



- **Course Specific Outcomes**

- **प्रथम वर्ष बी.ए. मराठी ( सत्र १ )**  
**अभ्यासपत्रिका - मराठी अनिवार्य**

- विद्यार्थ्यांस लेखन, वाचन, संभाषण, श्रवण याची ज्ञान प्राप्ती होईल.
- मराठीतील विरामचिन्हांची ज्ञान प्राप्ती होईल.
- अर्जलेखनाची ओळख होईल.
- वृत्त व वृत्तांतलेखनाचा परिचय होईल.

- **अभ्यासपत्रिका - मराठी अनिवार्य ( सत्र २ )**

- व्यवहारातील भाषिक वृत्ती वाढीस लागेल.
- भाषांतर प्रक्रियेचे कौशल्य अवगत होईल.
- इतिवृत्त लेखनाची ज्ञानप्राप्ती होईल.

- **अभ्यासपत्रिका - मराठी ऐच्छिक( सत्र १ )**

- एखाद्याच्या लेखाचा विशिष्ट अभ्यास करता येईल.
- नाट्य संहितेपासून ते सादरीकरणपर्यंत कौशल्य अवगत होईल

- **अभ्यासपत्रिका - मराठी ऐच्छिक ( सत्र २ )**

- साहित्यशाळा व समिक्षेचे ज्ञान होईल.
- आधुनिक नाटकाची ओळख अभ्यासता येईल.





- संगणकासाठी मराठी भाषेचा उपयोग होईल.
- स्पर्धा परीक्षा उत्तीर्ण होण्यासाठी हा अभ्यासक्रम उपयुक्त ठरेल.

• तृतीय वर्ष बी.ए.मराठी ( सत्र ५ )

अभ्यासपत्रिका क्र. ४ मध्ययुगीन मराठी वाङ्मयाचा इतिहास

- प्राचीन मराठी वाङ्मयाच्या इतिहासाची माहिती होईल.
- प्राचीन मराठी वाङ्मयाचे रचना प्रकार समजतील.
- मराठी भाषेबद्दल अभिमान निर्माण होईल.

अभ्यासपत्रिका क्र. ४ मध्ययुगीन मराठी वाङ्मयाचा इतिहास ( सत्र ६ )

- शाहिरी वाङ्मयाचा परिचय होईल.
- बखर वाङ्मयाचा परिचय होईल.
- वेगवेगळ्या पंथाचे वाङ्मयाचे स्वरूप लक्षात होईल.
- वेगवेगळ्या धार्मीयांनी केलेल्या वाङ्मय निर्मितीचा परिचय होईल.
- मध्ययुगीन वाङ्मयाचे स्वरूप स्पष्ट होईल.

अभ्यासपत्रिका -५ भारतीय सावहत्य विचार ( सत्र ५ )

- भारतीय साहित्याचा विचाराचा परिचय होईल.
- भारतीय सावहत्य आस्वाडची प्रक्रिया समजेल.
- भारतीय साहित्याची निर्मिती प्रक्रिया व प्रयोजनाचा परिचय होईल.



**अभ्यासपत्रिका -५ पाश्चात्य सावहत्य विचार ( सत्र ६ )**

- पाश्चात्य साहित्य विचारांचा परिचय होईल.
- पाश्चात्य साहित्याच्या निर्मिती प्रक्रिया व प्रयोजन विचारांचा परिचय होईल.
- पाश्चात्य साहित्याच्या आस्वाद घेण्याच्या पद्धती समजतील.

**अभ्यासपत्रिका ६. साहित्य आणि समाज भाग १ ( सत्र ५ )**

- साहित्य व समाज यांच्या अनोन्य संबंधाचा परिचय होईल.
- महानगरीय व ग्रामीण जाणीवेच्या साहित्याचा व समाजाचा अनोन्य संबंध लक्षात येईल.
- निवडक कलाकृतीच्या आधारे विविध वाङ्मयीन प्रवाहाचा परिचय होईल.

**अभ्यासपत्रिका ६. साहित्य आणि समाज ( सत्र ६ )**

- सामाजिक स्थित्यंतराचा मराठी साहित्यावर प्रभाव पडतो, हे समजेल.
- दलित साहित्याची निर्मिती प्रक्रिया समजेल.
- स्त्रीवादी जाणीव आणि वाङ्मयीन प्रवृत्तीचे ज्ञान होईल.





### अभ्यासपत्रिका क्र. ७ भाषाविज्ञान ( सत्र ५ )

- भाषेच्या विविध अंगांचा परिचय होईल.
- भाषेच्या अभ्यासाच्या आधुनिक व शास्त्रीय पद्धतीचा परिचय होईल.

### अभ्यासपत्रिका क्र. ७ मराठी व्याकरण ( सत्र ६ )

- मराठी व्याकरण व्यवस्थेचा सूक्ष्म परिचय होईल.
- मराठी व्याकरण व्यवस्थेतील समस्या लक्षात येतील.

### अभ्यासपत्रिका क्र. ८ आधुनिक मराठी साहित्य ( सत्र ५ )

- आधुनिकता वादाचे वैशिष्ट्याची ओळख होईल.
- वाङ्मयीन प्रवृत्ती समजतील.

### अभ्यासपत्रिका क्र. ८ उत्तर आधुनिक मराठी साहित्य ( सत्र ६ )

- उत्तर आधुनिकता वादाची वैशिष्ट्ये लक्षात येतील.
- उत्तर आधुनिकता वादाची स्वरूप वैशिष्ट्ये समजल्याने साहित्याकडे पाहण्याचा नवा दृष्टीकोन प्राप्त होईल.



**अभ्यासपत्रिका क्र. ९ भाषांतर कौशल्य (सत्र ५)**

- भाषांतर विद्येबद्दल सूक्ष्म माहिती होईल.
- भाषांतर कौशल्य प्राप्त होईल, त्यामुळे रोजगार संधी प्राप्त होईल.

**अभ्यासपत्रिका क्र. ९ व्यावसायिक मराठी (सत्र ६)**

- विद्यार्थांच्या लेखन क्षमतेचा आणि सर्जनशीलतेचा विकास होईल.
- विविध माध्यमांसाठी आवश्यक लेखनाच्या प्रकारांचा परिचय होईल आणि त्यासाठी आवश्यक कौशल्ये आत्मसात होतील.
- लेखन कौशल्ये आत्मसात करून माध्यामामधील रोजगाराच्या संधी उपलब्ध होतील.

**Head of Dept.**

**Prabhakar Patil Education Society's  
Arts, Commerce and Science College,  
Veshvi, Alibag**

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

## Course Outcomes

### FYBA - OPTIONAL HINDI

- CO1. नग्न सचयन छात्रों को हिंदी कहानी के आरंभ से लेकर अद्यतन कहानी रचना की प्रवृत्तियों, कहानी के विकास से अवगत कराना। हिंदी कहानीकारों द्वारा लिखित कहानियों से परिचित कराना।
- CO2 छात्रों को हिंदी कहानी विधा के स्वरूप तथा विशेषताओं से परिचित कराना।
- CO3 छात्रों का उपन्यास के सविस्तर रूप तथा विशेषताओं से परिचित कराना।
- CO4 छात्रों को आत्मकथा, रेखाचित्र, व्यंग्य, एकांकी विधाओं से परिचित कराना।
- CO5. छात्रों को संस्मरण, यात्रावृत्त, निबंध, लोककथा से परिचित कराना।

### Course (Paper) Name and No: SYBA - HINDI - II

- CO: 1 विद्यार्थियों में मानवीय संवेदनाओं के विकास के साथ नवीन सामाजिक, सांस्कृतिक बोध और जीवनमूल्य का विकास होगा।
- CO 2 विद्यार्थियों में साहित्य के माध्यम से कलात्मक गुणों की अभिरुद्धि होगी कला की साहित्यिक विधाओं के प्रति अभिरुची जागृत होगे तथा रचनात्मक कौशल्य को बढ़ावा मिलेगा।
- CO 3 विद्यार्थियों में नये वैश्विक मूल्य के प्रति सजगता को बढ़ावा मिलेगा, एवं पर्यावरणीय चेतना के प्रति दायित्व बोध उत्पन्न होगा।
- CO 4 विद्यार्थियों में राष्ट्र निर्माण हेतु नये सामाजिक, राजकीय, सांस्कृतिक विचारोंका का प्रसार होगा और दायित्व बोध का विकास होगा।
- CO 5 विद्यार्थियों में साहित्य रसास्वादन के साथ कलात्मक अभिरुची का निर्माण होगा और रचनात्मक कौशल्य को बढ़ावा मिलेगा।

**Course (Paper) Name and No: SYBA HINDI – III**

- CO 1: विद्यार्थियों को तकनीकी और व्यावहारिक भाषा दक्षता की प्रवीणता प्राप्ति होगी।  
विद्यार्थी जनसंचार माध्यमों में रोजगार के क्षेत्र से परिचित होगा।
- CO 2: विद्यार्थियों को जनसंचार माध्यमों में रोजगार के अवसर क्षेत्र से अवगत होंगे।
- CO 3: विद्यार्थियों को व्यावसायिक रूप से आत्मनिर्भरता के योग्य बनाना।
- CO 4: अनुवाद के महत्व को समझना।
- CO5: विद्यार्थी जनसंचार माध्यमों में रोजगार के क्षेत्र से परिचित होगा।

**Course (Paper) Name and No.:4 HISTORY OF HINDI LITERATURE**

**HISTORY OF MODERN HINDI LITERATURE**

- CO1: विद्यार्थियों को हिंदी साहित्य के इतिहास की व्यापक जानकारी प्राप्त होगी।  
साहित्य की अविरत धारा का परिचय होगा।
- CO2: हिंदी साहित्य की विभिन्न विधाओं का व्यापक और क्रमबद्ध ज्ञान प्राप्त होगा।
- CO3: हिंदी भाषा और उसके साहित्य की उत्पत्ति को समझना।
- CO4: साहित्य के इतिहास की अवधारणा को समझना।
- CO5: हिन्दी साहित्य के वर्गीकरण का आधार समझना।
- CO6: हिंदी के प्रत्येक कालखंड को दिए गए नामों के महत्व और आधार को समझना।
- CO7: आदिकाल, भक्तिकाल, रीतिकाल और आधुनिककाल की विशेषताओं को संदर्भ में समझना।
- CO8: हिंदी साहित्य में आधुनिककाल के उद्भव का कारण समझना।
- CO9: हिंदी नाटक, लघुकथा और उपन्यास के विकास के इतिहास को समझना।

**Course (Paper) Name and No.: 5 Post Independence Hindi Literature**

- CO1: आज़ादी के बाद की हिंदी के विभिन्न रूपों को पहचानना और समझना
- CO2: कविता और गद्य के विभिन्न रूपों को पहचानने और अलग करने में सक्षम होना



- CO3: छात्रों में नाटक, कविता के प्रति रुचि पैदा करने में मदद जिससे ऐसे क्षेत्र में नए अवसर खुलें।
- CO4: छात्रों को एकांकि की परिभाषा, स्वरूप, तत्व, तथा एकांकि के प्रकार से परिचित कराना।
- CO5: छात्रों को हिंदी के विविध लेखकों द्वारा लिखे गए एकांकि से परिचित कराना।
- CO6: छात्रों को कविता का अर्थ, परिभाषा तथा स्वरूप से परिचित कराना।
- CO7: छात्रों को हिंदी के विविध कवियों द्वारा लिखे गए कविताओं से परिचित कराना।

**Course (Paper) Name and No.: VI INFORMATION TECHNOLOGY IN HINDI  
SOCIAL MEDIA**

- CO 1: सूचना प्रौद्योगिकी की अवधारणा को समझने में सक्षम करना।
- CO 2: हिंदी साहित्य की वेबसाइटों से अध्ययन सामग्री का उपयोग करने में सक्षम करना।
- CO 3: सूचना प्रौद्योगिकी के महत्व एवं समस्याओं को समझने में सक्षम करना।
- CO 4: रोजगार सृजन में सूचना प्रौद्योगिकी की भूमिका को समझने में सक्षम करना।
- CO 5: सोशल मीडिया के महत्व को समझने में सक्षम करना।
- CO 6: समाज पर सोशल मीडिया के प्रभाव को समझने में सक्षम करना।
- CO 7: सोशल मीडिया और कानून के बीच संबंध को समझने में सक्षम करना।
- CO 8: सोशल मीडिया की समस्याओं और उनके निवारण को समझना।

**Course (Paper) Name and No.: VII. Literary Criticism: Prosody & Rhetoric's**

- CO 1: साहित्य में सिद्धांतों के विभिन्न रूपों को समझना।
- CO2: साहित्यकला के प्रकार, स्वरूप, परिभाषाएँ एवं वर्गीकरण एवं उससे संबंध को समझना।
- ICO3 काव्य के विभिन्न रूपों को समझने के लिए सक्षम करना।
- CO4 छंद और अलंकार के बारे में समझने में सक्षम होना।
- CO5 शब्द शक्ति के प्रकार और उनके अर्थ, परिभाषा एवं विभिन्न रूपों को समझना।
- CO6 शैलियों के अर्थ और रूपों की पहचान करने में सक्षम होना।
- CO7 विभिन्न प्रकार के गद्यांश रूपों को समझने में सक्षम होना।

**Course (Paper) Name and No.: VIII Linguistic, Hindi language and Hindi grammar.**

- CO 1: भाषाई अवधारणाओं को समझने में सक्षम होना।
- CO 2: हिंदी भाषा (राजभाषा, बोलीभाषा) के विभिन्न प्रवाहों को समझने में सक्षम करना।
- CO 3: हिंदी व्याकरण की परिचयात्मक अवधारणाओं को समझने में सक्षम करना।

- CO 4 भाषाई महत्व को समझने में सक्षम करना
- CO 5 प्राचीन एवं मध्यकाल की भाषाओं को समझने में सक्षम करना।
- CO 6 हिन्दी भाषा की उत्पत्ति एवं विकास को समझने में सक्षम करना।
- CO 7 खड़ीबोली (हिन्दी, उर्दू) के विभिन्न रूपों को समझने में सक्षम करना
- CO 8 हिन्दी व्याकरण की परिचयात्मक अवधारणाओं को समझने में सक्षम करना।

**Course (Paper) Name and No.: IX Mass Media**

- CO 1: मीडिया में लेखन के विभिन्न रूपों को समझना।
- CO 2: प्रूफ रीडिंग की अवधारणा को समझना।
- CO 3: छात्रों को मुद्रण कला के स्वरूप तथा विकास से परिचित कराना।
- CO 4: छात्रों को जनसंचार के विविध माध्यमों के स्वरूप तथा विकास से परिचित कराना।
- CO 5: मीडिया के क्षेत्र में हिन्दी के प्रयोग को समझने में सक्षम होना।

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



Prabhakar Patil Education Society's Arts, Commerce and Science

Veshvi-Alibag

Department of Economics

Course outcomes ( CO ) Bachelor of Arts in Economics

Class	Course	Sem	Course Outcome
F.Y.B.A	1. Micro economics I	Sem-I	<ul style="list-style-type: none"><li>• Learners can be aware about basic principles of microeconomic theory</li><li>• Learners will understand the concepts and importance of Opportunity Cost, Incentives Exchange Inflation and Unemployment Trade Off.</li><li>• Students can apply the demand and supply function in business decisions.</li><li>• Students can understand the importance of maximum satisfaction.</li></ul>
F.Y.B.A	Micro economics II	Sem-II	<ul style="list-style-type: none"><li>• Learners can be aware about production function and production theories.</li><li>• Students can understand the various cost and revenue concepts..</li><li>• The students can understand the different theories of factor pricing, rent, wages, interest, profit.</li></ul>



			<ul style="list-style-type: none"><li>• Learners can be aware about different market structures and their equilibrium conditions for price output determination.</li></ul>
S.Y.B.A	Macro Economics	Sem.III	<ul style="list-style-type: none"><li>• The students able to Understand the issues of macro economics</li><li>• The students able to take Obtained knowledge reading economics decision of consumption and investment</li><li>• The students able to take acquired knowledge about monetary and fiscal policy</li><li>• The Learners can aware about online banking transaction and new reforms.</li></ul>
S.Y.B.A	Macro Economics	Sem.IV	<ul style="list-style-type: none"><li>• The students can understand the trade balance and implications for GDP calculation, export and import functions.</li><li>• Learners can aware about IS/LM/UIP model fiscal and monetary policy under fixed and flexible exchange rates.</li><li>• Learners can grasp the knowledge about different types of exchange rate systems and exchange rate crises</li></ul>





			<ul style="list-style-type: none"><li>• Learners can acquaint the knowledge about the gold standard and Bretton Wood systems and their collaps.</li></ul>
S.Y.B.A	Public Finance	Sem.III	<ul style="list-style-type: none"><li>• Learners can aware about sources of monopoly and various aspects of monopoly market.</li><li>• Students can understand basics of game theory</li><li>• Learners can introduce with different oligopoly models, and forms of price leadership</li><li>• Students can acquaint the knowledge of General equilibrium and Pareto optimality conditions of social welfare.</li></ul>
S.Y.B.A	Indian Economy : Paper VI	Sem.IV	<ul style="list-style-type: none"><li>• Students will understand the Trends in India's National Income and PCI Since 1990; Structural Changes In Indian Economy.</li><li>• The learners will understand Role of Agriculture in Economic Development, Agricultural Inputs; Agricultural Price Policy, Sources of Agricultural Finance, Agricultural, Marketing, National Policy for Farmers, Food Security in India</li><li>• Students will understand Industrial Sector Development.</li><li>• Learners are expected to understand the various Types of</li></ul>



			service sector includes in the
T.Y. B.A.	Environmental Economics: XI	V	<ul style="list-style-type: none"> <li>• Learners can be aware about environmental economics and Rio declaration on environmental development.</li> <li>• Students can understand criteria for evaluating environmental policies and implementation of environmental policy</li> <li>• Learners can introduce the economic value of the environment and different methods of environmental valuation.</li> <li>• Students can acquire knowledge about global environmental problems and the concept of sustainable development</li> </ul>
T.Y. B.A.	Environmental Economics XVII	VI	<ul style="list-style-type: none"> <li>• Students are empowered about environmental challenges and need for environment accounting.</li> <li>• Developed understanding on the policies measures to attain SDGs.</li> </ul>
T.Y. B.A.	Advanced Micro Economics VII	V	<ul style="list-style-type: none"> <li>• Enables students will get knowledge on new market structure imperfect competition.</li> <li>• Provides understanding on the welfare economics and economics of information.</li> </ul>
T.Y.	Advanced Macro	VI	<ul style="list-style-type: none"> <li>• To make students aware about post</li> </ul>



B.A.	Economics XIII		<p>Keynesian Synthesis and understand various aspects of trade cycle.</p> <ul style="list-style-type: none"><li>● Students will be able to describe the contemporary exchange rate regimes and international monetary systems.</li></ul>
T.Y. B.A.	Economics of growth and development VIII	V	<ul style="list-style-type: none"><li>● The learners able to Learned the issues related to growth and development.</li><li>● Students are able identified issues in the development process</li><li>● Students are able to understand the policy options and analyzed measures taken for development of the economy.</li><li>● Learner know gain Learned the terms related with the foreign exchange market .</li><li>● The students get a knowledge to course introduce the international Economic Institutions.</li></ul>
B.A	International Economics XIV	VI	<ul style="list-style-type: none"><li>● Students will be enable to understand the trade theories and determinant of trade which helps them to analyze the international trade policies.</li><li>● Students will able to understand the role of various international institutions and trade blocks and</li></ul>





			their approaches informing the policies for trade.
B.A	Industrial and labour Economics	V	<ul style="list-style-type: none"><li>• Learners will study the different contemporary issues of Industrial sector.</li><li>• Learners will know the problems of industries.</li><li>• Learners will get the idea about productivity.</li><li>• Learners will get with new policies and its impact on industries.</li></ul>
B.A	Industrial and labour Economics XV	VI	<ul style="list-style-type: none"><li>• Learners become aware about different problems and policies a labor.</li><li>• Learners will get intoned about trade unions and industrial relation in contemporary world.</li><li>• Learners will know the different policies of labour welfare.</li></ul>
T.Y.B.A	Research Methodology X	V	<ul style="list-style-type: none"><li>• The learners will understand and inculcate research in economics.</li><li>• The learners will exchange ideas and application of results of economic research.</li><li>• The cause will help in formulation of problem in social since research.</li><li>• The students will understand data</li></ul>





			collection and presentation of quality research in social science.
T.Y.B.A	Research Methodology XVI	VI	<ul style="list-style-type: none"> <li>• The learners get assimilated to the research culture in economics through application of statics.</li> <li>• The learners will understand the concept of index number with its use and applications</li> <li>• The course will help in formulation of hypotheses and its testing in social science research.</li> <li>• The students will understand writing of social science research report with its various types, organization and styles.</li> </ul>
T.Y.B.A	History of Economic thoughts XVII	V	<ul style="list-style-type: none"> <li>• Learner Learned the thoughts of greatest economists.</li> <li>• Students able to understand the history of economy of the country</li> <li>• Learner able to Improved the critical thinking by setting past and current economic theories in their proper perspective</li> </ul>
T.Y.B.A	History of Economic thoughts XVIII	VI	<ul style="list-style-type: none"> <li>• Students will get information about the genesis of Economics and it's modern scenario.</li> <li>• Students get familiarized with the leading Indian Economist who</li> </ul>



			significantly contributed to the stream of Indian economic thought.
--	--	--	---

Final

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



## **Course Title: Communication Skills-I**

**Course Code: BCUI41**

### **Program Outcome –**

The course is intended to familiarize students with the basics of English language and help them to learn to identify language structures for correct English usage.

### **Program Specific Outcomes:**

The students should be able to :

01. Identify Common Errors and Rectify Them
02. Develop and Expand Writing Skills through Controlled and Guided Activities
03. To Develop Coherence, Cohesion and Competence in Oral Discourse through Intelligible pronunciation.

### **Course Outcome -**

To emphasize the essential aspects of effective written communication necessary for professional success. The should be able to write correctly and properly with special reference.



## **SYBA English (Ancillary) Course Title**

Optional English: Introduction to Drama

Paper II

### **Program Outcome:**

To introduce learners to the uniqueness of Indian Literature in English To acquaint learners to the pluralistic dimensions of Indian Literature in English To help them understand the different genres of Indian Literature in English

### **Program Specific Outcome**

- To familiarize learners with different perspectives of approaching this literature
- To make learners aware of prominent Indian Writers in English

### **Course Outcomes:**

By the end of the course, a learner will:

01. develop interest and passion for drama (and theatre).
02. be familiarized with the salient elements and characteristics of drama.
03. be able to identify the different forms and types of drama.
04. be capable to identify the various trends and characteristics of significant dramatic movements through the representative dramas.
05. be equipped with the tools and techniques to critically appreciate drama.
06. imbibe human values reflected in the selected plays.
07. justify that drama is reflection / representation of life.
08. develop analytical skills and critical thinking through close reading of the representative dramas.





**SYBA English (Ancillary) Course Title:**

Optional English: Introduction to Poetry

Paper III

**Program outcome**

1. To acquaint the learners of literature with the various genres and literary terms of twentieth century American Literature
2. To sensitize them to the themes and styles of American Literature
3. To introduce them to the socio-cultural milieu of twentieth century America through literary texts
3. To enhance their understanding of American, African American and Multicultural sensibilities by introducing them to the literary works representing them
4. To facilitate cross-cultural perspectives and discussions on American Literature

**Course Outcome:** By the end of the course, a student should develop the ability to:

01. Identify different genres and forms of poetry
02. Identify poetic technique, style and rhetorical devices used in poetry
03. Critically appreciate poems by separating various component parts and investigating the relationship of the parts to the whole
04. Demonstrate understanding of wide range of poems from different historical periods, written in a wide range of forms, styles and subject matter
05. Identify the major poets of world literature and define the importance of their works
06. Enhance their cultural sensitivity through reading of representative poems from diverse cultural context.



## **TYBA English literature**

All subjects

Students

### **Student Learning Outcomes**

Students in the Department of Literature and Writing Studies develop critical reading and writing skills and learn to recognize that effective thinking and writing about texts must be informed by knowledge about relevant local, global, and disciplinary contexts. We have designed our departmental curriculum to help students develop and demonstrate the following abilities:

Create clear and compelling communication in writing, speech, and other media;

Closely analyze texts, applying critical and theoretical approaches;

Identify and describe literary canons and alternative traditions and the process of their formation; and

Distinguish the local and global contexts of multicultural and international texts and apply those contexts in textual analysis, utilizing relevant theoretical frameworks.

We recognize that a good reading knowledge of at least one language other than English is necessary for an advanced understanding of literature and writing, especially since the translation of texts from other languages changes their meaning.

Assessment of these learning outcomes occurs in a variety of ways: students are asked in our classes to complete many different kinds of writing assignments, including short essay exams, in-class responses, reading journals, research papers, thesis-driven essays, oral reports, and collaborative writing projects.



Semester wise Course Outcomes

I. B. Com

• Semester I

Sr. No.	Name of the course	Outcomes
01	Commerce	<ul style="list-style-type: none"> <li>• Transmits understanding of basic concepts of business along with setting business units and logical provisions for initiating business.</li> <li>• Gives clues to learners on entrepreneurship and exposes them to problems and prospects of women entrepreneurs.</li> <li>• Conveys to the learners the current trends in business.</li> </ul>
02	Economics	<ul style="list-style-type: none"> <li>• Familiarises the students with the basic concepts of microeconomics and its applications to business situations.</li> <li>• Guides the students towards understanding the real world market situations &amp; business applications.</li> </ul>
03	Foundation Course	<ul style="list-style-type: none"> <li>• Creates understanding of multi-lingual, multi-religious, multicultural nature &amp; political nature of Indian society.</li> <li>• Creates understanding of the Indian Constitution &amp; the disparity in Indian society</li> </ul>
04	Business Communication	<ul style="list-style-type: none"> <li>• Corporate communication helps future managers and employees in performing managerial functions smoothly.</li> <li>• Creates awareness, imparts knowledge, shapes attitudes and overall improves overall interaction between people.</li> </ul>



05	Environmental Studies	<ul style="list-style-type: none"> <li>• Makes students learn the role of environment and ecosystem</li> <li>• Creates awareness about the relationship between population &amp; environment.</li> </ul>
06	Environmental Studies	<ul style="list-style-type: none"> <li>• Introduces mathematics &amp; statistics to undergraduate students of commerce so that they can use them in the field of commerce &amp; industries to solve real life problems.</li> <li>• Facilitates decision making with the help of decision making techniques</li> </ul>

• Semester II

Sr. No.	Name of the Course	Outcomes
01	Commerce	<ul style="list-style-type: none"> <li>• Makes learners understand the fundamentals of services, and plans regarding various strategies to increase service and trends in services.</li> <li>• Imparts knowledge related to retail changes in India with global perspective and converses on problems and prospects in retailing.</li> <li>• Furnishes details regarding BPO, KPO and various e-commerce activities focusing on logistics</li> </ul>
02	Economics	<ul style="list-style-type: none"> <li>• Enables understanding of the relationship between different market structures and how they compare and contrast with one another.</li> <li>• Enables understanding of how a firm sets price for its products by using different methods..</li> </ul>



03	Foundation Course	<ul style="list-style-type: none"> <li>• Makes learners understand the different evolution of Human Rights.</li> <li>• Creates the basic understanding about the issues related to economic changes and its impact on different fields.</li> </ul>
04	Business Communication	<ul style="list-style-type: none"> <li>• Equips the students to learn the principles of effective communication so that they can communicate with confidence in the corporate world.</li> <li>• Imparts the techniques of group discussion, the guidelines of preparing for the interview along with the knowledge of drafting different formats of letters like inquiry, sales, marketing, claim, adjustments, appointment and termination.</li> </ul>
05	Environmental Studies	<ul style="list-style-type: none"> <li>• Makes students aware about waste management.</li> <li>• Exposes learners to the impact of Industrial development on Agriculture.</li> </ul>
06	Mathematics and Statistics	<ul style="list-style-type: none"> <li>• Prepares students to develop skills to solve financial problems.</li> <li>• Creates awareness of applications of Derivatives concepts in Economics.</li> </ul>
Sr.No.	Name of the Course	Outcomes
01	Commerce	<ul style="list-style-type: none"> <li>• Creates understanding of the concept of management along with evolution of management.</li> <li>• Let's students become aware about universal application of functions of Management..</li> </ul>
02	Business Economics	<ul style="list-style-type: none"> <li>• Creates awareness among students about various economic conditions of macro - economics such as inflation, unemployment etc.</li> <li>• Examines the economy as a whole and inspires consistent way of thinking about key macroeconomic phenomena.</li> </ul>

03	Company Secretary Practice	<ul style="list-style-type: none"> <li>• Updates students about careers in Company Secretary Practice.</li> <li>• Have a thorough understanding of the role of the company secretary and the differing responsibilities of shareholders, the company secretary, the board of directors or governing body, the executives, management and stakeholders.</li> </ul>
04	Foundation Course	<ul style="list-style-type: none"> <li>• Gives basic understanding on issues related to human rights violations, ecology and urban-rural disparities in access to health and education.</li> <li>• Creates the importance of developing scientific temper towards technology and its use in everyday life.</li> </ul>
05	Business law	<ul style="list-style-type: none"> <li>• Provides a brief idea about the framework of Indian business law.</li> <li>• Familiarises the students with case law studies related to business law.</li> </ul>

• Semester IV

Sr. NO.	Name of the Course	Outcomes
01	Commerce	<ul style="list-style-type: none"> <li>• Provides basic knowledge of production management, inventory management, and quality management.</li> <li>• Updates learners with recent trends in finance.</li> </ul>
02	Business Economics	<ul style="list-style-type: none"> <li>• Enables students to understand the primary functions of government like revenue, expenditure, debt and helps to analyse budget.</li> <li>• Provides students with the tools to understand the underlying concepts and practical trade offs entailed in public finance policy alternatives.</li> </ul>

03	Company Secretary Practice	<ul style="list-style-type: none"> <li>To provide the learners an insight about Company Secretarial Practices.</li> <li>To make the learners understand the role of Company Secretary towards Company's statutory provisions, rules and regulations.</li> <li>To make the learners understand the various aspect of Company Management, meetings and reports</li> </ul>
04	Foundation Course	<ul style="list-style-type: none"> <li>Develops a basic understanding about rights of citizens, ecology, and the role of modern technology.</li> <li>Provides an overview of significant skills required to address competition in career choices.</li> </ul>
05	Business law	<ul style="list-style-type: none"> <li>Acquaints students with laws related to Indian Companies' Act 2013, IPR, Partnership Act 2008, and Consumer Protection Act.</li> <li>Provides a brief idea about the framework of Indian Business laws.</li> </ul>

• Semester V

Sr. No.	Name of the Course	Outcomes
01	Commerce (marketing)	<ul style="list-style-type: none"> <li>Intercepts and familiarise students with different and basic concepts of marketing mix, MIS and Marketing Research.</li> <li>Updates students about marketing challenges faced by marketing managers in the 21st century.</li> <li>Makes students aware about competitive strategies for market leaders, and various aspects of the market.</li> </ul>
02	Business Economics	<ul style="list-style-type: none"> <li>Assess the performance of commercial banks in agricultural credit.</li> <li>Identifies and explains economic concepts and theories related to the behaviour of economic agents, markets, industry legal institutions, social norms and government policies.</li> </ul>



03	Export Marketing (Elective)	<ul style="list-style-type: none"> <li>• Furnishes learners with basic concepts and global framework for export marketing.</li> <li>• Instructs learners about basic financial incentives and updates them with current trends in export marketing.</li> </ul>
04	Purchasing and Store Keeping	<ul style="list-style-type: none"> <li>• Give learners insights about how the businessman makes their purchase decision using a scientific method.</li> <li>• Also learners get ideas behind the various store designs and how store design can help to improve sales.</li> </ul>

Semester VI

Sr. No.	Name of the Course	Outcomes
01	Commerce (HRM)	<ul style="list-style-type: none"> <li>• Refurbishes students with fundamental aspects of HRM, the role, functions and process of HRM.</li> <li>• Explains students the applications of HRIS and different theories of leadership and motivation.</li> <li>• Updates learners with recent trends in HRM and make students aware about challenges faced by HR managers.</li> </ul>
02	Business Economics	<ul style="list-style-type: none"> <li>• Creates an understanding of the nature of International Trade and the nature of International organization such as the United Nations, the International Bank for Reconstruction and Development (World Bank), International Monetary Fund, World Trade Organization and their effects on business.</li> <li>• Creates understanding of the rate of exchange and how the rate of exchange is determined.</li> </ul>



03	Export marketing (elective)	<ul style="list-style-type: none"> <li>• Provides information regarding product planning and pricing decisions for export marketing.</li> <li>• Instructs students regarding various sources of export finance and provides knowledge regarding export Procedure and documentation.</li> </ul>
06	Purchasing and Store Keeping	<ul style="list-style-type: none"> <li>• Provides information regarding how uninterrupted supply of materials without delay to various production departments of the organization is made.</li> <li>• Also provides information regarding</li> </ul>

Zahedi



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



Semester wise Course outcomes

I. B. Com

• Semester I

Sr. No.	Name of the Course	Outcomes
1.	Accountancy	<ul style="list-style-type: none"> <li>• Inculcates knowledge of various accounting concepts and policies.</li> <li>• Introduces the students to working knowledge of Accounting Standards issued by the ICAI.</li> </ul>

• Semester II

Sr. No.	Name of the Course	Outcomes
01	Accountancy	<ul style="list-style-type: none"> <li>• Understands the techniques of consignment, Branch and Accounting methods.</li> <li>• Acquaints learners with knowledge regarding accounting procedures related to fire Ins. claims and the process of claims.</li> </ul>

• Semester III

Sr. No.	Name of the Course	Outcomes
01	Accountancy and financial management	<ul style="list-style-type: none"> <li>• Understands the techniques of consignment, Branch and Accounting methods.</li> <li>• Acquaints learners with knowledge regarding accounting procedures related to fire Ins. claims and the process of claims.</li> </ul>

02	Introduction to Management Accounting	<ul style="list-style-type: none"> <li>• Enables them to know the concept of capital budgeting with reference to time value of money</li> <li>• Enables understanding of the functions, advantages, limitations of management accounting</li> </ul>
----	---------------------------------------	---

#### Semester IV

Sr. No.	Name of the department	Outcomes
01	Introduction to auditing	<ul style="list-style-type: none"> <li>• Imparts knowledge of audit planning, procedures and documentation and assurance standards.</li> <li>• Instils elementary understanding of internal control and internal audit</li> </ul>
02	Accountancy and financial management	<ul style="list-style-type: none"> <li>• Imparts conceptual knowledge of various accounting concepts, conventions and policies.</li> <li>• Inculcates knowledge about accounting methods, practices and techniques particularly pertaining to joint stock companies.</li> </ul>

#### Semester V

Sr. No.	Name of the Course	Outcomes
01	Financial accounting and auditing paper	<ul style="list-style-type: none"> <li>• Creates awareness about company accounts with provision of various companies act.</li> <li>• Provides knowledge about the buyback of shares, investment account with their accounting treatment.</li> </ul>

02	Cost Accounting and auditing paper	<ul style="list-style-type: none"> <li>• Impacts the knowledge of various costs on the basis of element behavior and functions.</li> <li>• Helps in ascertaining the cost of material and labour.</li> </ul>
----	------------------------------------	--

**Semester VI**

Sr. No.	Name of the Course	Outcomes
01	Financial accounting and auditing paper	<ul style="list-style-type: none"> <li>• Imparts knowledge about accounting treatment of amalgamation of companies, Foreign currency transactions.</li> <li>• Helps students in gaining practical knowledge of accountancy.</li> </ul>
	Cost accounting and auditing paper	<ul style="list-style-type: none"> <li>• Creates understanding on the various techniques of costing like Contract, Process Creates understanding on the various techniques of costing like Contract, Process, Standard and Marginal.</li> <li>• Imparts knowledge on various emerging concept of cost accounting like cycling costing, Bench Marking etc.</li> </ul>

*Prabhakar Patil*

  
**PRINCIPAL**  
 Prabhakar Patil Education Society  
 Arts, Commerce & Science College  
 Veshvi - Alibag





### PROGRAMME OUTCOMES

To understand the scope and evolution of the diverse discipline of Geography.

- Recognize, synthesize and evaluate diverse sources of knowledge, arguments and approaches pertinent

to exploring human-environment problems. Explain societal relevance of geographical knowledge and apply

it to real world human- environment issues.

- Appreciate and reflect critically on the importance of holistic and interpretative human- environment

perspectives.

- An understanding and acknowledgment of the threats that endanger the earth's natural systems. This

helps in further realization of the significance of anthropogenic causes of many of the disasters and threats

that puts life on this planet on the edge.

- Development of knowledge, skills and holistic understanding of the discipline among students.

Encouragement of scientific mode of thinking and scientific method of enquiry in students. This goal is

achieved through the regular field excursions conducted by the Department to various parts of India

extensively and the writing of a report/thesis on it.



- Students become equipped with the ability to respond to both natural and man-made disaster and

acquire management skills. This is attained through the curriculum by studying and analyzing bazar

disasters, their impact and management.

- Ability to undertake research in interdisciplinary studies and problems or issues beyond the realm of

what strictly comes under the purview of geography. This is possible because of the varied nature of the

curriculum that encompasses the study and analyses of concepts of sub-disciplines and allied disciplines of

Geology, Seismology, Penology, Hydrology, Environmental Studies, Disaster Management, Resource

Management Conservation, Regional Planning and Development Studies ect.



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



J/C PRINCIPAL  
Prebhakar Patil Education Society's  
Arts, Commerce & Science College  
Veshvi - Alibag



**PRABHAKAR PATIL EDUCATION SOCIETY ARTS , COMMERCE AND SCIENCE  
COLLEGE VESHVI, ALIBAG.**

**COURSE OUTCOMES**

	<b>COURSE</b>	<b>COURSE OUTCOMES</b>
<b>1</b>	<b>F.Y.B.A Geography Semester – I HUMAN GEOGRAPHY</b>	<ol style="list-style-type: none"> <li>1. Concepts and reasoning associated with man-environment relationship.</li> <li>2. Spatial variation in human population and patterns of migration in the world.</li> <li>3. Knowledge base for competitive exams.</li> <li>4. Effective learning skills for presentation and explanation</li> </ol>
<b>2</b>	<b>F.Y.B.A Geography Semester – II Environment Geography</b>	<ol style="list-style-type: none"> <li>1. Fostering the ability of the students to encounter practical problems with theoretical knowledge in Geography and Environment.</li> <li>2. Promotion of research aptitude and field work aptitude as well as laboratory based practical works for the students of Geography.</li> <li>3. Capacity enhancement of the students in spatial mapping on digital platform for the Geographical research and studies.</li> </ol>
<b>3</b>	<b>S.Y.B.A Geography Semester – III GEOGRAPHY OF MAHARASTRA</b>	<ol style="list-style-type: none"> <li>1. To acquaint the student with basic knowledge of Maharashtra state.</li> <li>2. To acquaint the student with prospects and problems of Maharashtra. Outcomes:</li> <li>3. Student will familiar with prospective of Maharashtra.</li> <li>4. Student enhance his knowledge for doing research on Maharashtra's problem and futuristic development plan for Maharashtra</li> </ol>
<b>4</b>	<b>AGRICULTURE GEOGRAPHY</b>	<ol style="list-style-type: none"> <li>1.To educate students about geographical details of farming activities in India</li> <li>2. To make students understand the spatial variation in nature of farming and the crops in India</li> <li>3. To develop scientific attitude and independent thinking to understand the influence of geographical factors on the agricultural activities in India</li> <li>4. To create awareness about the present agricultural practices and the problems faced by farmers in India</li> <li>5. To train students in the skills in reading and interpretation of maps</li> <li>6. Demonstrate knowledge to develop the power of thinking, reasoning and memory LEARNING</li> </ol>
<b>5</b>	<b>S.Y.B.A Geography</b>	<ol style="list-style-type: none"> <li>1. To educate students about the spatial variation in</li> </ol>





	<b>Semester – IV GEOGRAPHY OF INDIA</b>	the geographical details of India 2. To impart training of map skills to the students. 3. To make students understand the importance of capacity building - power of thinking, reasoning and memory 4. To create a knowledge base for competitive exams. LEARNING OUTCOMES: 5. Geographical details of India 6. Spatial variation in physical features, vegetation, soil and minerals in India 7. Effective learning skills for capacity building 8. Confidence for competitive exams.
6	TOURISAM GEOGRAPHY	1) To develop and communicate basic conceptual frame work of Geo Tourism. 2) To realize its potentials and against achieved in the Indian context. 3) To understand the various Geo tourism. 4) To know the role and responsibilities, economic growth of Tourism industry in India. 5) To evaluate the role of various organization of tourism. 6) To know the importance of the sustainable tourism 7) To develop Socio cultural aspects for the Tourism geography.
7	<b>T.Y.B.A Geography Semester – V Introduction to Geomorphology</b>	1. To define the field of Geomorphology and to explain the essential principles of Geomorphology. 2. To know the mechanism of dynamic nature of earth's surface and it's interior. 3. To illustrate and explain the forces affecting the crust of the earth and its effect. 4. To understand the conceptual and dynamic aspects of landform development. Course Objectives:
8	<b>Geography of Rural Settlement (A)</b>	1. Learners will be able to recognize definitions, nature, scope, characteristics and importance of settlement geography. (Knowledge) 2. Learners will be able to describe origin, growth, characteristics, distribution, structure and rural urban fringe of rural settlements. (Comprehension) 3. Learners will be able to discover concepts like origin, growth, classification and Hierarchy of rural settlements. (Application) 4. Learners will be able to analyses distribution of settlements in India





9	<b>TOOLS AND TECHNIQUES IN GEOGRAPHY FOR SPATIAL ANALYSIS-I (Practical)</b>	<ol style="list-style-type: none"> <li>1. Understand and prepare different kinds of maps.</li> <li>2. Recognize basic themes of map making.</li> <li>3. Development of observation skills.</li> </ol>
10	<b>POPULATION GEOGRAPHY</b>	<ol style="list-style-type: none"> <li>1. Understand the nature, scope, importance approaches and relation with other social sciences of Population Geography</li> <li>2. Understand the structure, growth, density and distribution of population in India and World.</li> <li>4. Get knowledge about population theories.</li> <li>5. Understand the causes, consequences and recent trends of migration in India</li> <li>6. Understand the contemporary issues of population in India.</li> <li>7. The components of frameworks; population dynamics; world population and development with special reference to India.</li> <li>8. The Acquiring, handling and analyzing population data both at the grassroots level and secondary sources</li> </ol>
11	<b>GEOGRAPHY OF RESOURCES ( A)</b>	<ol style="list-style-type: none"> <li>1. Understand concepts of different natural resources, its use, overuse, with its solution by natural resource management methods.</li> <li>2. Appreciate the need for managing land and water resources for sustainable growth and development, managerial skills such as land evaluation and land classification.</li> <li>3. Also, able to understand the causes and consequences of water stress and draw water conservation and management plans</li> </ol>
12	<b>GEOSPATIAL TECHNOLOGY</b>	<ol style="list-style-type: none"> <li>1. Interpret satellite imagery and understand the preparation of false colour composites from them.</li> <li>2. Training in the use Geographic Information System (GIS) software for contemporary mapping skills.</li> <li>3. Analysing and interpreting remotely sensed satellite images and aerial photographs in order to understand topographical and cultural variations on the Earth's surface. Conducting field excursions and preparation of field report on research on problem in different areas of India Apply GIS to the preparation of thematic maps.</li> </ol>
13	<b>T.Y.B.A Geography</b>	<ol style="list-style-type: none"> <li>1. To understand the importance of atmosphere and ocean</li> </ol>



	<p align="center"><b>Semester – VI</b>  <b>Introduction to Climatology and Oceanography</b></p>	<p>2.To know measurements of atmosphere pressure and formation of pressure belts</p> <p>3.To understand weather phenomena like winds, humidity, condensation and precipitation</p> <p>4.To get knowledge about the concepts of cyclone, anti-cyclone, global warming and climate change.</p> <p>5.To know about the major oceans and their characteristics</p> <p>6.To understand the bottom relief of the oceans</p> <p>To get knowledge about the concepts of waves, tides and currents</p>
14	<p align="center"><b>Geography of Urban Settlement (A)</b></p>	<p>1) The students were known the importance of urban settlements through urban geography.</p> <p>2) The students understood the types of Urban Settlements, Site and Situations.</p> <p>3) The students were familiar with an idea of relationship between human activities and urban development.</p> <p>4) Detail understanding of students regarding present urban problems and students are capable to handling of present problematic situations in urban areas.</p> <p>5) The students are developed as a good urban planner and environmental conservator.</p>
15	<p align="center"><b>TOOLS AND TECHNIQUES IN GEOGRAPHY FOR SPATIAL ANALYSIS-II (Practical)</b></p>	<p>1. Understand the scope and content of socio-cultural geography</p> <p>2. Understand the concept of cultural hearth and realm, cultural diffusion, diffusion of regions.</p> <p>3. Develop an understanding of cultural segregation and cultural diversity, technology and development</p> <p>4. Learn about the different races and racial groups of the world</p> <p>5. Identify the socio-cultural space and regions of India</p> <p>6. Understand the indicators of social welfare and wellbeing</p>
16	<p align="center"><b>Economic geography</b></p>	<p>1) Understand the concept of economic activity, factors</p> <p>2) affecting location of economic activity. Gain knowledge</p> <p>3) about different types of Economic activities</p> <p>4) Assess the significance of Economic Geography, the</p> <p>5) concept of economic man and theories of choice.</p> <p>6) Analyze the factors of location of agriculture and industries.</p>



		7) Understand the evolution of varied types of economic activities.
17	<b>SOCIAL AND CULTURAL GEOGRAPHY-(B)</b>	<ol style="list-style-type: none"><li>1. Understand the scope and content of socio-cultural geography</li><li>2. Understand the concept of cultural hearth and realm, cultural diffusion, diffusion of regions.</li><li>3. Develop an understanding of cultural segregation and cultural diversity, technology and development</li><li>4. Learn about the different races and racial groups of the world</li><li>5. Identify the socio-cultural space and regions of India</li><li>6. Understand the indicators of social welfare and wellbeing</li></ol>
18	<b>Research Methodology in Geography (Practical)</b>	<ol style="list-style-type: none"><li>1. Have expertise in identification of area of study, methodology,</li><li>2. quantitative and qualitative analysis, and conclusions to be drawn about the area – fundamental to</li><li>3. geographical research.</li><li>4. Handle logistics and other emergencies on field.</li><li>5. Develop skills in photography, mapping and video recording.</li></ol>

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

H/C PRINCIPAL  
Prabhakar Patil Education Society's  
Arts, Commerce & Science College  
Veshvi - Alibag





## Programme Outcomes

- i) Core competency: Students will acquire core competency in the subject Chemistry, and 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 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 able to state the basic principle of electrochemistry
9. Student will 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

T.Y.B.Sc.



1. Student will be able to understand different activities of drug molecules & its use
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

A handwritten signature in blue ink, appearing to read 'Fah'.

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

A handwritten signature in blue ink, appearing to read 'S. J. ...'.

I/O PRINCIPAL  
Prabhakar Patil Education Society's  
Arts, Commerce & Science College  
Veshvi - Alibag



## Course Outcomes

### F.Y.Bsc

#### Calculus-I and II:

- State the properties of real numbers.
- Apply properties of real numbers to prove some inequalities.
- Define a sequence and classify different types of sequence.
- State and apply properties of convergence and divergence to sequences.
- Define limit, continuity and differentiability of real valued function
- State and prove algebra of limits, continuous functions and differentiability.
- Construct discontinuous function to continuous function
- Apply continuous function State and prove algebra of limits, continuous functions and differentiability
- Apply differentiation to graph of function functions, L-Hospital Rule, higher derivative and Taylors Expansion.

#### Algebra-I and Discrete Mathematics

- Define logic statements.
- Identify and apply various properties relating to the integers.
- Apply different methods of proof to verify mathematical assertions.
- Apply Fundamental theorem of algebra for finding roots of given polynomial.
- Solve counting problems involving the multiplication rule, permutations, and combinations (with and without replacement).
- Apply the Addition Rule and the Principle of Inclusion and Exclusion.
- Apply the Binomial and Multinomial Theorem.
- Apply the Pigeonhole Principle.
- Solve problems using counting techniques and combinatorics.

### S.Y.Bsc

- Calculus (Sem III) & Multivariable Calculus I(Sem IV): This course gives introduction to basic concepts of Analysis with rigor and prepares students to study further courses in Analysis. Formal proofs are given lot of emphasis in this course which also enhances understanding of the subject of Mathematics as a whole.
- Linear Algebra I ( Sem III) & Linear Algebra II (Sem IV): This course gives expositions to system of linear equations and matrices, Vector spaces, Basis and dimension, Linear Transformation, Inner product space, Eigen values and eigenvectors.



- Ordinary Differential Equations ( Sem III) prepares learner to get solutions of many kinds of problems in all subjects of Science and also prepares learner for further studies of differential equations and related fields.
- Numerical Methods and Statistical Methods: Lerner will learn different types of Numerical methods and statistical methods to apply in different fields of Mathematics.

### T.Y.Bsc

- Multivariable Calculus II (Sem V): In this course students will learn the basic ideas, tools and techniques of integral calculus and use them to solve problems from real-life applications including science and engineering problems involving areas, volumes, centroid, Moments of mass and center of mass Moments of inertia. Examine vector fields and define and evaluate line integrals using the Fundamental Theorem of Line Integrals and Green's Theorem; compute arc length.
- Complex Analysis (Sem VI): Students Analyze sequences and series of analytic functions and types of convergence. Students will also be able to evaluate complex contour integrals directly and by the fundamental theorem, apply the Cauchy integral theorem in its various versions, and the Cauchy integral formula. they will also be able to represent functions as Taylor, power and Laurent series, classify singularities and poles, find residues and evaluate complex integrals using the residue theorem.
- Group Theory, Ring Theory (Sem V, Sem VI) Students will have a working knowledge of important mathematical concepts in abstract algebra such as definition of a group, order of a finite group and order of an element, rings, Euclidean domain, Principal ideal domain and Unique factorization domain. Students will also understand the connection and transition between previously studied mathematics and more advanced mathematics. The students will actively participate in the transition of important concepts such homomorphisms & isomorphisms from discrete mathematics to advanced abstract mathematics.
- Topology of metric spaces (Sem V), Topology of metric spaces and real analysis (Sem VI): This course introduces students to the idea of metric spaces. It extends the ideas of open sets, closed sets and continuity to the more general setting of metric spaces along with concepts such as compactness and connectedness. Convergence concepts of sequences and series of functions, power series are also dealt with. Formal proofs are given a lot of emphasis in this course. This course serves as a foundation to advanced courses in analysis. Apart from understanding the concepts introduced, the treatment of this course will enable the learner to explain their reasoning about analysis with clarity and rigour.



- Partial Differential equations (Sem V: Paper IV: Elective A): a. Students will be able to understand the various analytical methods for solving first order partial differential equations. b. Students will be able to understand the classification of first order partial differential equations. c. Students will be able to grasp the linear and non linear partial differential equations.
- Integral Transforms (Sem VI: Paper IV- Elective A): a. Students will be able to understand the concept of integral transforms and their corresponding inversion techniques. b. Students will be able to understand the various applications of integral transforms.

*Ambekar*

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

*[Signature]*

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

**Course:- S.Y.B.Sc. Botany**

**Course outcome:**

SEM: III      PAPER: I  
USBO301      PLANT DIVERSITY-II

- CO1: Understand the life-cycles of Sargassum and Dictyota
- CO2: Understand Anthocerotae among Bryophyta along with life-cycle of Anthoceros
- CO3: Understand how to identify and classify plants based on Bentham & Hooker's classification.
- CO4: Understand basic concepts of preservation methods, microscopy, and chromatography and gel electrophoresis.

SEM: III      PAPER: II  
USBO302      Form and Function II

- CO1: Understand the life-cycles of Sargassum and Dictyota
- CO2: Understand Anthocerotae among Bryophyta along with life-cycle of Anthoceros
- CO3: Understand how to identify and classify plants based on Bentham & Hooker's classification.
- CO4: Understand basic concepts of preservation methods, microscopy, chromatography and gel electrophoresis.

SEM: III      PAPER: III  
USBO303      CURRENT TRENDS IN PLANT SCIENCES-I

- CO1: Understand monograph study from pharmacopoeia
- CO2: Understand study of detection of adulterants
- CO3: Understand plant product sources pertaining to fibers, spices, condiments and paper
- CO4: Understand the concept of aromatherapy, nutraceuticals, plant enzyme industry and biofuels
- CO5: Understand the technique of Vitamin C and Protein estimation

SEM: IV      PAPER: I  
USBO401      PLANT DIVERSITY-II

- CO1: Understand Ascomycetae among fungi along with the life-cycles of Erysiphe and Xylaria
- CO2: Understand how to identify and classify Lichens based on general characters.
- CO3: Understand basic concepts of plant pathology & their modes of nutrition & significance in nature.
- CO4: Understand the concept of Geological time-scale and fossil formation process
- CO5: Understand Coniferophyta among Gymnosperms along with life cycles and their economic importance



SEM: IV      PAPER: II  
USBO402      Form and Function II

- CO1: Understand the different types of plant tissues and their role in plant body
- CO2: Understand various physiological processes in plant body
- CO3: Understand the concept of long-day and short-day plants
- CO4: Understand the application of chromatography for separation of sugars and fermentation exercises
- CO5: Understand biogeochemical cycles and their importance and study of community ecology both on the basis of qualitative and quantitative characters.
- CO6: Learn soil organic matter analysis and quadrat study in field

SEM: IV      PAPER: III  
USBO403      CURRENT TRENDS IN PLANT SCIENCES-I

- CO1: Understand and plan the garden designs both formal and informal.
- CO2: Understand the technique of bottle garden and dish garden preparations.
- CO3: Understand various sterilization techniques, seed sterilization, callus induction
- CO4: Understand through the problems of biostatistics, the technique of extrapolating the knowledge to biological problems.
- CO5: Understand the application of bioinformatics tools.

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

  
H.C. PRINCIPAL  
Prabhakar Patil Education Society's  
Arts, Commerce & Science College  
Veshvi - Alibag



**Prabhakar Patil Education Society's Arts Commerce And  
Science College Veshvi- Alibag**



**Department of Zoology**

➤ **Zoology Programme Outcomes**

1. PO1 - Students gain knowledge and skill in the fundamentals of animal sciences, understands the complex interactions among various living organisms
2. PO2 – Analyse complex interactions among the various animals of different phyla, their distribution and their relationship with the environment
3. PO3 – Apply the knowledge of internal structure of cell, its functions in control of various metabolic functions of organisms
4. PO4 – Understands the complex evolutionary processes and behaviour of animals
5. PO5 – Correlates the physiological processes of animals and relationship of organ systems
6. PO6 – Understanding of environmental conservation processes and its importance, pollution control and biodiversity and protection of endangered species
7. PO7 – Gain knowledge of Agro based Small Scale industries like sericulture, fish farming, butterfly farming and vermicomposting preparation.
8. PO8 – Understands about various concepts of genetics and its importance in human health
9. PO9 - Apply ethical principles and commit to professional ethics and responsibilities in delivering his duties
10. PO10 – Apply the knowledge and understanding of Zoology to one's own life and work
11. PO11 – Develops empathy and love towards the animals

➤ **Program Specific Outcomes**

1. PSO1. Understand the nature and basic concepts of cell biology, genetics, taxonomy, physiology, ecology and applied Zoology
2. PSO2. Analyse the relationships among animals, plants and microbes
3. PSO3. Perform procedures as per laboratory standards in the areas of Taxonomy, Physiology, Ecology, Wonders of animal world's, Genetics, Footsteps to follow, Population ecology, Clinical science, tools and techniques of Zoology, Toxicology, Entomology, Nematology, Sericulture, Biochemistry, Fish biology, Animal biotechnology, Instrumentation
4. PSO4. Understand the applications of biological sciences in Apiculture, Aquaculture, Agriculture and Medicine
5. PSO5. Gains knowledge about research methodologies, effective communication and skills of problem solving methods
6. PSO6. Contributes the knowledge for Nation building

**6. Course Outcomes**

**F.Y.Bsc – Zoology Semester I**

**Course I: Wonders of Animal world (USZO101)**

### **Unit 1 Wonders of Animal World**

- CO1 To describe uniqueness of mimicry, Bird migration and Brood parasitism.
- CO2 To explain Breeding and Parental and Adaptation of desert animals.
- CO3 To describe Echolocation, pearl formation, Bioluminescence, Regeneration and Coral

### **Unit 2 Biodiversity and its Conservation**

- CO1 To explain significance of biodiversity and conservation.
- CO2 To interpret and discuss role & importance of biodiversity in daily life.
- CO3 To evaluate, discuss biodiversity conservation and management at local and international level.

### **Unit 3 Footsteps to follow**

- CO1 To summarise the work of scientists /philosophers/ entrepreneurs in biology.
- CO2 To delineate and sketch biographies of Dr. Hargobind Khorana, Dr. Salim Ali
- CO3 To critique and analyse White revolution, Water conservation, Biocon, Gadre fisheries, Anandvan.

## **Course II: Instrumentation and Biotechnology (USZO102)**

### **Unit 1 Laboratory Safety, Units and Measurements**

- CO1 To recognize hazard symbols and risks in Laboratory
- CO2 To practice safety measures in Laboratory
- CO3 To calculate concentrations e.g., molarity, normality, percentage etc
- CO4 To convert SI system units, e.g.,  $\mu\text{g}$  to g
- CO5 To evaluate and compare sampling methods CO6 To calculate measures of central tendency (mean, median, mode)

### **Unit 2 Animal Biotechnology**

- CO1 To describe applications of BT in various fields
  - CO2 To draw flowcharts and describe some applications
  - CO3 To debate ethical issues in use of GM products
- Numerical Methods and Statistical Methods: Lerner will learn different types of Numerical methods and statistical methods to apply in different fields of Mathematics.

### **Unit 3 Instrumentation**

- CO1 To identify instruments used in Biology

- CO2 To draw diagrams for and explain principles of instruments
- CO3 To delineate applications of instruments

## **Zoology Semester II**

### **Course I: Biodiversity and Population Ecology (USZO201)**

#### **Unit 1 Population Ecology**

- CO1 To define and describe factors affecting population, e.g., density, natality, mortality etc
- CO2 To draw and describe Age structure and survivorship curves
- CO3 To interpret and explain growth curves
- CO4 To discuss mechanisms regulating growth CO5 To define and learn significance of life table CO6 To describe procedure for census

#### **Unit 2 Ecosystem**

- CO1 To describe components of ecosystem
- CO2 To explain effect of temperature on biota
- CO3 To draw and explain biogeochemical cycles
- CO4 To explain fresh water ecosystems
- CO5 To define terms lentic and lotic ecosystems
- CO6 To describe ecological pyramids
- CO7 To differentiate erect and inverted pyramids
- CO8 To explain animal interactions with examples
- CO9 To define and explain various types of food chains and food webs
- CO10 To differentiate food chains and food webs

#### **Unit 3 National Parks, Sanctuaries of India**

- CO1 To illustrate endangered, threatened and critically endangered animals
- CO2 To analyse and describe reasons for threat to wildlife
- CO3 To describe unique features (flora and fauna) of some national parks
- CO4 To summarise role of wildlife
- CO5 To describe Projects Tiger and Rhinoceros
- CO6 To describe ecotourism with reference to conservation
- CO7 To explain Biopiracy with reference to biological resources in India

### **Course II: NUTRITION, PUBLIC HEALTH AND HYGIENE** **(USZO202)**



### Unit 1 Nutrition and Health

- CO1 To define and describe balanced diet and essential nutrients of food.
- CO2 To differentiate and describe healthy and unhealthy eating habits and lifestyles.
- CO3 To interpret and calculate BMI.

### Unit 2 Public Health and Hygiene

- CO1 To question and discuss depleting water resource. To evaluate measurement of water footprint.
- CO2 To define and explain sanitation and Hygiene
- CO3 To describe WHO and its programs in India.
- CO4 To explain and interpret effects of radiation
- CO5 To describe and list methods to prevent addiction.

### Unit 3 Common Human Diseases and Disorders

- CO1 To discuss causes, symptoms and impact of stress related disorders.
- CO2 To identify describe relevant solutions for positive attitude.
- CO3 To describe cause, symptoms and precautions of infectious diseases.
- CO4 To differentiate Communicable and Non – communicable diseases.

  
Head of The Department  
Prabhakar Puri Education Society's  
Arts, Commerce & Science College  
Vashi, Mumbai

  
PRINCIPAL  
Prabhakar Puri Education Society's  
Arts, Commerce and Science College  
Vashi-Airbag





## Course Outcomes

Class: F.Y.B. Sc. Microbiology

### Semester I

Course (Paper) Name and No.: Fundamentals of Microbiology-I

CO1 Learners will know the history and scope of Microbiology in industries

CO2 Learners will understand the microbial diversity

CO3 Learners will understand the prokaryotic and eukaryotic cytoskeleton and cellular structure in detail at microscopic level

CO4 Learners will understand the biochemistry of macromolecules present in cell

Course (Paper) Name and No.: Basic Techniques in Microbiology

CO1 Learners will understand the staining techniques routinely used in microbiology

CO2 Learners will learn how to handle microbial cultures while performing microbiology experiments

CO3 Learners will learn about nutritional requirements of micro organisms

CO4 Learners will understand the staining techniques routinely used in microbiology

### Semester II

Course (Paper) Name and No.: Basics of Microbiology II

CO1 Learners will know about the diversity of micro-organisms.

CO2 Learners will know significance of microbes in industry and medical sciences

CO3 Learners understand the growth requirements of microbes

CO4 Learners will learn to study microbial growth using different analytical techniques

Course (Paper) Name and No.: Exploring Microbiology



**CO1** Learners will know about various microbial associations found around the world

**CO2** Learners can understand the various disease caused by pathogenic microbes:

**CO3** Learners can understand the defense system found in human against the pathogens

**CO4** Learners can understand the working principle and methods of handling of microscopic instruments



**Class: S.Y.B. Sc. Microbiology**

**Semester III**

Course (Paper) Name and No.: I : Estimation of Biomolecules and nucleic acid structure and microbial taxonomy

CO1 Learners will understand the estimation of biomolecules

CO2 Learners will understand the concepts of nucleic acids structures

CO3 Learners will understand the basics of microbial taxonomy

Course (Paper) Name and No.: II: Introduction to Environmental Microbiology

CO1 Learners will learn about air microbiology

CO2 Learners will learn about fresh water and sewage treatment

CO3 Learners will learn importance of soil and geo microbiology

Course (Paper) Name and No.: III: Introduction to Clinical microbiology

CO1 Learners will learn about common infectious diseases

CO2 Learners will learn about public health awareness

CO3 Learners will learn about control of microorganisms

CO4 Learners will learn about safety in microbiology laboratory

**Semester IV**

Course (Paper) Name and No.: I: Introduction to Metabolism and Basic analytical techniques

CO1 Learners will learn about different types of metabolic pathways

CO2 Learners will learn about enzyme kinetics

CO3 Learners will learn about basic analytical techniques





Course (Paper) Name and No. II Introduction to Applied Microbiology

CO1 Learners will learn about Common infectious diseases

CO2 Learners will learn about Epidemiology and Public Health Awareness

CO3 Learners will learn about food and dairy microbiology

Course (Paper) Name and No. : III: Fermented foods, food sanitation and microbial ecology

CO1 Learners will be introduced about fermented foods

CO2 Learners will learn about food sanitation

CO3 Learners will learn about microbial ecology



**Class: T.Y.B. Sc. Microbiology**

**Semester V**

Course (Paper) Name and No.: I : Microbial Genetics I

- CO1 Learners will know about the DNA replication process at the molecular level
- CO2 Learners will know about the gene expression mechanism in bacteria
- CO3 Learners will have a better understanding in mutations
- CO4 Learners will understand about exchange of genetic material among the bacteria

Course (Paper) Name and No.: II: Medical Microbiology & Immunology

- CO1 Learners understand the basic mechanisms acquired by pathogens of respiratory and Urinary tract to cause infection.
- CO2 Learners gain information regarding the prognosis and course of infection of skin and gastrointestinal tract.
- CO3 Learners acquire knowledge of various mechanism adapted by organisms to cause infection
- CO4 Learners understand the functioning of immune system
- CO5 Learners acquire knowledge of diagnostic skills involved in detection of pathogens

Course (Paper) Name and No.: III: Microbial Biochemistry I

- CO1 Learners will understand the mechanisms to study solute uptake by bacteria
- CO2 Learners will learn Electron transport chain and ATP synthesis process
- CO3 Learners will learn carbohydrate metabolism pathways
- CO4 Learners will learn various fermentation pathways

Course (Paper) Name and No.:IV: Bioprocess Technology Part-I



**CO1** Learners will learn about applications of microbes and its strain improvement in Industrial Microbiology.

**CO2** Learners will learn to determine growth and productivity parameters of batch, continuous, fed batch and solid substrate fermentations.

**CO3** Learners will learn to describe the design of bioreactors for different applications and its process parameters.

**CO4** Learners will learn to design media, growth conditions and techniques for producing and recovering different types of products of commercial value.

**CO5** Learners will understand the importance of the containment and levels of Containment

### **Semester VI**

Course (Paper) Name and No.: Microbial Genetics I

**CO1** Learners will understand the basics of genetic engineering and molecular biology

**CO2** Learners will understand the use of different tools of genetic engineering in molecular biology experiments

**CO3** Learners will understand how to transform natural cell into transformed cell which can be used at commercial production of proteins

**CO4** Learners will understand the regulatory mechanism found in viruses to control gene Expression

Course (Paper) Name and No.: II: Medical Microbiology & Immunology

**CO1** Learners acquire knowledge of mechanism of infection of central nervous system and sexually transmitted diseases.

**CO2** Learners acquire the ability to understand the application and use of antibiotics in





treatment of various infections.

**CO3** Learners will understand the mechanism of immune system and formation of immune response.

Course (Paper) Name and No.: III: Microbial Biochemistry II

**CO1** The course will enhance learners understanding about lipid metabolism and will enhance their employability

**CO2** The course will enhance learners understanding about proteins and nucleic acid metabolism and will enhance their employability

**CO3** The course will enhance learners understanding about regulation of metabolism and will develop research aptitude

**CO4** The course will enhance learners understanding about metabolism of inorganic compounds and will enhance their employability

Course (Paper) Name and No.:IV: Bioprocess Technology Part II

**CO1** Understand the actual process involved in fermentations of important products

**CO2** Apply the knowledge of applications of animal and plant tissue culture techniques

**CO3** Learn the applications of immobilized enzymes in various fields

**CO4** Understand the working of important instruments used in biochemical analysis and bioassay.

**CO5** Learn the salient features of quality management, regulatory procedures and IPR

**CO6** Techniques involved in running a bioassay, immobilization of cells & sterility testing

**CO7** Preliminary techniques in animal & plant tissue culture

  
Head of The Department  
Prebhakar Padi Education Society's  
Arts, Commerce & Science College  
Veshmi - Aijbag

  
H.C. PRINCIPAL  
Prebhakar Padi Education Society's  
Arts, Commerce & Science College  
Veshmi - Aijbag



Prabhakar Patil Education Society's  
**Arts, Commerce And Science College,**  
Veshvi – Alibag

**Department of History**  
**COURSES OUTCOME – 2023- 2024**

No	COURSE	COURSE OUTCOMES
1	<b>F.Y.B.A History Semester – I</b>  <b>History of Modern India (1857-1947)</b>	<b>1: Growth of Political Awakening</b> (a) Revolt of 1857 – Causes and Consequences (b) Contribution of the Provincial Associations (c) Foundation of Indian National Congress. <b>2: Trends in Indian Nationalism</b> (a) Moderates (b) Extremists (c) Revolutionary Nationalists <b>3: Gandhian Movements</b> (a) Non Co-operation Movement (b) Civil Disobedience Movement (c) Quit India Movement <b>4: Towards Independence and Partition</b> (a) The Indian Act of 1935 (b) Attempts to Resolve the Constitutional Deadlock -The Cripps Mission, The Cabinet Mission and the Mountbatten Plan (c) Indian Independence Act and Partition
2	<b>F.Y.B.A History Semester – II</b>  <b>History of Modern India: Society and Economy.</b>	<b>1: Socio Religious Reform Movements: Reforms and Revival</b> (a) Brahmo Samaj, Arya Samaj and Ramakrishna Mission (b) Satyashodhak Samaj, Aligarh movement and Singh Sabha Movement. (c) Impact of Reform Movements <b>2: Education, Press and Transport</b> (a) Introduction of Western Education and its Impact (b) Development of Press (c) Transport and Communications <b>3: Impact of the British Rule on Indian Economy.</b> (a) Revenue Settlements, Commercialisation of Agriculture (b) Drain Theory (c) Deindustrialisation and Growth of Large Scale Industry <b>4: Nationalism and Social Groups: Interfaces.</b> (a) Women (b) Dalits (c) Peasants and Tribals

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



3	<p><b>S.Y.B.A History Paper - II Semester - III</b></p> <p><b>Landmarks in World History, 1300 A.D.-1945 A.D.</b></p>	<p><b>1: The Modern Age</b>            (a) Renaissance            (b) Geographical Discoveries            (c) Reformation</p> <p><b>2: Age of Revolutions</b>            (a) American Revolution            (b) French Revolution            (c) Industrial Revolution</p> <p><b>3: Nationalism and Imperialism</b>            (a) Formation of Nation-States in Europe            (b) Nationalist Movements in Italy and Germany            (c) Imperialist Expansion in Asia</p> <p><b>4: World in Transition (1914-1919)</b>            (a) World War I            (b) Russian Revolution            (c) League of Nations</p>
4	<p><b>S.Y.B.A History Paper - II Semester - IV</b></p> <p><b>Landmarks in World History, 1300 A.D.-1945 A.D.</b></p>	<p><b>1: Inter War Period</b>            (a) Kemal Pasha and Modernization of Turkey            (b) Reza Shah and Reforms in Iran            (c) Birth of Israel</p> <p><b>2: Rise of Dictatorships</b>            (a) Fascism            (b) Nazism            (c) Militarism in Japan</p> <p><b>3: World War II and Efforts for Peace</b>            (a) World War II            (b) The Atlantic Charter            (c) United Nations Organization.</p> <p><b>4: Nationalist Movements in Asia</b>            (a) Dr. Sun-Yat-Sen and China            (b) Mahatma Gandhi and India            (c) Dr. Sukarno and Indonesia</p>
5	<p><b>S.Y.B.A History Paper - III Semester - III</b></p> <p><b>Ancient India from Earliest Times to 1000 A.D.</b></p>	<p><b>1: Sources of Ancient India and their Importance</b>            (a) Archaeological            (b) Literary            (c) Foreign Travellers</p> <p><b>2: Indus Valley Civilization</b>            (a) Social and Economic Life            (b) Religious Life            (c) Town Planning and Decline of the Civilization</p> <p><b>3: Vedic Age</b>            (a) Janapada            (b) Social and Economic Life            (c) Religion</p> <p><b>4: India after 6th</b>            (a) Administration of Mahajanapadas Century B.C.            (b) Jainism and Buddhism            (c) Persian and Greek Invasions</p>





6	<p><b>S.Y.B.A History Paper - III Semester - IV</b></p> <p><b>Ancient India from Earliest Times to 1000 A.D.</b></p>	<p><b>1: Mauryan and Post- Mauryan Period (322 B.C. A.D.)</b>            (a) Chandragupta and Ashoka            (b) Mauryan Administration            (c) Post Mauryan Dynasties- Sungas, Kushanas and Satavahanas</p> <p><b>2: Gupta Age (320 A.D. to 600 A.D.)</b>            (a) Imperial Expansion: Chandragupta I, Samudragupta and Chandragupta II            (b) Administration            (c) Classical Age</p> <p><b>3: Post Gupta Period (600A.D. to 1000A.D.)</b>            (a) The Age of Harshavardhan            (b) The Rise of Rajputs            (c) Arab Invasion of Sind</p> <p><b>4: Major Dynasties of Deccan and South India</b>            (a) Chalukyas of Badami and Rashtrakutas            (b) Pallavas and Cholas            (c) Spread of Indian Culture in South-East Asia</p>
7	<p><b>T.Y.B.A History Paper - 4 Semester - V</b></p> <p><b>History of Medieval India (1000 CE-1526CE)</b></p>	<p><b>1: Foundation, Expansion and Decline of Delhi Sultanate</b>            (a) Socio-economic and political conditions on the eve of the Turkish Invasion            (b) Rise and Decline of Slave dynasty, Khilji Dynasty            (c) Tughlaq, Sayyid and Lodi Dynasty</p> <p><b>2: Administrative Structure of the Sultanate</b>            (a) Central Administration and Iqta system            (b) Administrative and Military Reforms of Ala-ud-din Khilji            (c) Reforms of Firozshah Tughlaq and Mohammed bin Tughlaq</p> <p><b>3: Emergence of Vijaynagar and Bahamani Kingdoms</b>            (a) Rise, Growth and Decline of Vijaynagar and Bahamani Kingdoms            (b) Administration, Socio-Economic and Cultural conditions of Vijayanagar Empire            (c) Administration, Socio-Economic and Cultural conditions of Bahamani Kingdom</p> <p><b>4: Society, Economy, Religion and Culture of Delhi Sultanate</b>            (a) Socio-economic and religious life            (b) Education and Literature            (c) Art and Architecture</p>
8	<p><b>T.Y.B.A History Paper - 5 Semester - V</b></p> <p><b>History of Modern Maharashtra (1818 CE-1960 CE)</b></p>	<p><b>1: Beginning of the British Rule</b>            (a) Socio-Economic conditions of Maharashtra in 19th Century            (b) Administration and Judiciary            (c) Tribal and Peasant Uprisings</p> <p><b>2: Socio- Economic Awakening</b>            (a) Mahatma Jotirao Phule - Satya Shodhak Samaj and Universal Humanism            (b) Prarthana Samaj            (c) Contribution of thinkers of Maharashtra to Economic Nationalism</p> <p><b>3: Political Developments in Maharashtra (1885-1960)</b></p>



		<p>(a) Moderates, Extremists and Revolutionaries</p> <p>(b) Response to Gandhian Movements in Maharashtra</p> <p>(c) Samyukta Maharashtra Movement</p> <p><b>4: Emergence of New Forces</b></p> <p>(a) Contribution of Reformers in Education</p> <p>(b) Contribution of Reformers towards Emancipation of Women</p> <p>(c) Contribution of Reformers towards Upliftment of Depressed Classes: V. R. Shinde, Rajarshi Shahu Maharaj and Dr. B.R. Ambedkar</p>
9	<p><b>T.Y.B.A History</b> <b>Paper - 6</b> <b>Semester - V</b></p> <p><b>Introduction to Archaeology</b></p>	<p><b>1: Aims and Methods of Archaeology</b></p> <p>(a) Definition, Aims and Development of Archaeology in India</p> <p>(b) Archaeology and History; Archaeology and Other Sciences</p> <p>(c) Field Archaeology: Methods of Exploration, Excavation and Dating Antiquities; Significance of Archaeology</p> <p><b>2: Pre-Historic, Proto-Historic and Early Historical Periods</b></p> <p>(a) Palaeolithic and Mesolithic Periods</p> <p>(b) Neolithic and Chalcolithic Periods</p> <p>(c) Megalithic and Early Historical Periods</p> <p><b>3: Epigraphy</b></p> <p>(a) Definition and History of Indian Epigraphy</p> <p>(b) Types of Inscriptions and their significance</p> <p>(c) Evolution of Brahmi and Kharosthi Scripts; Edicts of Ashoka</p> <p><b>4: Numismatics</b></p> <p>(a) Definition and History of Indian Numismatics</p> <p>(b) Ancient Indian Coinage: Punch-Marked, Satavahana, Western Kshatrapas, Kushana and Gupta Coins</p> <p>(c) Contribution of Numismatics to Indian History</p>
10	<p><b>T.Y.B.A History</b> <b>Paper - 7</b> <b>Semester - V</b></p> <p><b>History of the Marathas</b> <b>(1630 CE - 1707CE)</b></p>	<p><b>1: Introduction to Maratha History</b></p> <p>(a) Marathi, Persian and European Sources</p> <p>(b) Deccan in the 17th century - Geo-Political and Economic conditions</p> <p>(c) Socio-Cultural conditions; Maharashtra Dharma</p> <p><b>2: Establishment of Swarajya</b></p> <p>(a) Shivaji's relations with Bijapur</p> <p>(b) Shivaji's relations with the Mughals</p> <p>(c) Shivaji's relations with the Europeans</p> <p><b>3: Period of Consolidation and Crisis</b></p> <p>(a) Coronation and its significance; Shivaji's Karnatak Campaign</p> <p>(b) Sambhaji, Rajaram and Tarabai</p> <p>(c) Civil War - Tarabai and Shahu</p> <p><b>4: Administration during the Royal Period</b></p> <p>(a) Civil Administration</p> <p>(b) Revenue and Judicial Administration</p> <p>(c) Military Administration</p>
11	<p><b>T.Y.B.A History</b> <b>Paper - 8</b></p>	<p><b>1: Cold War (1945-1985)</b></p> <p>(a) Meaning, Causes of Cold War and Security Pacts</p>





	<p>Semester – V</p> <p><b>History of Contemporary World (1945 CE – 2000 CE)</b></p>	<p>(b) Conflicts in Cold War: Germany, Korea and Cuba (c) Economic Revival of Western Europe; Soviet Relations with Eastern Europe</p> <p><b>2: Europe, U.S.S.R and U.S.A. (1985-2000)</b> (a) Disintegration of U.S.S.R (b) Re-drawing of political borders of Germany, Yugoslavia and Czechoslovakia: Emergence of the European Union (EU) in Western Europe (c) U.S.A as the dominant world power</p> <p><b>3: Movements for Equal Rights and Challenging the Bipolar World (1945-2000)</b> (a) Campaigns within and outside South Africa against Apartheid (b) Civil Rights Movement in U.S.A (c) Non-Aligned Movement</p> <p><b>4: Major Trends</b> (a) Globalisation (b) Sustainable Development (c) Women's Liberation Movement</p>
12	<p>T.Y.B.A History Paper - 9 Semester – V</p> <p><b>Research Methodology and Sources of History</b></p>	<p><b>1: History: Definition and Scope</b> (a) History: Meaning, Scope and Nature (b) Importance of History (c) History and Auxiliary Sciences</p> <p><b>2: Sources of History</b> (a) Sources: Nature and Types (b) Authenticity and Credibility of Sources (c) Importance of Archival Sources</p> <p><b>3: Research Methods in History</b> (a) Methods of Data Collection (b) Interpretation and Generalisation of Sources (c) Footnotes and Bibliography</p> <p><b>4: Sources for Writing Indian History</b> (a) Sources for Ancient Indian History (b) Sources for Medieval Indian and Maratha History (c) Sources for Modern and Contemporary Indian History</p>
13	<p>T.Y.B.A History Paper - 4 Semester – VI</p> <p><b>History of Medieval India (1526 CE-1707CE)</b></p>	<p><b>1: Foundation, Expansion and Decline of the Mughal Rule</b> (a) India on the eve of Mughal Rule; Invasion of Babur (b) Humayun, Shershah and Akbar (c) Jahangir, Shahjahan and Aurangzeb</p> <p><b>2: Administrative Structure of the Mughals</b> (a) Central and Provincial Administration (b) Mansabdari System (c) Revenue and Judicial system</p> <p><b>3: Rise of the Maratha Power</b> (a) Shivaji and Foundation of Swarajya (b) Administration of Shivaji (c) Sambhaji, Rajaram and Tarabai</p> <p><b>4: Society and Economy, Religion and Culture of the Mughal Rule</b> (a) Society and Economy</p>



14	<p>T.Y.B.A History Paper - 5 Semester – VI</p> <p>History of Contemporary India (1947 CE- 2000 CE)</p>	<p>(b) Religion, Education and Literature (c) Art and Architecture</p> <p><b>1: The Nehru Era (1947 CE – 1964 CE)</b> (a) Features of Indian Constitution (b) Integration and Reorganization of Indian States (c) Socio- Economic Reforms and Foreign Policy</p> <p><b>2: Political, Social and Economic Developments (1964 CE – 1984 CE)</b> (a) Political Developments after Nehru Era; Green Revolution (b) Abolition of Privy Purses and Titles; Nationalization of Banks; The Emergency (c) Janata Government; Return of Congress to power ; Foreign Policy</p> <p><b>3: Political, Social and Economic Developments (1984 CE – 2000 CE)</b> (a) Political Developments (b) Relations with Neighboring Countries (c) Liberalization, Privatization and Globalization</p> <p><b>4: Emerging Trends</b> (a) Communalism and Separatist Movements (b) Women Empowerment and Policy of Reservation (c) Science, Technology and Education</p>
15	<p>T.Y.B.A History Paper - 6 Semester – VI</p> <p>Introduction to Museology and Archival Science</p>	<p><b>1: Museology</b> (a) Definition of Museology, Museum Movement in India (b) Role of the Curator (c) Types of Museums</p> <p><b>2: Museums</b> (a) Methods of Collection and Conservation of Objects in Museums (b) Preservation Techniques and Types of Exhibitions (c) Changing Role of Museums: In-house and Out-reach activities of Museums</p> <p><b>3: Archival Science</b> (a) Meaning, Scope, Objectives and Classes of Archives (b) Importance of Archives: Value of Records as Sources of History (c) Classification of Records</p> <p><b>4: Management of Archives</b> (a) Appraisal and Retention of Records (b) Conservation and Preservation of Records (c) Digital Archives</p>
16	<p>T.Y.B.A History Paper - 7 Semester – VI</p> <p>History of the Marathas (1707 CE – 1818 CE)</p>	<p><b>1: Expansion of the Maratha Power</b> (a) Rise of the Peshwas: Balaji Vishwanath (b) Peshwa Bajirao I (c) Maratha Confederacy</p> <p><b>2: Consolidation of the Maratha Power</b> (a) Peshwa Balaji Bajirao (Nanasaheb) (b) Third Battle of Panipat: causes and consequences</p>





		<p>(c) Defeat of the Marathas and significance of the Panipat</p> <p><b>3: Post Panipat Revival and Downfall</b></p> <p>(a) Peshwa Madhavrao I</p> <p>(b) Barbhai Council</p> <p>(c) Downfall of the Maratha Power</p> <p><b>4: Administrative and Socio-Cultural Developments</b></p> <p>(a) Peshwa Administration: Civil, Revenue and Military</p> <p>(b) Society under the Peshwas – Religion, Caste and Position of Women</p> <p>(c) Cultural Developments: Literature, Art and Architecture</p>
17	<p><b>T.Y.B.A History Paper - 8 Semester – VI</b></p> <p><b>History of Asia (1945 CE-2000 CE)</b></p>	<p><b>1: Transformation of China</b></p> <p>(a) Domestic Policy in People's Republic of China under Mao Zedong</p> <p>(b) Economic Progress in China under Deng Xiaoping</p> <p>(c) Foreign Policy of China with USSR</p> <p><b>2: Reconstruction of Japan</b></p> <p>(a) American Occupation of Japan</p> <p>(b) Economic Miracle in Japan</p> <p>(c) Foreign Policy of Japan with USA</p> <p><b>3: South East Asia</b></p> <p>(a) Cold War and Vietnam</p> <p>(b) Guided Democracy in Indonesia</p> <p>(c) Association of South East Asian Nations (ASEAN)</p> <p><b>4: Conflicts in West Asia</b></p> <p>(a) Arab- Israel Conflict (1948-2000)</p> <p>(b) Iranian Revolution of 1979</p> <p>(c) Oil Politics and OPEC</p>
18	<p><b>T.Y.B.A History Paper - 9 Semester – VI</b></p> <p><b>Research Methodology and Sources of History (CE-2000 CE)</b></p>	<p><b>1: Historical Research: Methods and Presentation</b></p> <p>(a) Steps in Historical Research</p> <p>(b) Methods of Critical Enquiry</p> <p>(c) Presentation of Historical Research</p> <p><b>2: New Trends in History</b></p> <p>(a) Local History</p> <p>(b) Oral History</p> <p>(c) Digital and E-Sources</p> <p><b>3: Approaches to History</b></p> <p>(a) Subaltern</p> <p>(b) Feminist</p> <p>(c) Post-Modern</p> <p><b>4: Indian Historiography</b></p> <p>(a) Imperialist</p> <p>(b) Nationalist</p> <p>(c) Marxist</p>

  
 THE PRINCIPAL  
 Prebhakar Pali Education Society's  
 Arts, Commerce & Science College  
 Veshvi - Allbag

# Course Outcomes (COs)

## F.Y.B.Sc [CS] SEM-I

### 1. Digital Systems & Architecture

- To have an understanding of Digital systems and operation of a digital computer.
- To learn different architectures & organizations of memory systems, processor organization and control unit.
- To understand the working principles of multiprocessor and parallel organization's as advanced computer architectures

### 2. Introduction to Programming with Python

- To learn how to design and program Python applications.
- To explore the innards of Python Programming and understand components of Python Program .
- To define the structure and components of a Python program.
- To learn how to write loops and decision statements in Python
- To learn about inbuilt input/output operations and compound data types in Python

### 3. LINUX Operating System

- To learn basic concepts of Linux in terms of operating system .
- To learn use of various shell commands with regular expressions .
- To set Linux Environment variables and learn setting file permissions to maintain Linux security implementation .
- To learn various editors available in Linux OS.
- To learn shell scripting.
- To learn installation of compilers and programming using C and Python languages on Linux platform

### 4. Open Source Technologies

- Understand the difference between open-source software and commercial software.
- Understand the policies, licensing procedures and ethics of FOSS.
- Understand open-source philosophy, methodology and ecosystem.
- Awareness with Open-Source Technologies.

### 5. Discrete Mathematics

- The purpose of the course is to familiarize the prospective learners with mathematical structures that are fundamentally discrete.
- This course will enhance prospective learners to reason and ability to articulate mathematical problems.
- This course will introduce functions, forming and solving recurrence relations and different counting principles. These concepts will be useful to study or describe objects or problems in computer algorithms and programming languages and these concepts can be used effectively in other courses.

## **6. Descriptive Statistics**

- To develop the learners ability to deal with different types of data.
- To enable the use of different measures of central tendency and dispersion wherever relevant.
- To make learner aware about the techniques to check the Skewness and Kurtosis of data.
- To make learner enable to find the correlation between different variables and further apply the regression analysis to find the exact relation between them.
- To develop ability to analyze statistical data through R software.

## **7. Soft Skills**

- Understand the significance and essence of a wide range of soft skills.
- Learn how to apply soft skills in a wide range of routine social and professional settings
- Learn how to employ soft skills to improve interpersonal relationships
- Learn how to employ soft skills to enhance employability and ensure workplace and career success

## **F.Y.B.Sc [CS] SEM-II**

### **1. Design & Analysis of Algorithms**

- To make students understand the basic principles of algorithm design
- To give idea to students about the theoretical background of the basic data structures
- To familiarize the students with fundamental problem-solving strategies like searching, sorting, selection, recursion and help them to evaluate efficiencies of various algorithms.



- To teach students the important algorithm design paradigms and how they can be used to solve various real world problems.

## **2. Advanced Python Programming**

- To learn how to design object-oriented programs with Python classes.
- To learn about reading, writing and implementing other operation on files in Python.
- To implement threading concept and multithreading on Python
- To design GUI Programs and implement database interaction using Python.
- To know about use of regular expression and handling exceptions for writing robust python programs.

## **3. Introduction to OOPs using C++**

- Students should be able to write, compile and debug programs in C language.
- Students should be able to use different data types in a computer program.
- Students should be able to design programs involving decision structures, loops and functions.
- Students should be able to explain the difference between call by value and call by reference
- Students should be able to understand the dynamics of memory by the use of pointers.
- Students should be able to use different data structures and create/update basic data files.

## **4. Database Systems**

- To make students aware fundamentals of database system.
- To give idea how ERD components helpful in database design and implementation.
- To experience the students working with database using MySQL.
- To familiarize the student with normalization, database protection and different DCL Statements.
- To make students aware about importance of protecting data from unauthorized users.
- To make students aware of granting and revoking rights of data manipulation.

## **5. Calculus**

- Understanding of Mathematical concepts like limit, continuity, derivative, integration of functions.

- Ability to appreciate real world applications which uses these concepts.
  - Skill to formulate a problem through Mathematical modeling and simulation
- 6. Statistical Methods and Testing of Hypothesis**
- Enable learners to know descriptive statistical concepts
  - Enable study of probability concept required for Computer learners
- 7. E-Commerce & Digital Marketing**
- To understand increasing significance of E-Commerce and its applications in Business and Various Sectors
  - To provide an insight on Digital Marketing activities on various Social Media platforms and its emerging significance in Business
  - To understand Latest Trends and Practices in E-Commerce and Digital Marketing, along with its Challenges and Opportunities for an Organization

### S.Y.B.Sc [CS] SEM-III

**1. Principles of Operating Systems**

- To learn basic concepts and structure of operating systems
- To learn about process and synchronization in operating system level
- To learn CPU scheduling algorithms
- To learn Memory and File system management

**2. Linear Algebra**

- Appreciate the relevance of linear algebra in the field of computer science.
- Understand the concepts through program implementation
- Instill a computational thinking while learning linear algebra.

**3. Data Structures**

- To introduce data abstraction and data representation in memory
- To describe, design and use of elementary data structures such as stack, queue, linked list, tree and graph
- How and why different data structures are used for different types of problems.

**4. Advanced Database Concepts**

- To develop understanding of concepts and techniques for data management and learn about widely used systems for implementation and usage.

- To develop understanding of Transaction management and crash recovery.
- To develop concepts of programming concepts of database.

### **5. Java based Application Development**

- To provide insight into java based applications using OOP concepts.
- To provide understanding of developing GUI based desktop applications in java.
- To provide knowledge of web based applications through servlet and jsp
- To provide understanding and implementation of basic JSON

### **6. Web Technologies**

- To understand the concepts of Hyper Text Markup Language and Cascading Style Sheets.
- To learn JavaScript for creating dynamic websites.
- To learn various operations performed on data among web applications using XML
- To learn Server-Side Programming using PHP

### **7. Green Technologies**

- Know about Green IT Fundamentals: Business, IT, and the Environment
- Green IT Strategies and Significance of Green IT Strategies
- Green Enterprise Architecture and Green Information Systems
- Sociocultural Aspects of Green IT and Green Compliance

## **S.Y.B.Sc [CS] SEM-IV**

### **1. Theory of Computation**

- Understand Grammar and Languages
- Learn about Automata theory and its application in Language Design
- Learn about Turing Machines and Pushdown Automata
- Understand Linear Bound Automata and its applications

### **2. Computer Networks**

- Learner will be able to understand the concepts of networking, which are important for them to be known as a '*networking professionals*'.
- Useful to proceed with industrial requirements and International vendor certifications.

### **3. Software Engineering**

- Basic knowledge and understanding of the analysis and design of complex system.
- Ability to develop ,maintain and evaluate large-scale software systems.



- To produce efficient, reliable robust and cost-effective software solutions.
- Ability to understand and meet ethical standards and legal responsibilities.

#### **4. Physical Computing and IoT Programming**

- Enable learners to understand System On Chip Architectures.
- Introduction and preparing Raspberry Pi with hardware and installation.
- Learn physical interfaces and electronics of Raspberry Pi and program them using practical's
- Learn how to make consumer grade IoT safe and secure with proper use of protocols.

#### **5. Android Application Development**

- Kotlin Programming Language for application development
- Creating robust mobile applications on simulators and physical devices
- Creating intuitive, reliable mobile apps using the android services and components
- Handling data local and remote data storage
- Create a seamless user interface that works with different mobile screens

#### **6. Advanced Application Development**

- To understand all the necessary and important technologies such as MongoDB, Express.js, AngularJS, and Node.js.
- To understand modern app development using Flutter

#### **7. Research Methodology**

- The research methodology course is proposed to assist students in planning and carrying out research projects.
- The students are exposed to the principles, procedures and techniques of implementing research project.
- The course starts with an introduction to research and carries through the various methodologies involved.
- It continues with finding out the literature using technology, basic statistics required for research and finally report writing.

### **T.Y.B.Sc [CS] SEM-V**

#### **1. Artificial Intelligence**

After completion of this course, learner should get a clear understanding of AI and different search algorithms used for solving problems. The learner should also get acquainted with different learning algorithms and models used in machine learning.

## **2. Software Testing and Quality Assurance**

Understand various software testing methods and strategies. Understand a variety of software metrics, and identify defects and managing those defects for improvement in quality for given software. Design SQA activities, SQA strategy, formal technical review report for software quality control and assurance.

## **3. Information and Network Security**

Understand the principles and practices of cryptographic techniques. Understand a variety of generic security threats and vulnerabilities, and identify & analyze particular security problems for a given application. Understand various protocols for network security to protect against the threats in a network

## **4. Web Services**

Emphasis on SOAP based web services and associated standards such as WSDL. Design SOAP based / RESTful / WCF services Deal with Security and QoS issues of Web Services.

## **5. Game Programming**

Learner should study Graphics and gaming concepts with present working style of developers where everything remains on internet and they need to review it, understand it, be a part of community and learn.

### **T.Y.B.Sc [CS] SEM-VI**

#### **1. Cloud Computing**

After successfully completion of this course, learner should be able to articulate the main concepts, key technologies, strengths, and limitations of cloud computing and the possible applications for state-of-the-art cloud computing using open source technology.

Learner should be able to identify the architecture and infrastructure of cloud computing, including SaaS, PaaS, IaaS, public cloud, private cloud, hybrid cloud, etc.

They should explain the core issues of cloud computing such as security, privacy, and interoperability.

## **2. Cyber Forensics**

The student will be able to plan and prepare for all stages of an investigation - detection, initial

response and management interaction, investigate various media to collect evidence, report them in a way that would be acceptable in the court of law.

## **3. Information Retrieval**

After completion of this course, learner should get an understanding of the field of information

retrieval and its relationship to search engines. It will give the learner an understanding to apply information retrieval models.

## **4. Data Science**

After completion of this course, the students should be able to understand & comprehend the

problem; and should be able to define suitable statistical method to be adopted.

## **5. Ethical Hacking**

Learner will know to identify security vulnerabilities and weaknesses in the target applications.

They will also know to test and exploit systems using various tools and understand the impact of hacking in real time machines.