

VIVEKANAND EDUCATION SOCIETY'S COLLEGE OF ARTS, SCIENCE, AND
COMMERCE (AUTONOMOUS)
SINDHI SOCIETY, CHEMBUR, MUMBAI

F.Y.B.Sc. NEP-2020 Course Structure for Academic Year 2023-24

MAJOR COURSE:

Choose any ONE of the following

Major subjects
Physics
Chemistry
Microbiology

MINOR SUBJECT:

Choose any one Minor Subject that is different from your Major Subject in
Semester 2

Minor subjects
Physics
Chemistry
Microbiology
Mathematics

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Detailed Course Structure:

Semester - I				
Major Subject	Physics	Chemistry	Microbiology	Credits
Major (Core) Papers (Compulsory)	Physics Paper 1 (Mechanics and Thermodynamics)	Chemistry Paper 1 (Basics in Physical and Inorganic Chemistry I)	Microbiology Paper 1 (Introduction to Microbiology)	2
	Physics Paper 2 (Optics and Material Science)	Chemistry Paper 2 (Basics in Organic & Inorganic Chemistry I)	Microbiology Paper 2 (Structure and Physiology of Bacteria)	2
	Physics Practical based on Paper 1 & Paper 2	Chemistry Practical based on Paper I & Paper II	Microbiology Practical based on Paper 1 & Paper 2	2
Vocational Skill Course (VSC)	CPP Programming	Water Analysis	Microscopy and Staining Techniques	2
Minor Subjects	NOT TO BE SELECTED IN SEM 1			
Ability Enhancement Courses (AEC)	English Communication Skill			2
Indian Knowledge System (IKS)	Ancient and modern contribution of India in Physics	Ancient and modern contribution of India in Chemistry	Ancient and modern contribution of India in Microbiology	2
Value Education Courses (VEC)	Indian Constitution			2

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Field Project (FP) / Apprenticeship or Internship (OJT) / Community Engagement & Services (CES) / Co-curricular Courses (CC)	NSS/NCC Fine Arts / Performing Arts Sports training /Music/ Department Association Activities	2
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Baskets (Semester-I)

SEC (Skill Enhancement Course)

Sr. No.	Title of the Course	Department	Credit
1	Skill Based Experiments in Physics	Physics	2
2	Laboratory Techniques in Chemistry	Chemistry	2
3	Cultivation and Preservation of Microbes	Microbiology	2
4	Functions using Geogebra and Basic Algorithms	Mathematics	2

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OE (Open Electives)

Note: 1. Two OE courses are to be selected in each Semester - one from Group A and the other from Group B.

2. The offering department name is given in brackets.

Sr. No.	Group A	Group B	Credits
	Title of the Course	Title of the Course	
1	Life Outside Earth (Physics)	Understanding Stress (Psychology)	2
2	Chemistry & Society (Chemistry)	Sociology & Cinema (Sociology)	2
3	Microbes and Food (Microbiology)	Introduction to Stock Market (Economics)	2
4	Math in the Real World (Mathematics)	Financial Literacy (Commerce)	2

F.Y.B.Sc. NEP-2020 Course Structure for Academic Year 2023-24

Semester - II				
Major Subject	Physics	Chemistry	Microbiology	Credits
Major (Core) Subjects (Compulsory)	Physics Paper 1 (Electricity and Electronics)	Chemistry Paper I (Basics in Physical and Inorganic Chemistry II)	Microbiology Paper 1 (Microbial Growth and Ecology)	2
	Physics Paper 2 (Modern Physics)	Chemistry Paper II (Basics in Organic & Inorganic Chemistry II)	Microbiology Paper 2 (Microbial Diversity)	2
	Physics Practical based on Paper 1 & Paper 2	Chemistry Practical based on Paper I & Paper II	Microbiology Practical based on Paper 1 & Paper 2	2
Vocational Skill Course (VSC)	Circuit designing and PCB making	Commercial Analysis of Food Samples	Environmental Microbiology	2

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Minor Subjects	Chemistry (Fundamentals of Chemistry) or Microbiology (Fundamentals of Microbiology) or Mathematics (Set Theory and Basic Counting)	Microbiology (Fundamentals of Microbiology) or Physics (Basic Physics and Electronics) or Mathematics (Set Theory and Basic Counting)	Chemistry (Fundamentals of Chemistry) or Physics (Basic Physics and Electronics) or Mathematics (Set Theory and Basic Counting)	2
Ability Enhancement Courses (AEC)	English Communication Skill			
Value Education Courses (VEC)	Energy literacy, Renewable & non-renewable energy	Environmental Science	Environmental Science	2
Field Project (FP) / Apprenticeship or Internship (OJT) / Community Engagement & Services (CES) / Co-curricular Courses (CC)	NSS / Sports / Music/Cultural/ DLLE (CC)			

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Baskets (Semester-II)

SEC (Skill Enhancement Course)

Sr. No.	Title of the Course	Department	Credit
1	Electricity and Electronics in Daily Life	Physics	2
2	Lab technique in Soil Analysis	Chemistry	2
3	Sterilization and Disinfection Practices	Microbiology	2
4	Advanced Algorithms	Mathematics	2

OE (Open Electives) :

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2. The offering department name is given in brackets.

Sr. No.	Group A	Group B	Credits
	Title of the Course	Title of the Course	
1	Life Outside Earth (Physics)	Understanding Stress (Psychology)	2
2	Chemistry & Society (Chemistry)	Sociology & Cinema (Sociology)	2
3	Microbes and Food (Microbiology)	Introduction to Stock Market (Economics)	2
4	Math in the Real World (Mathematics)	Financial Literacy (Commerce)	2