

Khed Taluka Shikshan Prasarak Mandal's
Mandal's Hutatma Rajguru Mahavidyalaya Rajgurunagar
Affiliated to S.P.Pune University, Pune

NAAC Reaccredited "B++" Grade (CGPA 2083), DST-FIST Recognized

College website: <https://www.hrmrajgurunagar.ac.in>, E-mail: hrmrajguru@yahoo.co.in,

Ph.No. 02135222099

Department of Chemistry

Syllabus Completion Report 2024-25

Teacher Name : Dr. S.P. Jadhav

Class: F.Y.B.Sc.

Paper No.: SEC -101- CHE

Sem: I

Paper Name: Skill Enhancement Course

Total No.: of Lectures taken: 24

Sr. No.	Chapter No.	Chapter name	No. Of Lectures Taken	Month
1	1	Introduction of Chemical and Laboratory Safety	03	July
2	2	Understanding Laboratory Hazards	04	July /August
3	3	Laboratory Hazards and Responses	08	August /September
4	4	Handling Chemicals and Minimizing Hazards in Laboratory	06	September/October
5	5	Case Studies of Chemical and Laboratory Accidents	03	October

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Syllabus Completion Report 2024-25

Teacher Name : Dr. S.P. Jadhav

Class: T.Y.B.Sc.

Sem: V

Paper No.: I (CH-501)

Paper Name: Physical Chemistry-I

Total No.: of Lectures Allotted: 36

Total No.: of Lectures taken: 36

Sr. No.	Chapter No.	Chapter name	No. of Lectures taken	Month
1	1	Quantum Chemistry	10	July
2	2	Investigation of Molecular Structure	16	August/September
3	3	Photochemistry	10	September/ October

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Department of Chemistry

Syllabus Completion Report 2024-25

Teacher Name : Dr. S.P. Jadhav

Class: S.Y.B.Sc.

Sem: III

Paper No.: I (CH-301)

Paper Name: Physical & analytical Chemistry-I

Total No.: of Lectures Allotted: 36

Total No.: of Lectures taken: 36

Sr. No.	Chapter No.	Chapter name	No. of Lectures taken	Month
1	1	Chemical Kinetics	10	June
2	2	Surface Chemistry	14	June /July
3	3	Errors in Quantitative Analysis	02	August/September
4	4	Volumetric analysis	10	September/ October

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Department of Chemistry

Syllabus Completion Report 2024-25

Teacher Name : Dr. S.P. Jadhav

Class: F.Y.B.Sc.

Paper No.: CHE-102-P

Sem: I

Paper Name: CHE-102-P: Chemistry Practical -I

Total No.: Practicals taken: 10

Batch- B1, B2, B3

Sr. No.	Name of the Practical	Month	No. of Lectures Taken
1	Estimation of aspirin from given tablet and find error in qualitative analysis	29/07/2024 30/07/2024 31/07/2024	05 x 3 =15
2	Balancing of chemical equation using titration data between Oxalic acid and KMnO ₄	01/08/2024 02/08/2024 05/08/2024	05 x 3 =15
3	Estimation of hardness of water by EDTA method	07/08/2024 08/08/2024 12/08/2024	05 x 3 =15
4	Organic Qualitative Analysis 1	13/08/2024 14/08/2024 16/08/2024	05 x 3 =15
5	Organic Qualitative Analysis 2	20/08/2024 21/08/2024 22/08/2024	05 x 3 =15
6	Organic Qualitative Analysis 3	26/08/2024 27/08/2024 28/08/2024	05 x 3 =15
7	Synthesis of potash alum from aluminium metal (scrap Aluminium metal) and qualitative test for anion and cation	03/09/2024 04/09/2024 09/09/2024	05 x 3 =15
8	Synthesis of Mohr's Salt [(FeSO ₄)(NH ₄) ₂ SO ₄]•6H ₂ O and qualitative test for anion and cation.	12/09/2024 18/09/2024 24/09/2024	05 x 3 =15
9	Preparation of Dark red inorganic pigment: Cu ₂ O and qualitative test for cation.	27/09/2024 30/09/2024 01/10/2024	05 x 3 =15
10	Preparation of semicarbazone derivative of aldehyde and ketone and purity by TLC	03/10/2024 04/10/2024 07/10/2024	05 x 3 =15

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Syllabus Completion Report 2024-25

Teacher Name : Dr. S.P. Jadhav

Class: F.Y.B.Sc.

Paper No.: CHE-102-P

Sem: II

Paper Name: CHE-102-P: Chemistry Practical -II

Total No.: Practicals taken: 10

Batch- B1, B2, B3

Sr. No.	Name of the Practical	Month	No. of Lectures Taken
1	Determination of unknown concentration of KMnO ₄ by Colorimetry.	01/01/2025 02/01/2025 15/01/2025	05 x 3 =15
2	Estimation of Cu ++ ion by using EDTA Calorimetrically.	16/01/2025 17/01/2025 20/01/2025	05 x 3 =15
3	Determination of Heat of Neutralization of Strong Acid & Strong Base.	21/01/2025 22/01/2025 03/02/1015	05 x 3 =15
4	Compare the strengths of HCl and H ₂ SO ₄ by studying kinetics of hydrolysis of methyl acetate	03/02/2025 05/02/2025 06/02/2015	05 x 3 =15
5	1. Purification of organic compounds by- 1. Crystallization 2. Sublimation	10/02/2025 12/02/2025 17/02/2025	05 x 3 =15
6	Detection of elements (N, S, Cl, Br, I) in the organic compounds	18/02/2025 20/02/2025 24/02/2025	05 x 3 =15
7	Detection of elements (N, S, Cl, Br, I) in the organic compounds	18/02/2025 20/02/2025 24/02/2025	05 x 3 =15
8	Estimation of number of water of crystallization in Mohr's salt by titrating with KMnO ₄ .	25/02/2025 03/03/2025 12/03/2025	05 x 3 =15
9	Study stoichiometry of reaction between KMnO ₄ and FeSO ₄ by titration method hence determination of number of electrons involved in the reaction and equivalent weight of oxidizing agent - KMnO ₄ .	17/02/2025 18/02/2025 19/02/2025	05 x 3 =15
10	Study stoichiometry of reaction between KMnO ₄ and FeSO ₄ by titration method hence determination of number of electrons	17/02/2025 18/02/2025 19/02/2025	05 x 3 =15

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Syllabus Completion Report 2024-25

Teacher Name : Dr. S.P. Jadhav

Class: S.Y.B.Sc.

Sem: IV

Paper No.: I (CH-401)

Paper Name: Physical & analytical Chemistry-I

Total No.: of Lectures Allotted: 36

Total No.: of Lectures taken: 36

Sr. No.	Chapter No.	Chapter name	No. of Lectures taken	Month
1	1	Phase Equilibrium	06	January-February
2	2	Ideal and Real Solutions	06	February
3	3	Conductometry	06	March
4	4	Colorimetry	09	March
5	5	Column Chromatography	09	April

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Syllabus Completion Report 2024-25

Teacher Name : Dr. S.P. Jadhav

Class: T.Y.B.Sc.

Sem: VI

Paper No.: I (CH-601)

Paper Name: Physical Chemistry-I

Total No.: of Lectures Allotted: 36

Total No.: of Lectures taken: 39

Sr. No.	Chapter No.	Chapter name	No. of Lectures taken	Month
1	1	Electrochemical Cell	13	Dec.-Jan
2	2	Crystal Structures	16	Jan-Feb
3	3	Nuclear Chemistry	10	March

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Syllabus Completion Report 2024-25

Teacher Name: Dr. S.P. Jadhav

Class: F.Y.B.Sc.

Paper No.: SEC -101- CHE II

Sem: II

Paper Name: Skill Enhancement Course

Total No.: of Lectures taken: 27

Sr. No.	Chapter No.	Chapter name	No. Of Lectures Taken	Month
1	1	Laboratory Reagents and Solvents	03	December
2	2	Preparation and Standardization of Solutions	04	January
3	3	Common Laboratory Techniques	08	February
4	4	Instruments, Equipment and apparatus handling	06	February
5	5	Stock and Inventory Control	03	March
6	6	Files and Records	03	March