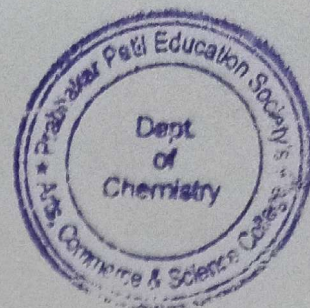


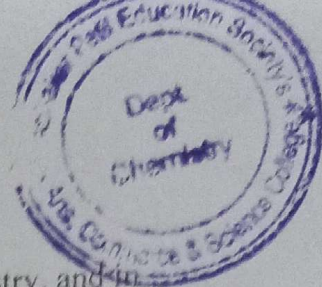
**Prabhakar Patil Education Society's,
Arts, Commerce & Science College,
Veshvi-Alibag-Raigad.**

DEPARTMENT OF CHEMISTRY



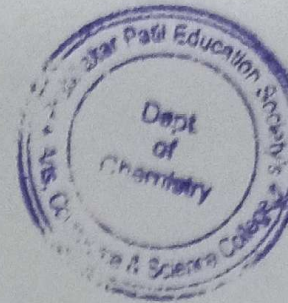
Programme Specific Outcomes

1. Develop skills to solve and understand the principles in quantitative and qualitative analysis in chemistry
2. Students become cautious about handling of drugs, hazardous chemicals and able to perform industrial work with responsibility, honesty and safety
3. Develop skill in problem solving, critical thinking and analytical reasoning
4. Students will be able to carry out scientific experiments as well as accurately record and analyze the results of such experiments
5. Students will be able to explore new areas of research in both chemistry and allied fields of science and technology
6. Learners acquire recent knowledge in the respective and will apply it for the betterment of society especially in the field of Pharmaceutical, Chemical, Agriculture and Biochemistry.
7. Competent in emerging trends for entrepreneurship and successful career in Chemistry related field.



Programme Outcomes

- i) Core competency: Students will acquire core competency in the subject Chemistry, and in allied subject areas.
- ii) A systematic and coherent understanding of the fundamental concepts in Physical chemistry, Organic Chemistry, Inorganic Chemistry, Analytical Chemistry, and all other related allied chemistry subjects.
- iii) Students will be able to use the evidence-based comparative chemistry approach to explain chemical synthesis and analysis.
- iv) Students will be able to characterize, identify and separate components of organic or inorganic origin and will also be able to analyze them by making use of the modern instrumental methods learned.
- v) Students will be able to understand the basic principle of equipment and instruments used in the chemistry laboratory.
- vi) Students will be able to demonstrate the experimental techniques and methods of their area of specialization in Chemistry
- vii) The course curriculum also includes components that can be helpful to graduate students to develop critical thinking ability by way of solving problems/numerical using basic chemistry knowledge and concepts.
- viii) Appreciate the central role of chemistry in our society and use this as a basis for ethical behavior in issues facing chemists including an understanding of safe handling of chemicals, environmental issues, and key issues facing our society in terms of energy, health, and medicine.
- ix) Lifelong learner: The course curriculum is designed to inculcate a habit of learning continuously through the use of advanced ICT techniques and other available techniques/books/journals for personal academic growth as well as for increasing employability opportunity.



Course Outcomes

F.Y.B.Sc

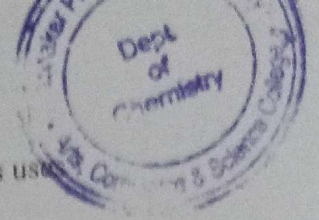
1. Able to write electronic configuration of given atomic number
2. To understand the shapes of different orbital.
3. Be able to draw the structure of organic compounds accurately from molecular and empirical formula
4. Use IUPAC nomenclature rules for naming of organic compounds
5. The students will be able to classify matter by its state and bonding behaviour using periodic table as a reference.
6. Students will be able to state the principle of alkali metals, alkaline earth metals, halogens & noble gases
7. will be able to differentiate between metals, non-metals & metalloids
8. Student will be able to state the basic principle of electrochemistry
9. Student will be able to derive integrated rate expressions for Zero order, first order, and second order & third order reactions
10. To understand preparation methods for alkenes, alkynes & alkyl halides

Course Outcomes



S.Y.B.Sc.

1. To understand the core concept of organic chemistry i.e. resonance, hyper conjugation, inductive effect & their applications
2. To understand the mechanism of attack of electrophiles & Nucleophiles
3. The students will be able to understand the chemistry of many heterocyclic products, carbohydrates, amino acids, peptides, proteins & lipids used as drug and food
4. To understand the reactivity of different carbonyl compounds towards Nucleophilic reactions.
5. Able to know basic concept of thermodynamics.
6. Able to understand the different type of titrations, determination of equivalence points & their applications in various fields
7. Able to understand different methods of separation and purification techniques used in analytical chemistry
8. Student will be able to describe different quantitative & qualitative methods of analysis of organic and inorganic substances
9. Student will be able to understand general properties and applications of s-block, p-block & d-block elements
10. Student will be able to recognize structure of acid halides, esters, amides, and acid anhydrides.
11. Student will be able to understand general properties and applications of s-block, p-block & d-block elements.
12. Student will be able to recognize structure of acid halides, esters, amides, and acid anhydrides



1. Student will be able to understand different activities of drug molecules & its uses
2. Must be familiar about chemical and physical properties of inner transition elements
3. Students will be able to explain large scale preparation and properties of industrial products such as cement, POP, sodium hydroxide, sodium carbonates and bicarbonates
4. Student will be able to demonstrate methods of drugs analysis and pharmaceutical calculations
5. Able to write the order of reactivity of different carbonyl compounds and carboxylic acid derivatives
6. Student will be able to separate mixture of components in organic chemistry which having wide scope in research and forensic science
7. Understand to write nomenclature, classification, properties & preparation of coordination compounds
8. To understand basic feature of spectroscopy & ability to explain common terms in NMR spectroscopy such as chemical shift, coupling constant & anisotropy and describe how they are affected by molecular structure
9. Students are able to classify molecules in relevant point group
10. Student will be able to understand different chromatographic techniques used in pharmaceutical and chemical industries

Patil

Head of The Department
Prabhakar Patil Education Society's
Arts, Commerce & Science College
Veshvi - Alibag

Principal
Prabhakar Patil Education Society's
Arts, Commerce & Science College
Veshvi - Alibag