Vivekanand College, Kolhapur (Empowered Autonomous)

Department of Chemistry

Syllabus Completion Report 2024-25- : SEM- II, IV and VI

Teacher Name: Dr. Mrs. S. D. Shirke, M.Sc.Ph.D.

Class	Subject	Total Units	Compl eted Units	Remaining Units
B.Sc. I (Sem- II) NEP	Major and Minor Open Elective		No organic Chemistry paper in SEM-II Practicals – As per Syllabus	NIL
B.Sc .II (Sem IV)	Organic Chemistry	01	 Amines and Diazonium Salts: Amines- Definition, Classification, Preparation methods, Primary, secondary and Tertiary amines - Chemical reactions Diazonium Salts-Definition, examples Preparation of diazonium salts from aromatic amines and HNO2 Electrophilic Substitution reactions and Sandmeyer's reactions. Practicals -As per syllabus. 	NIL NIL
B.Sc. III (Sem VI)	Organic Chemistry	01	Unit I- Natural Products: A) Terpenoids B) Alkaloids Terpenoids – Introduction, General methods for determination of structure of terpenoid, Extraction, Isolation methods – Analytical and Synthetic evidence of Citral Alkaloids-Introduction, Isolation methods for determination of structure of alkaloid, Analytical and Synthetic evidence of Nicotine.	NIL
		02	UNIT -II: Electrophilic Addition reactions across carbon carbon double and carbon carbon triple bonds. Introduction, structure, mechanism of addition reaction- Addition of Hydrogen	f

		Halogen, halogen acids, ozone, hydroboration, oxidation, hydroxylation etc. across the double and carbon carbon triple bonds.	NIL
Industrial Chemistry	1	UNIT I- Sugar and Jaggary Industry: Manufacture of Raw Sugar – Extraction of juice, Clarification, Multiple effect evaporator- Concentration Centrifugation, Drying. Manufacture of White sugar- All steps repeated., Refining of sugar Byproducts of sugar industry Manufacture of Jaggary, Antimicrobial testing of Jaggary Practicals –As per syllabus	NIL NIL

Dr. Mrs. S. D. Shirke

(Head of Dept.)
HEAD
DEPARTMENT OF CHEMISTRY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

Vivekanand College, Kolhapur (An Empowered Autonomous Institution)

Syllabus Completion Report

Academic Year - 2024-25

Sem-I, Sem-III, Sem-V

Department - Chemistry

Name of the Teacher - Prof. Dr. A. S. Kumbhar

Name of the Class	Units Allotted	Units Completed	Remark
B.Sc.II (Major)	Kinetic Theory of GasesThermodynamics	Kinetic Theory of GasesThermodynamics	Completed
B.Sc.II (Minor)	Kinetic Theory of GasesThermodynamics	Kinetic Theory of GasesThermodynamics	Completed
B.Sc.III	Mass SpectroscopyEMF	Mass SpectroscopyEMI	Completed
M.Sc.l	 Stereochemistry 	Stereochemistry	Completed
M.Sc.II	Mass Spectroscopy	Mass Spectroscopy	Completed

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Prof. Dr. A. S. Kumbhar

Prof. Dr. Mrs. S. D. Shirke

Vivekanand College, Kolhapur (An Empowered Autonomous Institution)

Syllabus Completion Report

Academic Year – 2024-25

Sem-II, Sem-IV, Sem-VI

Department - Chemistry

Name of the Teacher - Prof. Dr. A. S. Kumbhar

Name of the Class	Units Allotted	Units Completed	Remark
B.Sc.II (Major)	CarbohydratesAmino acids. peptidesand proteins	CarbohydratesAmino acids, peptides and proteins	Completed
B.Sc.II (Minor)	CarbohydratesAmino acids, peptides and proteins	CarbohydratesAmino acids, peptides and proteins	Completed
B.Sc.III	Reagents	Reagents	Completed
M.Sc.I	PhotochemistryHydroboration and enamines	PhotochemistryHydroboration and enamines	Completed
M.Sc.II	Stereochemistry of fused and bridged ring systemsNewer Methods of Organic Synthesis	 Stereochemistry of fused and bridged ring systems Newer Methods of Organic Synthesis 	Completed

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Prof. Dr. A. S. Kumbhar

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HEAD
DEPARTMENT OF CHEMISTRY

VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

Academic Year - 2024-25

Sem-I, Sem-III, Sem-V

Department - Chemistry

Name of the Teacher - Dr. A. N. Ambhore

Name of the Class	Units Allotted	Units Completed	Remark
B.Sc.III	 Molecular Spectroscopy Molecular Orbital Theory IR Spectroscopy Potentiometric Chemistry 	 Molecular Spectroscopy Molecular Orbital Theory IR Spectroscopy Potentiometric Chemistry 	Completed
M.Sc.I	Reaction Mechanism:Structure and ReactivityElimination Reaction	 Reaction Mechanism: Structure and Reactivity Elimination Reaction 	Completed
M.Sc.II	Study of UV and IR Spectroscopy	Study of UV and IR Spectroscopy	Completed

Dr. A. N. Ambhore

Prof. Dr. Mrs. S. D. Shirke HEAD

Academic Year – 2024-25

Sem-II, Sem-IV, Sem-VI

Department - Chemistry

Name of the Teacher - Dr. A. N. Ambhore

Name of the Class	Units Allotted	Units Completed	Remark
B.Sc.I (Major)	ChromatographyTheory of Titrimetric Analysis	Methods of determining Reaction Mechanism	Completed
B.Sc.III	 Manufacturing of Heavy Chemicals Manufacturing of Sugar and Jiggery 	 Manufacturing of Heavy Chemicals Manufacturing of Sugar and Jiggery 	Completed
M.Sc.II	Methods of determining Reaction Mechanism	 Methods of determining Reaction Mechanism 	Completed

Dr. A. N. Ambhore

Prof. Dr. Mrs. S. D. Shirke

Academic Year - 2024-25 Sem-I, Sem-III, Sem-V Department- Chemistry

Name of the Teacher - Mr. S. S. Kadam

Name of the Class	Units Allotted	Units Completed	Remark
B.Sc.I (Major)	 Fundamentals of Organic Chemistry Chemistry of aromatic compounds 	 Fundamentals of Organic Chemistry Chemistry of aromatic compounds 	Completed
B.Sc.III	General Safety & Safe Handling of Chemicals	transportation of chemicals Waste Management & Disposal Housekeeping	Completed
B.Sc.III	 Introduction to Spectroscopy Ultra-Violet (UV) Spectroscopy Combined problems based on NMR,IR,UV 	based on NMR,IR,UV	Completed
M.Sc.I	Ellimination Reaction & Study of Following reaction	 Ellimination Reaction & Study of Following reaction 	Completed

Mr. S. S. Kadam

Dr. Mrs. S. D. Shirke

Academic Year - 2024-25 Sem-II, Sem-IV, Sem-VI Department- Chemistry

Name of the Teacher - Mr. S. S. Kadam

Name of the Class	Units Allotted	Units Completed	Remark
B.Sc.I (major)	ThermodynamicsProperties of liquids	ThermodynamicsProperties of liquids	Completed
B.Sc.II	 Carboxylic acids and their derivatives Transition Elements 	 Carboxylic acids and their derivatives Transition Elements 	Completed
B.Sc.III	■ Name reactions ■ Electrophilic addition to >C=C< and -C≡C- bonds	■ Name reactions ■ Electrophilic addition to >C=C< and -C=C- bonds	Completed
M.Sc.I	 Reduction & Protection of functional group 	Reduction & Protection of functional group	Completed

Mr. S. S. Kadam

Dr. Mrs. S. D. Shirke

Academic Year – 2024-25 Sem-I, Sem-III, Sem-V Department - Chemistry Name of the Teacher – **Dr. S. S. Ankushrao**

Name of the Class	Units Allotted	Units Completed	Remark
B.Sc. I	 Chemical Bonding and Molecular structure -Ionic Bonding Chemical Bonding and Molecular structure- Valence bond theory (VBT) 	 Chemical Bonding and Molecular structure - Ionic Bonding Chemical Bonding and Molecular structure- Valence bond theory (VBT) 	Completed
B.Sc. I	Inorganic, Organic & Physical Chemistry Practicals	Inorganic, Organic & Physical Chemistry Practicals	Completed
B.Sc. II (Major)	Unit Operations and Unit Processes	Unit Operations and Unit Processes	Completed
B.Sc.II (Minor)	Unit Operations and Unit Processes	Unit Operations and Unit Processes	Completed
B.Sc. III	Soil & Water AnalysisChromatography	Soil & Water AnalysisChromatography	Completed
B.Sc. III SEC	 Introduction to Lab chemicals & its Management MSDS & Lab Safety Pictograms 	 Introduction to Lab chemicals & its Management MSDS & Lab Safety Pictograms 	Completed
B.Sc. III	Inorganic Chemistry Practicals	Inorganic Chemistry Practicals	Completed
M.Sc. I	Data Interpretation & Report Writing	Data Interpretation & Report Writing	Completed
M.Sc. II	Proton NMRSpectroscopy	Proton NMR Spectroscopy	Completed

Dr. S. S. Ankushrao

Dr. Mrs. S. D. Shirke

Academic Year: 2024-25 Sem-II, Sem-IV, Sem-VI Department - Chemistry

Name of the Teacher – Dr. S. S. Ankushrao

Name of the Class	Units Allotted	Units Completed	Remark
B.Sc.I	ThermodynamicsIntroduction to AnalyticalChemistry	ThermodynamicsIntroduction to AnalyticalChemistry	Completed
B.Sc. I	Inorganic, Organic & Physical Chemistry Practicals	Inorganic, Organic &Physical ChemistryPracticals	Completed
B.Sc. II (Major)	Crystal Field Theory	Crystal Field Theory	Completed
B.Sc.II (Minor)	Crystal Field Theory	Crystal Field Theory	Completed
B.Sc. III	Chemical KineticsNuclear ChemistryBioinorganic Chemistry	Chemical KineticsNuclear ChemistryBioinorganic Chemistry	Completed
B.Sc. III	Inorganic Chemistry Practicals	Inorganic ChemistryPracticals	Completed
M.Sc. II	Pericyclic Reactions	Pericyclic Reactions	Completed

Dr. S. S. Ankushrao

Dr Mrs S D Shirke

Academic Year – 2024-25 Sem-II, Sem-IV, Sem-VI Department- Chemistry Name of the Teacher - Dr. S. D. Shinde

Name of the Class	Units Allotted	Units Completed	Remark
B.Sc.I			3
B.Sc.II	Valence Bond Theory [VBT]	 Valence Bond Theory [VBT] 	Completed
(Maj+Min)	Crystal Field Theory [CFT]	Crystal Field Theory [CFT]	Completed
	Coordination Chemistry	Coordination Chemistry	
B.Sc.III	Chemistry of f-Block	Chemistry of f-Block The control of the control o	Completed
ai.	Elements	Elements	

Dr. S. D. Shinde

Dr. Mrs. S. D. Shirke HEAD DEPARTMENT OF CHEMISTRY

VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

Vivekanand College, Kolhapur (An Empowered Autonomous Institute)

Syllabus Completion Report

Academic Year - 2024-25
Sem-I, Sem-III, Sem-V
Department- Chemistry
Name of the Teacher – Dr. A. S. Tapase

Name of the Class	Units Allotted	Units Completed	Remark
B.Sc. I	-	i g	
B.Sc. II	Chemical KineticsElectrochemistry II	Chemical Kinetics Electrochemistry II	Completed
B.Sc. III	Quantum TheoryPhotochemistry	Quantum TheoryPhotochemistry	Completed
M.Sc. II (Analytical Chemistry)	Surface characterization by spectroscopy	Surface characterization by spectroscopy	Completed

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Dr. A. S. Tapase

Dr. Mrs. S. D. Shirke

Vivekanand College, Kolhapur (An Empowered Autonomous Institute)

Syllabus Completion Report Academic Year - 2024-25

Academic Year - 2024-25 Sem-II, Sem-IV, Sem-VI Department- Chemistry Name of the Teacher – **Dr. A. S. Tapase**

Name of the Class	Units Allotted	Units Completed	Remark
B.Sc. I	Chemical KineticsElectrochemistry I	Chemical KineticsElectrochemistry I	Completed
B.Sc. II	· ·	*	æ
B.Sc. III	AdsorptionThermodynamics	AdsorptionThermodynamics	Completed

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Dr. A. S. Tapase

Dr. Mrs. S. D. Shirke HEAD

Academic Year - 2024-25 Sem-II, Sem-IV, Department - Chemistry Name of the Teacher — Mr. A.T. Mane

Name of the	Units Allotted	Units Completed	Remark
Class		1	- 17111111
M.Sc.I	Unit I: Chemistry of non-transition elements	Unit I: Chemistry of non-transition elements	Completed
M.Sc.II (Analytical chemistry)	Unit I: Fluorescence and Phosphorescence specrophotometry Unit II: Spectrochemical Methods of Analysis	Unit I: Fluorescence and Phosphorescence specrophotometry Unit II: Spectrochemical Methods of Analysis	Completed

Mr. A. T. Mane

Dr. Mrs. S. D. Shirke

Academic Year - 2024-25 Sem-I, Sem-III, Department - Chemistry

Department - Chemistry
Name of the Teacher — Mr. A.T. Mane

Name of the	Units Allotted	Units Completed	Remark
Class			
M.Sc.I	Unit I: A) Chemistry of transition elements B) Bioinorganic Chemistry	Unit I: A) Chemistry of transition elements B) Bioinorganic Chemistry	Completed
M.Sc.II (Analytical chemistry)	Unit:I A) Drug Analysis B) Analysis of vitamins Unit II: A) Pesticides Analysis B) Forensic Analysis	Unit:I A) Drug Analysis B) Analysis of vitamins Unit II: A) Pesticides Analysis B) Forensic Analysis	Completed

Mr. A. T. Mane

Dr. Mrs. S. D. Shirke

Academic Year - 2024-25 M. Sc. Part-I & II (Sem- II & IV)

Department - Chemistry

Name of the Teacher: Dr. S. D. Kharade

Name of the Class	Units Allotted	Units Completed	Remark
M. Sc. I Sem-II	A) Stereochemistry and bonding in main group compounds B) Metal-ligand equilibria in solution	A) Stereochemistry and bonding in main group compounds B) Metal-ligand equilibria in solution	Completed
	2. Thermal Analysis (TGA, DTA, DSC, TMA)	2. Thermal Analysis (TGA, DTA, DSC, TMA)	Completed
M. Sc. II	1. Food and Food Additive	1.	Completed
Sem IV (Inorganic Chemistry)	Analysis 2. Analysis of Paints, pigments, and petroleum		Completed
Ð	products 3. Analysis of soil and fertilizers		Completed

Dr. S. D. Kharade

Head

Department Of Chemistry

Academic Year – 2024-25

Sem-I, Sem-III

Department - Chemistry

Name of the Teacher -Dr. A. S. Rajmane

Name of the Class	Units Allotted	Units Completed	Remark
M.Sc.I	Fundamentals of research MethodologyComputer Applications	Fundamentals of research MethodologyComputer Applications	Completed
M.Sc.II	 Applications of Following Reagents Study of six and seven membered heterocycles containing two or more heteroatoms 	 Applications of Following Reagents Study of six and seven membered heterocycles containing two or more heteroatoms 	Completed

Dr. A. S. Rajmane

Prof. Dr. Mrs. S. D. Shirke

Academic Year – 2024-25

Sem-II, Sem-IV

Department - Chemistry

Name of the Teacher – Dr. A. S. Rajmane

Name of the Class	Units Allotted	Units Completed	Remark
M.Sc.I	Oxidizing agentsApplications in organic synthesis	Oxidizing agentsApplications in organic synthesis	Completed
M.Sc.II	TerpenoidsVitamins	Terpenoids Vitamins	Completed

Dr. A. S. Rajmane

Prof. Dr. Mrs. S. D. Shirke

Vivekanand College, Kolhapur

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Syllabus Completion Report

Academic Year - 2024-25 Sem- II, Sem-IV Department - Chemistry

Name of the teacher: Miss. S.N. Inamdar

Name of the class	Units Allotted	Units Completed	Remark
M.Sc. I (Physical & Analytical chemistry)	UV and IR spectroscopy	UV and IR spectroscopy	Completed
M.Sc. I (Analytical chemistry) Elective	Advanced liquid chromatographic techniques	Advanced liquid chromatographic techniques	Completed
M.Sc. II (Analytical chemistry)	 Analysis of cosmetic product 	Analysis of cosmetic product	Completed
	Kinetic methods of analysis	Kinetic methods of analysis	Completed

Miss. S.N. Inamdar

Prof. Dr. S. D. Shirke

Vivekanand College, Kolhapur

(An Empowered Autonomous Institution)

Syllabus Completion Report

Academic Year – 2024-25

Sem-III

Department - Chemistry

Name of the Teacher -Ms. V. S. Rajmane

Name of the Class	Units Allotted	Units Completed	Remark
M.Sc.I	 Electroanalytical Teacniques 	 Electroanalytical Teacniques 	Completed
M.Sc.II	 Advanced Instrumentation Techniques-B Ion Selective Electrodes Study of five and six-membered heterocycles containing one heteroatom 	 Advanced Instrumentation Techniques-B Ion Selective Electrodes Study of five and six-membered heterocycles containing one heteroatom 	Completed

Ms.V.S.Rajmane

DEPARTMENT OF CHEMISS :
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(EMPOWERED AUTONOMOUS)

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Prof. Dr. Mrs. S. D. Shirke

Vivekanand College, Kolhapur

(An Empowered Autonomous Institution)

Syllabus Completion Report

Academic Year - 2024-25

Sem-IV

Department - Chemistry

Name of the Teacher -Ms. V. S. Rajmane

Name of the Class	Units Allotted	Units Completed	Remark
M.Sc.I	 Ion Chromatography Study of following chromatographic techniques 	 Ion Chromatography Study of following chromatographic techniques 	Completed
M.Sc.II	 Kinetic and Thermodynamic Control of Reactions Photoelectron spectroscopy X-ray spectroscopy 	 Kinetic and Thermodynamic Control of Reactions Photoelectron spectroscopy X-ray spectroscopy 	Completed

Ms.V.S.Rajmane

DEPARTMENT OF CHEMISTRY
VIVEKANAND COLLEGE, KOLHAPUR
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Prof. Dr. Mrs. S. D. Shirke

Vivekanand College, Kolhapur (An Empowered Autonomous Institute)

Syllabus Completion Report

Academic Year - 2024-25 Department - Chemistry

Name of the teacher: Mrs .S.V.Jadhav

Name of the class	Units Allotted	Units Completed	Remark
B.Sc. III	1) Iron And Steel	1) Iron And Steel	Completed
(Sem VI)	2) Fermentation	2) Fermentation	Completed
B.Sc. I (Sem- I and II)	Practicals (As Per Syllabus)	Practicals (As Per Syllabus)	Completed
B.Sc. II (Sem- III and IV)	Practicals (As Per Syllabus)	Practicals (As Per Syllabus)	Completed

Mrs. S.V.Jadhav

Prof. Dr. S. D. Shirke