



Devrukh Shikshan Prasarak Mandal's
Nya. Tatyasaheb Athalye Arts, Ved. S.R. Sapre Commerce and
Vid. Dadasaheb Pitre Science College
(Autonomous)

Late Kakasaheb Pandit Educational Campus,
Devrukh, Dist: Ratnagiri- 415 804, Maharashtra

NAAC Accredited 'A' Grade (Third Cycle), Mumbai University Best College Award 2009-10

Syllabus

Programme: T. Y. B. Sc.

Course- Chemistry Practical-I

w.e.f. Academic Year 2021-22

Choice Based Credit System
T. Y. B. Sc.
Chemistry Syllabus
To be implemented from the Academic year 2021-22

Course Content
Semester V

Course Code	Unit	Topics	Credits	L/Week
USCHT51	I	Molecular Spectroscopy		
	II	Electrochemistry		
	III	Nuclear Chemistry		
	IV	Surface Chemistry & Colloidal State		
USCHT52	I	Molecular Symmetry and Chemical Bonding		
	II	Solid State Chemistry		
	III	Chemistry of Inner Transition Elements		
	IV	Some Selected Topics		
USCHT53	I	Mechanism of Organic Reactions; Pericyclic Reactions & Photochemistry		
	II	Stereochemistry & Heterocyclic Chemistry		
	III	IUPAC & Synthesis of Organic Compounds		
	IV	Spectroscopy-I & Natural Products		
USCHT54	I	Statistical Treatment of Analytical Data-II		
	II	Classical Methods of Analysis (Titrimetry)		
	III	Optical Methods		
	IV	Methods of Separation-I		
USCHP51		Chemistry Practicals I		
USCHP52		Chemistry Practicals II		
USCHP53		Chemistry Practicals III		
USCHP54		Chemistry Practicals IV		

Chemistry Practicals

Semester V

Paper I: Physical Chemistry

Non-Instrumental

1. Colligative Properties

To determine the molecular weight of compound by Rast Method

2. Chemical Kinetics

To determine the order between $K_2S_2O_8$ and KI by fractional change method.

3. Surface Phenomena

To investigate the adsorption of acetic acid on activated charcoal and test the validity of Freundlich adsorption isotherm.

Instrumental

1. Conductometry

To determine the velocity constant of alkaline hydrolysis of ethyl acetate by conductometric method.

2. Potentiometry

To determine the number of electrons in the redox reaction between ferrous ammonium sulphate and ceric sulphate potentiometrically.

Reference Books for Practicals:

Physical Chemistry

1. Practical Physical Chemistry 3rd edition A.M.James and F.E. Prichard , Longman publication
2. Experiments in Physical Chemistry R.C. Das and B. Behra, Tata Mc Graw Hill
3. Advanced Practical Physical Chemistry J.B.Yadav, Goel Publishing House
4. Advanced Experimental Chemistry. Vol-I J.N.Gurtu and R Kapoor, S.Chand and Co.
5. Experimental Physical Chemistry By V.D.Athawale.
6. Senior Practical Physical Chemistry By: B. D. Khosla, V. C. Garg and A. Gulati, R Chand and Co. 2011