted batchwise

NPC21-Programme Core Course for CMPN & INFT - Digital logic and Computer Organization & Architecture
NES24-Fundamentals of Programming-OOPM (JAVA Programming)(CMPN & INFT)



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Group B (AI & DS, EXTC, ETCS,AU & RO)
Teaching & Credit Scheme for Autonomous Programme 2024-25

Semester II - Teaching Scheme

Course Type	Course code	Course Name	Teaching Scheme (Contact hrs)			Credits Assigned			
			Th	Pr	Tut	Th	Pr	Tut	Total
Basic Science Course (BS)	NBS21	Fundamentals of Engineering Mathematics-2	02	--	01	02	--	01	03
Basic Science Course (BS)	NBS22	Engineering Physics	02	02	--	02	01	--	03
Engineering Science Course (ES)	NES21	Engineering Mechanics	02	--	--	02	--	--	02
Engineering Science Course (ES)	NES22	Engineering Drawing	--	*02 (DH)+ 02(Auto CAD)	--	--	02	--	02
Engineering Science Course (ES)	NES23	Basic Electrical Engineering	03	02	--	03	01	--	04
Ability Enhancement Course (AE)	NAE21	Professional Communications and Ethics-I	01	--	02	01	--	01	02
Value Education (VE)	NVE22	Universal Human Values-2	02	--	--	02	--	--	02
Co curricular Activity (CC)	NCC22	Co curricular Course	--	04	--	--	02	--	02
Total Credits									20

Tutorials to be conducted batchwise



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Examination Scheme for Autonomous Programme 2024-25

Semester II - Examination Scheme								
Course Type	Course code	Course Name	TH	MT	CA	TW	PR/ OR	Total
Basic Science Course (BS)	NBS21	Fundamentals of Engineering Mathematics-2	60	20	20	--	-	100
Basic Science Course (BS)	NBS23	Engineering Chemistry	60	20	20	25	-	125
Basic Science Course (BS)	NBS24	Biology for Engineers	60	20	20	--	-	100
Engineering Science Course (ES)	NES24	Fundamentals of Programming (Java)	60	20	20	25	-	125
Programme Core Course (PC)	NPC21	Programme Core Course	60	20	20	-	-	100
Ability Enhancement Course (AE)	NAE11	Professional Communications and Ethics-I	-	20	80	--	-	100
Value Education (VE)	NVE22	Universal Human Values-2	-	-	20	--	-	20
Vocational/Skill Enhancement course (VS)	NVS21	Basic Workshop Practice	-	-	-	50	-	50
Co curricular Activity (CC)	NCC22	Co curricular Course	-	-	-	-	25	25
Total Marks								745

NPC21-Programme Core Course for CMPN & INFT - Digital logic and Computer Organization & Architecture



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NES24-Fundamentals of Programming-OOPM (JAVA Programming)(CMPN & INFT)

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Examination Scheme for Autonomous Programme 2024-25

Semester II								
Examination Scheme								
Course Type	Course code	Course Name	TH	MT	CA	TW	PR/ OR	Total
Basic Science Course (BS)	NBS21	Fundamentals of Engineering Mathematics-2	60	20	20	--	-	100
Basic Science Course (BS)	NBS22	Engineering Physics	60	20	20	25	-	125
Engineering Science Course (ES)	NES21	Engineering Mechanics	60	20	20	--	-	100
Engineering Science Course (ES)	NES22	Engineering Drawing	-	-		25	25	50
Engineering Science Course (ES)	NES23	Basic Electrical Engineering	60	20	20	25	-	125
Ability Enhancement Course (AE)	NAE21	Professional Communications and Ethics-I	-	20	80	--	-	100
Value Education (VE)	NVE22	Universal Human Values-2	-	-	20	--	-	20
Co curricular Activity (CC)	NCC22	Co curricular Course	-	-	-	-	25	25
Total Marks								645