



**Pravara Rural Education Society's**  
**Arts, Commerce and Science College, Satral**  
**Tal. Rahuri, Dist. Ahmednagar- 413711**  
Affiliated to Savitribai Phule Pune University, Pune.

## **Self-Study Report: 2024 (3<sup>rd</sup> Cycle)**



### **Criterion-2** **Teaching-Learning and Evaluation**

**Key Indicator: 2.6**  
**Student Performance and Learning Outcomes**

### **Metric: 2.6.1 (QIM)**

Programme Outcomes (POs) and Course Outcomes (COs) for all Programmes offered by the institution are stated and displayed on website



**Submitted to**  
**NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL BENGALURU**

# PROGRAMME OUTCOMES (POs) AND COURSE OUTCOMES (COs)

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## Program Outcomes (POs)

### 1. B.A.

PO-1. The students acquire knowledge in the field of social sciences, literature and humanities which make them sensitive and sensible enough.

PO-2. The B.A. graduates will be acquainted with the social, economical, historical, geographical, political, ideological and philosophical tradition and thinking.

PO-3. The program also empowers the graduates to appear for various competitive examinations or choose the post graduate programme of their choice.

PO-4. The B. A. program enables the students to acquire the knowledge with human values framing the base to deal with various problems in life with courage and humanity.

PO-5. The students will be ignited enough to think and act over for the solution of various issues prevailed in the human life to make this world better than ever.

### 2. B.Com.

PO-1. Developed management skills.

PO-2. Having basic knowledge of important business laws, financial accounting and Management Accounting.

PO-3. Developed Entrepreneurial ability.

PO-4. Developed numerical ability.

PO-5. Well familiar with business regulatory framework.

### 3. B.Sc.

PO-1. Conduct research relevant to a scientific issue, evaluate different sources of Information including secondary data, understanding that a source may lack detail or show bias.

PO-2. It helps to develop scientific temper and thus can prove to be more beneficial for the society as the scientific developments can make a nation to grow at a rapid pace.

PO-3. After the completion of this course students have the option to go for higher studies i.e. M.Sc. and then do some research for the welfare of mankind.

PO-4. After higher studies students can join as scientist and can even look for professional job oriented courses.

PO-5. Science graduates can go to serve in industries or may opt for establishing their own industrial unit.

### 4. M.Com.

PO-1. Demonstrate an understanding of advanced commercial and business methods and processes, enabling learners to tackle and overcome challenges in the corporate world effectively.

PO-2. Exhibit independent and logical thinking skills, leading to enhanced personality development and the ability to approach complex business situations with a critical mindset.

PO-3. Recognize the significance of research in the business domain and apply research methodologies to address industry-specific problems and opportunities.

PO-4. Acquire proficiency in various methods of data collection and interpretation, enabling learners to make informed decisions based on data-driven insights.

PO-5. Enhance communication and analytical skills, fostering effective collaboration and problem-solving in professional settings.

## 5. M.Sc.

PO-1. Demonstrate, solve and an understanding of major concepts in all disciplines of Chemistry.

PO-2. Solve the problem and also think methodically, independently and draw a logical conclusion.

PO-3. Create an awareness of the impact of Chemistry on the society, and development outside the scientific community.

PO-4. Become professionally trained in the area of Industry, material science, lasers and Nano-Technology.

PO-5. Employ critical thinking and the scientific knowledge to design, carry out, record and analyze the results of Chemistry experiments.

PO-6. To inculcate the scientific temperament in the students and outside the scientific community.

PO-7. Apply modern methods of analysis to chemical systems in a laboratory setting.



  
Principal  
**PRINCIPAL**  
Art's, Commerce & Science College  
Satral, Tal.Rahuri, Dist. Ahmednagar.

**COURSE OUTCOMES (COs)**  
**DEPARTMENT OF MARATHI**

| Sr. No. | Name of the Course   | Outcomes   |
|---------|--|--|
| 1.      | <b>F.Y.B.A. Sem-I</b><br>मराठी साहित्य : कथा आणि<br>भाषिक कौशल्य विकास(११०२१)  | CO1.मराठी भाषा, मराठी साहित्य आणि मराठी संस्कृती यांचे<br>अध्ययन करणे.<br>CO2.साहित्यविषयक आकलन आणि मूल्यमापनक्षमता विकसित<br>करणे.<br>CO3.साहित्यभ्यातून जीवनविषयक समज विकसित करणे.<br>CO4.मराठी भाषेची उपयोजनात्मक कौशल्य विकसित करणे. |
| 2.      | <b>F.Y.B.A. Sem-II</b><br>मराठी साहित्य :एकांकिका आणि<br>भाषिक कौशल्य विकास (१२०२१)  | CO1.विद्यार्थ्यांना साहित्य प्रकाराची ओळख करून देणे.<br>CO2.साहित्य प्रकारचे स्वरूप, घटक आणि प्रकार यांची ओळख<br>करून देणे.<br>CO3.मराठी एकांकिकांचे अध्ययन करणे.<br>CO4.भाषिक कौशल्य विकास करणे.  |
| 3.      | <b>S.Y.B.A. Sem-III</b><br>मराठी जनरल पेपर २,<br>भाषिक कौशल्यविकास आणि<br>आधुनिक मराठी साहित्य प्रकार :<br>कादंबरी (२३०२३) | CO1. कादंबरी या साहित्यप्रकाराचे स्वरूप, घटक आणि वाटचाल<br>समजून घेणे.<br>CO2. नेमलेल्या कादंबरीचे आकलन, आस्वाद आणि विश्लेषण करणे.<br>CO3. भाषिक कौशल्य विकास करणे.<br>CO4. आधुनिक मराठी साहित्य प्रकाराची ओळख करून घेणे.                |
| 4.      | <b>S.Y.B.A. Sem-IV</b><br>मराठी जनरल पेपर २, भाषिक<br>कौशल्यविकास आणि आधुनिक<br>मराठी साहित्यप्रकार : ललितगद्य<br>(२४०२३)  | CO1. ललितगद्य या साहित्य प्रकाराचे स्वरूप समजून घेणे.<br>CO2. ललितगद्य साहित्य प्रकाराचे घटक आणि वाटचाल समजून<br>घेणे.<br>CO3. ललित गद्याचे आकलन, आस्वाद आणि विश्लेषण करणे.<br>CO4. विद्यार्थ्यांचा भाषिक कौशल्य विकास करणे.             |

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| 5. | <b>S.Y.B.A. Sem-III</b><br>मराठी पेशल पेपर S-१, DSE-1A,<br>आधुनिक मराठी साहित्य :<br>प्रकाशवाटा (२३०२१)                      | CO1. आत्मचरित्र या साहित्य प्रकारचे स्वरूप आणि वाटचाल समजावून घेणे.<br>CO2. अन्य साहित्य प्रकारांच्या तुलनेत आत्मचरित्राचे वेगळेपण समजावून घेणे.<br>CO3. मध्ययुगीन गद्य - पद्य साहित्य प्रकारांची ओळख करून घेणे.<br>CO4. नेमलेल्या अभ्यासपुस्तकाचे आकलन, आस्वाद आणि विश्लेषण करणे. |
| 6. | <b>S.Y.B.A. Sem-IV</b><br>मराठी पेशल पेपर S-१, DSE-1B,<br>मध्ययुगीन मराठी साहित्य :<br>निवडक मध्ययुगीन गद्य, पद्य<br>(२४०२१) | CO1. मध्ययुगीन गद्य -पद्य साहित्य प्रकारांची ओळख करून घेणे.<br>CO2. संत-पंत-तत साहित्याची ओळख करून देणे.<br>CO3. साहित्याची सामाजिकता अभ्यासणे.<br>CO4. अभ्यासपुस्तकातील मध्ययुगीन गद्य-पद्याचे आकलन, विश्लेषण करणे.   |
| 7. | <b>S.Y.B.A. Sem-III</b><br>मराठी पेशल पेपर S-२, DSE-2A,<br>साहित्यविचार (२३०२२)  | CO1. मराठी साहित्य प्रकारांच्या तात्त्विक घटकांचे ज्ञान देणे.<br>CO2. साहित्या विषयीची अभिरुची निर्माण करणे.<br>CO3. साहित्यकृतीला मुक्त प्रतिसाद देण्याची क्षमता विकसित करणे.<br>CO4. साहित्यकृतींचे आकलनआणि मूल्यमापन करण्याची दृष्टी निर्माण करणे.                              |
| 8. | <b>S.Y.B.A. Sem-IV</b><br>मराठी पेशल पेपर S-२, DSE-2B,<br>साहित्यसमीक्षा (२४०२२)   | CO1. साहित्याचे स्वरूप, प्रयोजन व साहित्य निर्मितीची प्रक्रिया समजावून घेणे.<br>CO2. साहित्याची भाषा समजावून घेणे.<br>CO3. साहित्याची संकल्पना, साहित्यिक अभिरुची, मधीन मूल्ये समजावून घेणे.<br>CO4. साहित्याचा सूक्ष्म पातळीवर अभ्यास करण्याची क्षमता विकसित करणे.                |
| 9. | <b>S.Y.B.A. Sem-III</b>  | CO1. प्रकाशन व्यवहार आणि संपादन यासाठी आवश्यक कौशल्य   |

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|     | SEC 2A, प्रकाशनव्यवहार आणि संपादन (२३०२५)                                   | मिळविणे.<br>CO2. प्रकाशन व्यवहार आणि संपादन यासाठी आवश्यक प्रशिक्षण घेणे.<br>CO3. प्रकाशन व्यवहार आणि संपादन यासाठी प्रात्यक्षिकासह उपयोजनाची कौशल्ये मिळविणे.<br>CO4. प्रकाशन संस्थांना भेटी देऊन प्रकाशन विश्वाची ओळख करणे.  |
| 10. | <b>S.Y.B.A. Sem-IV</b><br>SEC 2B, उपयोजित लेखनकौशल्य (२४०२५)                | CO1. उपयोजित लेखन कौशल्ये आत्मसात करणे.<br>CO2. जाहिरात, मुलाखत लेखन आणि संपादन यासाठी आवश्यक कौशल्ये मिळविणे.<br>CO3. जाहिरात, मुलाखतलेखन आणि संपादन यासाठी प्रात्यक्षिकासह प्रशिक्षण घेणे.<br>CO4. माहितीपर नोंदी संकलनाचे कौशल्य विकसित करणे.                         |
| 11. | <b>S.Y.B.A. Sem-III</b><br>MIL, मराठी भाषिक संज्ञापनकौशल्य (२३०११)          | CO1. मराठी भाषिक संज्ञापन कौशल्ये समजावून देणे.<br>CO2. प्रगत भाषिक कौशल्यांची क्षमता विकसित करणे.<br>CO3. प्रसार माध्यमातील संज्ञापनातील स्वरूप आणि स्थान स्पष्ट करणे.<br>CO4. व्यक्तिमत्त्व विकास आणि भाषा यांच्यातील सहसंबंध स्पष्ट करणे.                             |
| 12. | <b>S.Y.B.A. Sem-IV</b><br>MIL, नवमाध्यमे आणि समाजमाध्यमांसाठी मराठी (२४०११) | CO1. नव माध्यमे आणि समाज माध्यमांचे स्वरूप आणि स्थान स्पष्ट करणे.<br>CO2. भाषा, जीवन व्यवहार आणि प्रसार माध्यमांचे परस्परसंबंध स्पष्ट करणे.<br>CO3. प्रसार माध्यमांसाठी लेखन क्षमता विकसित करणे.<br>CO4. समाज माध्यमांविषयी साक्षरता, दक्षता, परिणाम याबद्दल चर्चा करणे. |



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| 13. | <b>T.Y.B.A. Sem-V</b><br>मराठी जनरल पेपर ३, भाषिक कौशल्यविकास आणि आधुनिक मराठी साहित्यप्रकार : प्रवासवर्णन (३५०२३)               | CO1.आधुनिक मराठी साहित्यातील साहित्य प्रकारांचा परिचय वाढवणे.<br>CO2. साहित्य परंपरेचा स्थूल परिचय करून देणे.<br>CO3.विद्यार्थ्यांमध्ये मुद्रित माध्यमांसाठी लेखन कौशल्ये विकसित करणे.<br>CO4. प्रवास वर्णनाचे आकलन, आस्वाद आणि विश्लेषण करणे.                          |
| 14. | <b>T.Y.B.A. Sem-VI</b><br>मराठी जनरल पेपर ३, भाषिक कौशल्यविकास आणि आधुनिक मराठी साहित्यप्रकार : कविता (३६०२४)                    | CO1.मराठी साहित्य, भाषिक कौशल्य विकास आणि शासन व्यवहार यांची माहिती घेणे.<br>CO2.कविता या साहित्य प्रकाराचे स्वरूप आणि वैशिष्ट्ये समजून घेणे.<br>CO3.कवितेचे विविध अविष्कार व भाषा रूपांची ओळख करून घेणे.<br>CO4.भाषेचे यथोचित आकलन व वापर करण्याची क्षमता विकसित करणे. |
| 15. | <b>T.Y.B.A. Sem-V</b><br>मराठी पेशल पेपर S-3, DSE-1D, मध्ययुगीन मराठी वाङ्.मयाचा स्थूल इतिहास : प्रारंभ ते इ. स. १६०० (३५०२१)    | CO1.मध्ययुगीन मराठी वाङ् मयाचा स्थूल परिचय करून घेणे.<br>CO2. वाङ्.मयेतिहास संकल्पना आणि स्वरूप समजून घेणे.<br>CO3.मध्ययुगीन कालखंडाची सामाजिक, सांस्कृतिक पार्श्वभूमी समजून घेणे.<br>CO4.मराठी भाषा, साहित्याचा कालखंडानुरूप इतिहास समजून घेणे.                        |
| 16. | <b>T.Y.B.A. Sem-VI</b><br>मराठी पेशल पेपर S-3, DSE-2D, मध्ययुगीन मराठी वाङ्.मयाचा स्थूल इतिहास : इ. स. १६०१ ते इ.स. १८१७ (३६०२१) | CO1.शिवकाल आणि पेशवेकाळातील वाङ्.मयनिर्मितीचा अभ्यास करणे.<br>CO2. प्राचीन मराठी भाषेचा व वाङ्.मयाचा इतिहास समजून घेणे.<br>CO3. बखर आणि गद्य वाङ्.मय निर्मिती अभ्यासणे.<br>CO4.साहित्य आणि समाज यातील परस्परसंबंध समजावून घेणे.   |

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| 17. | <b>T.Y.B.A. Sem-V</b><br>मराठी पेशल पेपर S-4, DSE-2C,<br>वर्णनात्मक भाषाविज्ञान : भाग १<br>(३५०२२)  | CO1.भाषेचे स्वरूप व कार्य, भाषेच्या अभ्यासाचे महत्त्व जाणून घेणे.<br>CO2. स्वन निर्मितीची प्रक्रिया समजावून घेणे.<br>CO3. वागिंद्रियांची रचना व कार्य समजावून घेणे.<br>CO4. स्वन विज्ञान, स्वनिम संकल्पना आणि मराठीची स्वनिम व्यवस्था जाणून घेणे. |
| 18. | <b>T.Y.B.A. Sem-VI</b><br>मराठी पेशल पेपर S-4, DSE-2D,<br>वर्णनात्मक भाषाविज्ञान : भाग २<br>(३६०२२) | CO1. भाषाचे मानवी जीवनातील कार्य व महत्त्व जाणून घेणे.<br>CO2. मराठी रूपिमव्यवस्था समजावून घेणे.<br>CO3.वाक्यव अर्थविन्यास या भाषा वैज्ञानिक संकल्पना समजावून घेणे.<br>CO4.मराठी भाषेचा उत्पत्ती काळव भाषिक स्थित्यंतरांचा आढावा घेणे.            |
| 19. | <b>T.Y.B.A. Sem-V</b><br>SEC 2C, कार्यक्रम संयोजनातील<br>भाषिक कौशल्ये भाग - १ (३५०२५)              | CO1. कार्यक्रमाचे स्वरूप समजून घेणे.<br>CO2.कार्यक्रमाच्या प्रकारानुसार कार्यक्रम संयोजन कौशल्य अवगत करणे.<br>CO3. कार्यक्रम संयोजनातील भाषिक कौशल्य प्राप्त करणे.<br>CO4. कार्यक्रम संयोजनातील भाषेचे महत्त्व मजावून देणे.                       |
| 20. | <b>T.Y.B.A. Sem-VI</b><br>SEC 2D, कार्यक्रम संयोजनातील<br>भाषिक कौशल्य : भाग २ (३६०२५)              | CO1. कार्यक्रम संयोजनातील लेखन कौशल्ये संपादन करणे.<br>CO2. मराठी भाषेची संवाद कौशल्य विकसित करणे.<br>CO3. कार्यक्रम संयोजनातील भाषिक कौशल्ये प्राप्त करणे.<br>CO4. आभासी कार्यक्रमांचे भाषिक कौशल्ये संयोजन करणे.                                |
| 21. | <b>F.Y.B.Com. Sem-I</b><br>११७ ब, भाषा साहित्य आणि<br>कौशल्य विकास                                  | CO1. भाषा व्यवहाराचे स्वरूप व गरज समजावून देणे.<br>CO2. मराठी भाषेच्या वापराची कौशल्य विकसित करणे.<br>CO3. विविध लेखनप्रकारांचा अभ्यासकरणे.<br>CO4. कर्तृत्ववान व्यक्तींच्या कार्याची व विचारांची ओळख करून  |

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| 22. | <b>F.Y.B.Com. Sem-II</b><br>१२७ ब भाषा आणि कौशल्य<br>विकास         | CO1. प्रशासनिक मराठीची ओळख करून देणे.<br>CO2. प्रगत भाषिक कौशल्यविषयक समाज विकसित करणे.<br>CO3. लेखनाची कौशल्ये वापरण्यास सक्षम करणे.<br>CO4. विद्यार्थ्यांमध्ये नैतिक, व्यावसायिक व वैचारिक मूल्यांची जोपासना करणे.  |
| 23. | <b>S.Y.B.Sc. (AECC-2A) 33/<br/>23331, Sem-III</b><br>उपयोजित मराठी | CO1. विद्यार्थ्यांमध्ये मराठी विज्ञान साहित्या विषयी आवड निर्माण करणे.<br>CO2. विज्ञान, उद्योगातील विविध प्रवाह, संधी यांचा परिचय करून देणे.<br>CO3. भाषिक कौशल्यांचे विविध आविष्कार समजावून घेणे.<br>CO4. पारिभाषिक संज्ञांची ओळख विद्यार्थ्यांना करून देणे. |
| 24. | <b>S.Y.B.Sc. (AECC-2B)<br/>24331, Sem-IV मराठी साहित्य</b>         | CO1. साहित्यविषयक अभिरुची विकसित करणे.<br>CO2. विज्ञान साहित्य विषयक आकलन क्षमता वाढविणे.<br>CO3. वैज्ञानिक जाणिवा निर्माण करणे.<br>CO4. विद्यार्थ्यांमध्ये भाषिक कौशल्य अधिकाधिक विकसित करणे.  |

## DEPARTMENT OF HINDI


| Sr. No. | Course  | Outcomes   |
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| 1.      | <b>F.Y.B.A. Sem-I</b><br>वैकल्पिक हिंदी<br>(11091-1- A)   | CO1. छात्रों को हिंदी साहित्य के काव्य तथा कहानियों का परिचय प्राप्त होगा।<br>CO2. हिंदी भाषा में संप्रेषण कौशल विकसित होगा।<br>CO3. मौलिक लेखन की ओर रुझान बढेगा और राष्ट्रप्रेम, सामाजिक प्रतिबद्धता की भावना विकसित होती हैं।<br>CO4. हिंदी कंप्यूटिंग का सामान्य परिचय होगा।   |
| 2.      | <b>F.Y.B.A. Sem-II</b><br>वैकल्पिक हिंदी<br>(12092 1- B)  | CO1. छात्र हिंदी काव्य तथा कहानी साहित्य से परिचित होते हैं।<br>CO2. विज्ञापन, निबंध तथा स्ववृत्त लेखन कौशल विकसित होता है।<br>CO3. वाक्य शुद्धीकरण के कारण छात्र वर्तनीगत अशुद्धियों से परिचित होते हैं।<br>CO4. साहित्य की विभिन्न विधाएं निबंध, रेखाचित्र, यात्रावर्णन, व्यंग्य तथा एकांकी के माध्यम से राष्ट्रप्रेम एवं सामाजिक भावना विकसित होती हैं।   |
| 3.      | <b>S.Y.B.A.</b><br>हिंदी सामान्य पेपर २<br>(23093)<br>(आधुनिक काव्य कहानी तथा व्यावहारिक हिंदी) | CO1. छात्र हिंदी के प्रतिनिधि कहानीकार और कवियों से परिचित होते हैं।<br>CO2. छात्र हिंदी के प्रयोजनमूलक पक्ष से अवगत होते हैं।<br>CO3. भाषातंत्र का उपयोग एवं लेखन कौशल विकसित होता है।<br>CO4. साहित्य की विभिन्न विधाओं से परिचित हो जाते हैं और उनमें सर्जनात्मक कौशल का विकास होता है।   |
| 4.      | <b>S.Y.B.A.</b><br>हिंदी स्पेशल पेपर-1<br>काव्यशास्त्र सामान्य<br>[ 23091 ] DSE-1A              | CO1. भारतीय काव्य शास्त्र में रुचि पैदा होती है तथा आलोचनात्मक दृष्टि विकसित होती है।<br>CO2. छात्र साहित्य की विविध विधाओं से परिचित होते हैं।<br>CO3. छात्र अपनी अभिव्यक्ति में शब्द शक्तियों का प्रयोग करने लगते हैं।<br>CO4. छात्र महाकाव्य, खंडकाव्य और मुक्तक काव्य से परिचित होता है। साथ ही नाट्य अभिनय कलाको आत्मसात करता है।   |
| 5.      | <b>S.Y.B.A.</b><br>उपन्यास, नाटक तथा मध्ययुगीन हिंदी काव्य<br>23092 DSE 2 A                     | CO1. मध्ययुगीन प्रतिनिधि कवियों के योगदान तथा उनकी वैचारिक पृष्ठभूमि से छात्र परिचित होते हैं।<br>CO2. छात्र हिंदी उपन्यास एवं नाटक की समीक्षा करते हैं। साथ ही हिंदी उपन्यास तथा नाटक के अध्ययन में रुचि निर्माण होती है।<br>CO3. साहित्य कृतियों के माध्यम से छात्र जीवनमूल्याको आत्मसात करना।<br>CO4. विवेच्य साहित्य कृतियों के शिल्प तथा भाव पक्ष से परिचित होते हैं। साथ ही उनमें अभिनय कौशल विकसित होता है। |
| 6.      | <b>S.Y.B.A.</b><br><b>SEC 2A(CBCS-2019)</b><br>अनुवाद स्वरूप एवं व्यवहार (23096)                | CO1. छात्र अनुवाद की आवश्यकता एवं महत्व समझते हैं और उनमें अनुवाद के माध्यम से रोजगार मिलने की आकांक्षा एवं रुची उत्पन्न होती है।<br>CO2. छात्र अनुवाद के विविध क्षेत्रों से परिचित होते हैं।<br>CO3. छात्र हिंदी-मराठी प्रत्यक्ष अनुवाद कार्य विधि से परिचित होते हैं।  |

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| 7.  | <b>S.Y.B.A.</b><br><b>SEC 2A(CBCS-2019)</b><br><b>माध्यम लेखन(24096)</b>   | CO1.छात्र विविध माध्यमों के लिए लेखन विधि से परिचित होता है।<br>CO2. छात्र लेखन कौशल तंत्र से अवगत होता है।<br>CO3.छात्र श्रव्य-दृश्य माध्यमों की भाषा से परिचित होता है।<br>CO4.छात्र श्रव्य-दृश्य माध्यमों की भाषा से परिचित होता है।   |
| 8.  | <b>S.Y.B.A.</b><br><b>MIL हिंदी भाषा शिक्षण</b><br><b>-Sem-III 23012</b>   | CO1.छात्रवर्ण विचार से सोदाहण परिचित होते हैं।<br>CO2. छात्र भाषा कौशल शिक्षण से अवगत होते हैं।<br>CO3.छात्र एक ही रचनाकार की सृजनात्मकता से परिचित होते हैं।<br>CO4.छात्र लघुकथाओं के माध्यम से उसके व्यापक उद्देश्य को समझते हैं।   |
| 9.  | <b>S.Y.B.A.</b><br><b>MIL हिंदी भाषा शिक्षण</b><br><b>-Sem-IV 24012</b>  | CO1.छात्रवाक्य-भेद विराम चिह्नों से परिचित होते हैं।<br>CO2.छात्र गोपालदास सक्सेना के गीतों की सृजनात्मकता से परिचित होते हैं।<br>CO3.छात्र एक ही रचनाकार के गीतों के विषय वैविध्य से परिचित होते हैं।<br>CO4.छात्र गीतों की लयात्मकता एवं आशय समझते हैं।   |
| 10. | <b>T.Y.B.A.</b><br><b>Core Course -1E (G-3)</b><br><b>कथेतर विधाएँ</b><br><b>(35093)</b>   | CO1. छात्र संस्मरण तथा रेखाचित्र विधा एवं साहित्य से परिचित होते हैं<br>CO2. छात्रों की समीक्षात्मक दृष्टि का विकास होता है।<br>CO3. सभा, इतिवृत्त लेखन तथा वार्ता लेखन कौशल विकसित होता है।<br>CO4. छात्रों को सृजनात्मक लेखन की प्रेरणा मिलती है।   |
| 11. | <b>T.Y.B.A.</b><br><b>Discipline Specific</b><br><b>Elective DSE 1 C (S3)</b><br><b>हिंदी साहित्य का</b><br><b>इतिहास</b><br><b>(35091) –(S-3)</b> | CO1.छात्र विशेष प्रश्नपत्र के रूप में हिंदी साहित्य के इतिहास के कालविभाजन, नामकरण तथा अन्यान्य ऐतिहासिक पहलुओं के अध्ययन से परिचित होते हैं<br>CO2. हिंदी साहित्य के आदिकाल, भक्तिकाल तथा रीतिकाल की पृष्ठभूमि, साहित्य, कवि एवं विशेषताओं से परिचित होते हैं।<br>CO3. परियोजना कार्य के माध्यम से छात्र किसी विशिष्ट रचनाकार तथा क्षेत्रीय कार्य का अध्ययन करना सीखते हैं।<br>CO4. छात्र रचनाकार एवं रचनाओं से परिचित होते हैं। |
| 12. | <b>T.Y.B.A.</b><br><b>Discipline Specific</b><br><b>Elective 2 C (S4)</b><br><b>भाषा विज्ञान सामान्य</b><br><b>परिचय(35092 )</b>                   | CO1. छात्र भाषा विज्ञान के स्वरूप एवं व्याप्ति से परिचित होते हैं<br>CO2. भाषा विज्ञान की दिशाओं के परिचय को समझते हुए उसके अनुप्रयोगात्मक पक्ष को सीखते हैं।<br>CO3. साहित्य के अध्ययन में भाषा विज्ञान की उपयोगिता एवं आवश्यकता को छात्र समझते हैं।<br>CO4. छात्र भाषा विज्ञान के अनुप्रयोगात्मक पक्ष की जानकारी मिलती है।  |
| 13. | <b>T.Y.B.A.</b><br><b>Skill Enhancement</b><br><b>Course 2 C</b><br><b>(SEC)(35096)पटकथा</b><br><b>लेखन</b>  | CO1. छात्र पटकथा लेखन कौशल से परिचित होते हैं।<br>CO2. छात्र दृश्य-श्राव्य माध्यमों के लिए पटकथा लेखन की आवश्यकता को समझते हैं।<br>CO3. पटकथा लेखन के माध्यम से रोजगार मिल सकता है, यह विश्वास छात्रों में निर्माण होता है।   |

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|     |  | CO4. व्यवसायिक कौशल का विकास होता है।   |
| 14. | <b>T.Y.B.A.</b><br>Core Course -1F (G-3)<br>गजल विधा और<br>पत्राचार<br>(36093)   | CO1. छात्र गजल विधा से परिचित होते हैं और उनमें समीक्षात्मक दृष्टि का विकास होता है।<br>CO2. छात्र अन्यान्य गजलकारों के व्यक्तित्व से परिचित होते हैं।<br>CO3. छात्र सरकारी पत्रलेखन विधि से परिचित होते हैं और उसका उपयोग अपने जीवन में करते हैं।<br>CO4. छात्रों में गजल विधा के प्रति रुचि उत्पन्न होती है।        |
| 15. | <b>T.Y.B.A.</b><br>Discipline Specific<br>Elective 1 D (S3)<br>हिंदी साहित्य का<br>इतिहास<br>(आधुनिक काल का<br>सामान्य परिचय)<br>(36091) | CO1. छात्र आधुनिक काल की पृष्ठभूमि से परिचित होते हैं।<br>CO2. छात्र भारतेंदुयुग, द्विवेदी युग तथा छायावादी काव्य की विशेषताओं से परिचित होते हैं।<br>CO3. छात्र हिंदी गद्य के उद्भव एवं विकास से परिचित होते हैं।<br>CO4. छात्र आधुनिक काल के रचनाकार एवं रचनाओं से परिचित होते हैं।                                 |
| 16. | <b>T.Y.B.A.</b><br>Discipline Specific<br>Elective 2 D (S4)<br>हिंदी भाषा और उसका<br>विकास(36092)  | CO1. छात्र भाषा की विभिन्न परिभाषाओं तथा विविध रूपों से परिचित होते हैं।<br>CO2. छात्र नागरी लिपि के उद्भव और विकास तथा विशेषताओं से परिचित होते हैं।<br>CO3. परियोजना कार्य से छात्र भाषा के वर्तमान रूपों से परिचित होते हैं।<br>CO4. छात्र साहित्य अध्ययन में भाषा विज्ञान की उपयोगिता समझते हैं।                  |
| 17. | <b>T.Y.B.A.</b><br>Skill Enhancement<br>Course SEC 2 D साहित्य<br>और फिल्मांतरण-<br>(36096)  | CO1. छात्र सिनेमा के स्वरूप से बारीकी से परिचित होते हैं।<br>CO2. छात्र हिंदी साहित्य एवं सिनेमा के अंतर्संबंधों से परिचित होते हैं।<br>CO3. छात्र हिंदी उपन्यास तथा कहानियों पर आधारित फिल्मों से परिचित होते हैं।<br>CO4. छात्र साहित्य और फिल्मांतरण की प्रक्रिया समझते हैं।                                       |
| 18. | <b>F.Y.B.Com.</b><br>वैकल्पिक हिंदी<br>प्रश्नपत्र -1 A<br>Semester I   | CO1. साहित्य और वाणिज्य का परस्पर संबंध प्रतिपादित होगा।<br>CO2. वाणिज्य और साहित्य के बीच पुल बांधा जाएगा।<br>CO3. हिंदी भाषा द्वारा संवाद कौशल विकसित होगा।<br>CO4. छात्र साहित्येतर पाठ्यक्रम के माध्यम से विज्ञापन, कम्प्यूटर तथा गणितीय चिन्हों से परिचित होते हैं।  |
| 19. | <b>F.Y.B.Com.</b><br>वैकल्पिक हिंदी<br>प्रश्नपत्र -1 B<br>Semester II  | CO1. छात्र हिंदी काव्य तथा कहानी साहित्य से परिचित होते हैं।<br>CO2. हिंदी भाषा द्वारा संवाद कौशल विकसित होगा।<br>CO3. छात्र पारिभाषिक शब्दों के अर्थ वैविध्य को तथा प्रयोग को समझते हैं।<br>CO4. छात्र साहित्येतर पाठ्यक्रम के माध्यम से अनुवाद के स्वरूप से परिचित होकर अनुवाद के व्यावहारिक पक्ष से अवगत होते हैं। |

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| 20. | <b>S.Y.B.Sc.</b><br><b>हिंदी ऐच्छिक पेपर</b><br><b>(23095AECC-2 A &amp; B</b><br><b>हिंदी काव्य तथा कहानी</b><br><b>साहित्य</b> | CO1. छात्र साहित्य और विज्ञान के कार्यकारण भाव से परिचित होते हैं.<br>CO2. छात्र कहानी तथा काव्य रचनाओं से परिचित होंगे और उनके भाव एवं विचार प्रज्वलित होंगे.<br>CO3. व्यवहारिक हिंदी भाषा की जानकारी प्राप्त होगी।<br>CO4. काव्य एवं कहानी लेखन कौशल विकसित होकर साहित्यालोचन की दृष्टि विकसित होती है. |
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## DEPARTMENT OF ENGLISH

| Sr.No. | Course   | Outcomes  |
|--------|--|---|
| 1      | <b>F.Y. B.Com.<br/>(CBCS-2019)Semester-I<br/>&amp;II<br/>[111/121]<br/>Compulsory English</b>  | CO-1. Used English language efficiently.<br>CO-2. Improved communicative skills.<br>CO-3. Developed verbal and non-verbal skills of communication.<br>CO-4. Developed moral and human values.   |
| 2      | <b>FYBA<br/>(CBCS-2019)<br/>Semester-I &amp;II<br/>[11011/12011]<br/>Compulsory English</b>  | CO-1. Used English language effectively.<br>CO-2. Enhanced communicative skills.<br>CO-3. Developed verbal and non-verbal skills of communication.<br>CO-4. Developed moral and human values.   |
| 3      | <b>FYBA<br/>(CBCS-2019)<br/>Semester-I &amp;II<br/>[11331/12331]<br/>Optional English</b>  | CO-1. Used values learned through literary works.<br>CO-2. Developed linguistic & communicative competence.<br>CO-3. Developed sounds of English.<br>CO-4. Inculcation of moral and human values among students.  |
| 4      | <b>SYBA<br/>(CBCS-2019)<br/>Semester-III &amp;IV<br/>[23001/24001]<br/>Compulsory English</b>  | CO-1. The students learned to appreciate literature<br>CO-2. Oral and written communication improved.<br>CO-3. Vocabulary is enhanced<br>CO-4. The students learned to make proper use of grammar.  |
| 5      | <b>SYBA<br/>Semester-III &amp;IV<br/>[23333/24333]Skill<br/>Enhancement Course-<br/>SEC-1A - Advanced<br/>Study<br/>of English Language<br/>and Literature</b> | CO-1. Familiarized students with the various components of language.<br>CO-2. Developed overall linguistic competence of the students.<br>CO-3. Learnt some advanced areas of language study.<br>CO-4. Prepared students to go for detailed study and understanding of language |
| 6      | <b>SYBA<br/>Semester-III &amp;IV<br/>[23331/24331]Discipline<br/>Specific Course-DSC:<br/>Appreciating Drama</b>   | CO-1. Understood drama as a major form of literature.<br>CO-2. Acquainted the literary and the performing of drama.<br>CO-3. Developed interest among the students to appreciate and analyze drama independently.   |



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|    |   | CO-4. Familiarised with elements and the types of Drama.   |
| 7  | <b>SYBA<br/>Semester-III &amp;IV<br/>[23332/24332]<br/>Discipline Specific<br/>Course-DSC:<br/>Appreciating Poetry</b>                    | CO-1. Acquainted with the terminology in poetry criticism (i.e. the terms used in appreciation and critical analysis of poems)<br>CO-2. Developed approaches to appreciating literary works.<br>CO-3. Learnt masterpieces of English poetry.<br>CO-4. Awared in the aesthetics of poetry and to empower them to read, appreciate and critically evaluate poetry independently. |
| 8  | <b>SYBA<br/>Semester-III &amp;IV<br/>[23334/24334]<br/>SEC: A Certificate<br/>Course in Skill<br/>Development</b>                         | CO-1. Developed communication skills.<br>CO-2. Acquainted with verbal and non-verbal communication.<br>CO-3. Expressed their ideas, views, and thoughts in English.<br>CO-4. Developed vocabulary.   |
| 9  | <b>TYBA<br/>Semester-V &amp;VI<br/>[35001/36001]<br/>Compulsory English</b>   | CO-1. Realised the beauty and communicative power of English.<br>CO-2. Became competent and effective users of english in real life situations.<br>CO-3. Developed practical writing skills required in work environment.<br>CO-4. Developed soft skills to enhance their employability.   |
| 10 | <b>TYBA<br/>Semester-V &amp;VI<br/>[35333/36333]<br/>SEC: Enhancing<br/>Employability Skills<br/>Aspirations: English for<br/>Careers</b> | CO-1. Awareness of career opportunities available to them.<br>CO-2. Understand the use of English in different careers.<br>CO-3. Enhance skills required for their placement.<br>CO-4. Exercise verbal as well as nonverbal communication effectively for their career.  |
| 11 | <b>TYBA<br/>Semester-V &amp;VI<br/>[35331/36331]<br/>DSE: Appreciating<br/>Novel</b>  | CO-1. Understood the basics of novel as a literary form.<br>CO-2. Acknowledged historical development and nature of novel.<br>CO-3. Develop literary sensibility and sense of cultural diversity in students.<br>CO-4. Understood different types and aspects of novel.  |

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| 12 | <b>TYBA</b><br><b>Semester-V &amp;VI</b><br><b>[35332/36332]</b><br><b>DSE: Introduction to</b><br><b>Literary Criticism</b>    | CO-1.Acquainted with the basics of literary criticism<br>CO-2.Aware of the nature and historical development of criticism<br>CO-3. Interpreted literary works in the light of the critical approaches<br>CO-4. Develop aptitude for critical analysis. |
| 13 | <b>TYBA</b><br><b>Semester-V &amp;VI</b><br><b>[35334/36334]</b><br><b>SEC: Mastering Life Skills</b><br><b>and Life Values</b> | CO-1. Students quipped with social skills.<br>CO-2.Learnt stress management and positive thinking.<br>CO-3. Enhanced leadership qualities.<br>CO-4. Aware the students about universal human values.   |



  
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## DEPARTMENT OF ECONOMICS

| Sr.No. | Course  | Outcomes   |
|--------|---|--|
| 1.     | <b>F.Y.B. A.<br/>SEM-I &amp; II<br/>Indian<br/>economic<br/>enviournment<br/>-11151/11152</b> | <p>CO-1. To familiarize the students with the recent developments in the Indian Economy</p> <p>CO-2. To provide the students with the background of the Indian Economy with focus on contemporary issues like economic environment.</p> <p>CO-3. To help the students to prepare for varied competitive examinations</p> <p>CO-4. To enable students to understand and comprehend the current business scenario, agricultural scenario and other sectorial growth in the Indian context.</p> |
| 2.     | <b>S.Y.B. A.<br/>SEM-III &amp; IV<br/>Financial<br/>System<br/>(G2)</b>                       | <p>CO-1. To understands fundamentals of modern financial system.</p> <p>CO-2. To understand the recent trends and developments in banking system.</p> <p>CO-3. To understand the role of the Reserve Bank of India in Indian financial system.</p> <p>CO-4. To provide the knowledge of various financial and non-financial institutions.</p>  |
| 3.     | <b>S.Y.B. A.<br/>SEM-III &amp; IV<br/>Micro<br/>Economics<br/>(S-1)</b>                       | <p>CO-1. To develop an understanding about subject matter of Economics.</p> <p>CO-2. To impart knowledge of micro economics.</p> <p>CO-3. To clarify micro economic concepts.</p> <p>CO-4. To analyze and interpret charts, graphs and figures.</p>  |
| 4.     | <b>S.Y.B. A<br/>SEM-III &amp; IV<br/>Macro<br/>Economics<br/>(S2)</b>                         | <p>CO-1. To introduce students to the historical background of the emergence of Macroeconomics.</p> <p>CO-2. To familiarize students with the differences between micro economics and macro economics.</p> <p>CO-3. To familiarize students with various concepts of national income.</p> <p>CO-4. To familiarize students with Keynesian macroeconomic theoretical framework of</p>   |

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|    |   | consumption and investment functions.   |
| 5. | <b>T.Y.B.A. SEM-V/VI</b><br><b>G-3: Indian Economic Development</b> | <p>CO-1. The Study of Economic Development has gained importance because of staid interest of the developing countries in uplifting their economic conditions restructuring their economics to acquire greater diversity, efficiency and equity in consonance with their priorities.</p> <p>CO-2. While few success stories can be counted, many have grappled with chronic problems of narrow economic Base, inefficiency and low standard of living. For this and other reasons, there have been many Approaches to economic development.</p> <p>CO-3. In recent times, besides hard core economic prescriptions to development, concern hitherto relegated to background, like education, health, sanitation and infrastructural development, have found place of pride in explaining the preference of various.</p> <p>CO-4 Students will be get acquainted with the policy point of view under the present waves of globalization and liberalization both in the North and in the South.</p> |
| 6. | <b>T.Y.B.A. SEM-V/VI</b><br><b>S-3: International Economics</b>     | <p>CO-1. This course provides the students a thorough understanding and deep knowledge about the basic principles that tend to govern the free flow of trade in goods and services at the global level.</p> <p>CO-2. The contents of the Paper spread over various modules, lay stress both on theory and Applied nature of the subject that have registered rapid changes during the last decade.</p> <p>CO-3.the students to know the impact of free trade and tariffs on the different sectors of the economy as well as at the macro level.</p> <p>CO-4. The students would also be well trained about the rationale of recent changes in the export import policies of India.</p>  |
| 7. | <b>T.Y.B.A. SEM-V/VI</b>  | <p>CO-1. Role and functions of the Government in an economy has been changing with the Passas of</p> <p>CO-2. There is vast array of fiscal institutions -tax systems,</p>  |

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|     | <b>S-4: Public Finance</b>               | <p>CO-3. Students will be acquaint the basic concepts of vast array of fiscal institutions -tax systems, expenditure programs budgetary procedures, stabilization instruments, debt issues, levels of government, etc., which Raise a spectrum of issues arising from the operation of these institutions.</p> <p>CO-4. Students will be acquaint the basic concepts of the existence of externalities, concern for adjustment in the distribution of income and wealth, etc. require political processes for their solution in a manner which combines individual freedom and justice.</p> |
| 8.  | <b>FYBCOM Business Economics (Micro)</b> | <p>CO-1. To impart knowledge of business economics.</p> <p>CO-2. To clarify micro economic concepts.</p> <p>CO-3. To analyze and interpret charts and graphs.</p> <p>CO-4. To understand basic theories, concepts of micro economics and their application.</p>   |
| 9.  | <b>SYBCOM Business Economics (Macro)</b> | <p>CO-1. To familiarize the students to the basic theories and concepts of Macro Economics and their application.</p> <p>CO-2. To study the relationship amongst broad aggregates.</p> <p>CO-3. To impart knowledge of business economics.</p> <p>CO-4. To understand macroeconomic concepts.</p>   |
| 10. | <b>TYBCOM Indian Global Economics</b>    | <p>CO-1. To expose students to a new approach to the study of the Indian Economy.</p> <p>CO-2. To help the students in analyzing the present status of the Indian Economy.</p> <p>CO-3. To enable students to understand the process of integration of the Indian Economy with other economics of the world.</p> <p>CO-4. To acquaint students with the emerging issues in policies of India's foreign trade.</p>   |



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## DEPARTMENT OF POLITICAL SCIENCE

| Sr.No. | Course  | Course outcomes   |
|--------|---|---|
| 1.     | <b>FYBA<br/>(G-I)<br/>SEM-I &amp; II<br/>Introduction to<br/>Indian<br/>Constitution<br/>(1167)</b> | <p>CO1. Students enable to understand the philosophy of Indian constitutions.</p> <p>CO2. Students enable to understand the basic doctrine of Indian Constitution.</p> <p>CO3. Students enable to understand the various Government of Indian acts their provision and reforms.</p> <p>CO4. Students enable to appreciate the fundamental rights and duties and the directive principle of state policy.</p>      |
| 2.     | <b>SYBA<br/>(G-2)<br/>SEM-III &amp; IV<br/>Political Theory<br/>(2167)</b>                          | <p>CO 1. Students enable to appreciate the procedure of different theoretical ideas in political theory.</p> <p>CO2. Students enable to appreciate the procedure of different theoretical ideas in political theory.</p> <p>CO3. Students enable to understand the various traditional and modern theories of political science.</p> <p>CO4. Students enable to evaluate the theories of origin of the state.</p> |
| 3.     | <b>TYBA<br/>(G-III)<br/>SEM-V &amp; VI<br/>Local Self<br/>Government in<br/>Maharashtra</b>         | <p>CO1. Students enable to understand the nature of Ideology.</p> <p>CO 2. Students enable to understand the contributions of various ideologies in practices in the World.</p> <p>CO3. Students enable to describe the role and impact of different Political Ideologies in Politics.</p> <p>CO4. Students enable to describe the significance of Ideologies.</p>  |



  
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## DEPARTMENT OF HISTORY

| Sr. No. | Course  | Course outcomes  |
|---------|---|--|
| 1.      | <b>FYBA<br/>(G-I)<br/>SEM-I &amp; II<br/>Early India: From<br/>Prehistory to the<br/>Age of the<br/>Mauryas</b>   | CO-1. Understand the history of early India.<br>CO-2. Know the rise, growth and spread of civilization and culture of India along with the dynastic history.<br>CO-3. Understand the contribution of Early Indians to polity, art, literature, philosophy, religion and science and technology.<br>CO-4. Develop the spirit of enquiry among the students by studying the major developments in Indian history.  |
| 2.      | <b>SYBA<br/>(G-2) SEM-III &amp; IV<br/>CC-1(3) History of<br/>the Marathas:<br/>(1630- 1707)<br/>CC-2(3) History of<br/>the Marathas:<br/>(1707- 1818) CC-<br/>2(3) History of the<br/>Marathas: (1707-<br/>1818)</b> | CO -1. Develop the ability to analyse sources for Maratha History.<br>CO-2. Learn significance of regional history and political foundation of the region.<br>CO-3. Enhance their perception of 17th century Maharashtra and India in context of Maratha history.<br>CO-4. Appreciate the skills of leadership and the administrative system of the Marathas.  |
| 3.      | <b>TYBA<br/>(G-III) SEM-V &amp; VI<br/>CC- 3(3) Indian<br/>National<br/>Movement<br/>(1885-1947)<br/>CC- 4(3) India<br/>After<br/>Independence-<br/>(1947-1991)</b>   | CO-1. Enable students to develop an overall understanding of Modern India.<br>CO-2. Increase the spirit of healthy Nationalism, Democratic Values and Secularism among the Students.<br>CO-3. Understand various aspects of the Indian Independence Movement and the creation of Modern India.<br>CO-4. Understand various aspects of India's domestic and foreign policies that shaped Post-Independence India. |

## DEPARTMENT OF GEOGRAPHY

| Sr. No. | Course   | Outcomes  |
|---------|--|---|
| 1.      | <b>F.Y.B.A.<br/>2019 Credit<br/>Pattern<br/>Physical<br/>Geography<br/>Gg110 A</b> | <p>CO-1. Students have become able to conceptualize the elements of physical features and basic concepts in Physical Geography</p> <p>CO-2. Students have become able to imagine and recognize the major topographical, geological, soil and natural vegetation regions of local and global level.</p> <p>CO-3. Students have applied their subject knowledge with help of GIS based open source software in the day today life.</p> <p>CO-4. Students have become able to examine the various issues, problems and challenges associated with the physical regions.</p> <p>CO-5. Students have developed life-long learning skill and keep them engaged in updating geography related knowledge.</p> |
| 2.      | <b>F.Y.B.A.<br/>Human<br/>Geography<br/>Gg110 B</b>                                | <p>CO-1. The Students have understood demographic composition</p> <p>CO-2. Students have imagined and recognize urbanization, population density and literacy.</p> <p>CO-3. Students have identified and describe social, cultural, economic and population dynamics of society.</p> <p>CO-4. Students have able to understand patterns and processes of population growth and its implications</p>   |
| 3.      | <b>S.Y.B.A.<br/>2019 Credit<br/>Pattern<br/>Environmental<br/>Geography-I</b>      | <p>CO-1 Student will be familiar with the dynamic nature of the environment</p> <p>CO-2 Students will be get acquainted with the fundamental concepts of Environmental Geography for development in different areas</p> <p>CO-3 They will be integrating various factors of Environment and dynamic aspect of Environmental Geography</p> <p>CO-4 Student will be aware of the problems of</p>  |



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|    |  | environment, utilization and conservation of resources in view of sustainable development  |
| 4. | <b>S.Y.B.A.<br/>Environmental<br/>Geography -II</b>                              | CO-1 Students will be aware about the dynamic environment<br>CO-2 Students will get acquainted with the fundamental concepts of Environmental Geography<br>CO-3 Students will get acquainted with the past, present and future utility and potentials of natural resources<br>CO-4 Students will aware about the problems of environment and they will know the concept of sustainable development |
| 5. | <b>S.Y.B.A.<br/>Population<br/>Geography-I</b>                                   | CO-1 Students will understand the history of population<br>CO-2 They will know the basic concepts in Population Geography<br>CO-3 They will know the types and sources of population data  |
| 6. | <b>S.Y.B.A.<br/>Population<br/>Geography-II</b>                                  | CO-1 Students will know the population policy of India and China<br>CO-2 They will know the health indicators of India<br>CO-3 Students will be get acquainted with the concept of urbanization in Population Geography<br>CO-4 They will understand the Population theories   |
| 7. | <b>S.Y.B.A.<br/>Practical<br/>Geography-<br/>I(Scale and Map<br/>Projection)</b> | CO-1 Students will know the basic concepts in Population Geography<br>CO-2 Students will be enabled to use various scales and projection techniques in Geography<br>CO-3 Students will use various projections for map making<br>CO-4 They will be familiar with the elementary and essential principles of practical work in Geography  |
| 8. | <b>S.Y.B.A.<br/>Practical<br/>Geography-II<br/>(Cartographic</b>                 | CO-1 Students will know the basic and contemporary concepts in Cartography<br>CO-2 Students will get acquainted with the utility and applications of various cartographic techniques<br>CO-3 Students will know the latest concepts  |

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|     | <b>Techniques, Surveying and Excursion /Village/ Project Report)</b>          | regarding the modern cartography in the field of Geography<br>CO-4 Students will know the elementary and essential principles of practical work in Geography  |
| 9.  | <b>T.Y.B.A. 2019 Credit Pattern Geography of Tourism I and II</b>             | CO-1 Students will understand the history of tourism<br>CO-2 They will know the basic concepts in tourism Geography<br>CO-3 They will know the types of tourism<br>CO-4 They will obtain the knowledge about different aspects of Tourism Geography   |
| 10. | <b>T.Y.B.A. Geography of India I and II</b>                                   | CO-1 Students will be familiar with the Geography of India<br>CO-2 They will be aware of the magnitude of problems and prospects of national level issues<br>CO-3 Students will understand the interrelationship between the subject and the society<br>CO-4 Students will understand the recent trends in regional India   |
| 11. | <b>T.Y.B.A. Practical Geography (Techniques of Spatial Analysis) I and II</b> | CO-1 Students will get familiar with the basic concepts and techniques of Geographical Analysis<br>CO-2 They will read the SOI to posheet and acquire knowledge of its interpretation<br>CO-3 They know the weather maps and acquire the knowledge of its interpretation<br>CO-4 Students will be introduced with the aerial photographs and satellite images and acquires knowledge to interpret it. |



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## DEPARTMENT OF COMMERCE


| Sr. No. | Course  | Outcomes  |
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| 1.      | <b>F.Y.B.Com.<br/>Sem.-I &amp; II<br/>Financial<br/>Accounting<br/>(Course Code- 112)</b>                 | CO-1 To impart knowledge of basic accounting concepts.<br>CO-2 To create awareness about application of these concepts in business world.<br>CO-3 To impart skills regarding computerised accounting.<br>CO-4 To impart knowledge regarding finalization of accounts of various establishments.   |
| 2.      | <b>F.Y.B.Com.<br/>Sem.-I &amp; II<br/>Computer<br/>Concepts and<br/>Application<br/>(Course Code-114)</b> | CO-1 To make the students familiar with computer environment.<br>CO-2 To make the students familiar with the basics of operating system and business communication tools.<br>CO-3 To make the students familiar with basics of Network, Internet and to marked related concepts.<br>CO-4 To make awareness among students about applications of Internet in Commerce. |
| 3.      | <b>F.Y.B.Com.<br/>Sem.-I &amp; II<br/>Banking and<br/>Finance<br/>(Course Code-115)</b>                   | CO-1 To provide knowledge of fundamentals of banking.<br>CO-2 To create awareness about various banking concepts.<br>CO-3 To conceptualize banking operations.<br>CO-4 To provide banking system fundament.   |
| 4.      | <b>F.Y.B.Com.<br/>Sem.-I &amp; II<br/>Marketing and<br/>Salesmanship<br/>(Course Code-116)</b>            | CO-1 Created awareness about market and marketing.<br>CO-2 Established link between commerce/business and marketing.<br>CO-3 Understood the basic concept of marketing.<br>CO-4 To understand marketing philosophy.   |
| 5.      | <b>S.Y.B.Com.<br/>Sem.-III &amp; IV<br/>Business<br/>Communication<br/>( 231 )</b>                        | CO-1 To understands the concept, process and importance of communication.<br>CO-2 To acquire and develop good communication skills requisite for business correspondence.<br>CO-3 To develop awareness regarding new trends in business communication.<br>CO-4 To provide knowledge of various media of   |

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|    |  | communication and to develop business communication skills through the application and exercises.   |
| 6. | <b>S.Y.B.Com.<br/>Sem.-III &amp; IV<br/>Corporate<br/>Accounting<br/>( 232 )</b>   | <p>CO-1 To acquaint the student with knowledge about various concepts, objectives and applicability of some important accounting standards associated with to corporate accounting.</p> <p>CO-2 To develop understanding among the students on the difference between commencement and incorporation of a company and the accounting treatment for transactions during the two phases.</p> <p>CO-3 To update the students with knowledge for preparation of final accounts of a company as per Schedule III of the Companies Act 2013</p> <p>CO-4 To acquaint the student with knowledge about various concepts, Objectives and applicability of some important accounting standards associated with to corporate accounting.</p> |
| 7. | <b>S.Y.B.Com.<br/>Sem.-III &amp; IV<br/>Business<br/>Management<br/>( 234 )</b>    | <p>CO-1 To provide basic knowledge and understanding about various concepts of Business Management.</p> <p>CO-2 To help the students to develop cognizance of the importance of management principles.</p> <p>CO-3 To provide an understanding about various functions of management.</p> <p>CO-4 To provide them tools and techniques to be used in the performance of the managerial job.</p>   |
| 8. | <b>S.Y.B.Com.<br/>Sem.-III &amp; IV<br/>Element of<br/>Company Law<br/>( 235 )</b> | <p>CO-1 To develop general awareness of Elements of Company Law among the students.</p> <p>CO-2 To understand the Companies, Act 2013 and its provisions.</p> <p>CO-3 To have a comprehensive understanding about the existing law on formation of new company in India.</p> <p>CO-4 To create awareness among the students about legal environment relating to the company law and to acquaint the students on e-commerce, e-governance and e-filing mechanism relating to companies.</p>  |
| 9. | <b>S.Y.B.Com.</b>  | CO-1 To provide basic knowledge about various   |

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|     | <b>Sem.-III &amp; IV<br/>Business<br/>Administration - I<br/>( 236 )</b>                    | <p>forms of business organizations To acquaint the students about business environment and its implications thereon.</p> <p>CO-2 To make them aware about the recent trends in business.</p> <p>CO-3 To understand the concept of business to understand the various perspectives to business.</p> <p>CO-4 To know the various functions of business administration.</p>                   |
| 10. | <b>S.Y.B.Com.<br/>Sem.-III &amp; IV<br/>Marketing<br/>Management - I<br/>( 236 H )</b>      | <p>CO-1 To orient the student's recent trends in marketing management.</p> <p>CO-2 To create awareness about marketing of eco friendly products in the society through students.</p> <p>CO-3 To inculcate knowledge of various aspects of marketing management through practical approach.</p> <p>CO-4 To acquaint the students with the use of E-Commerce in competitive environment.</p> |
| 11. | <b>T.Y.B.Com.<br/>Sem.-V &amp; VI<br/>Business<br/>Regulatory<br/>Framework<br/>( 351 )</b> | <p>CO-1 To acquaint students with the basic concepts, terms &amp; provisions of Mercantile and Business Laws.</p> <p>CO-2 To develop the awareness among the students regarding these laws affecting business, trade and commerce.</p> <p>CO-3 To develop aware of acts</p> <p>CO-4 To develop business ethics.</p>  |
| 12. | <b>T.Y.B.Com.<br/>Sem.-V &amp; VI<br/>Advance<br/>Accounting<br/>( 352 )</b>                | <p>CO-1 To impart the knowledge of various accounting concepts.</p> <p>CO-2 To instil the knowledge about accounting procedures, methods and techniques.</p> <p>CO-3 To acquaint them with practical approach to accounts writing by using software package</p> <p>CO-4 To develop using balance sheet activity.</p>   |
| 13  | <b>T.Y.B.Com.<br/>Sem.-V &amp; VI<br/>Auditing and<br/>Taxation(354)</b>                    | <p>CO-1 To acquaint themselves about the concept and principles of Auditing, Audit process, Assurance Standards, Tax Audit, and Audit of computerized Systems.</p> <p>CO-2 To get knowledge about preparation of Audit report.</p>   |

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|    |   | CO-3 To understand the basic concepts and to acquire knowledge about computation of income, submission of income tax return, advance tax, and tax deducted at source,<br>CO-4 Tax collection authorities under the income tax act, 1961.   |
| 14 | <b>T.Y.B.Com.</b><br><b>Sem.-V &amp; VI</b><br><b>Business</b><br><b>Administration – II</b><br><b>( 355 )</b>    | CO-1 To acquaint the students with basic concepts & functions of HRD and nature of Marketing functions of a business enterprise.<br>CO-2 Concept and Importance.<br>CO-3 Performance Appraisal Process.<br>CO-4 To Methods and Techniques and to Merits and limitations of performance appraisal.        |
| 15 | <b>T.Y.B.Com.</b><br><b>Sem.-V &amp; VI</b><br><b>Business</b><br><b>Administration – III</b><br><b>( 365 A )</b> | CO-1 To acquaint the students with the basic concepts in finance and production functions of a business enterprise.<br>CO-2 To Shares, Debentures, Public Deposits, ploughing back of profits.<br>CO-3 To Instalment credit etc.<br>CO-4 To loans from bank and financial institutions, trade creditors. |
| 16 | <b>T.Y.B.Com.</b><br><b>Sem.-V &amp; VI</b><br><b>Marketing</b><br><b>Management - II</b><br><b>( 355 H )</b>     | CO-1 To understand the concept and functioning of marketing planning and sales management.<br>CO-2 To know marketing strategies and organization.<br>CO-3 To inform various facets of marketing with regulatory aspects.<br>CO-4 To understand marketing in globalize scenario.                          |
| 17 | <b>T.Y.B.Com.</b><br><b>Sem.-V &amp; VI</b><br><b>Marketing</b><br><b>Management - III</b><br><b>( 366 H )</b>    | CO-1 To know detailing of marketing research.<br>CO-2 To understand the role brand and distribution management in marketing.<br>CO-3 To inform about marketing and economic development.<br>CO-4 To know of the importance of control on marketing activities.   |



  
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## DEPARTMENT OF BOTANY

| Sr. No. | Course   | Outcomes  |
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| 1.      | <b>F.Y.B.Sc. Sem.-I</b><br><br><b>Course-</b><br><br><b>Plant life and Utilization - I</b><br><br><b>Course code-</b><br><br><b>BO-111</b>       | CO-1 Know the terminologies in Plant kingdom.<br><br>CO-2 Gain the knowledge of outline of plant kingdom.<br><br>CO-3 Know about the structure and life history of Algae, Fungi, Lichens and Bryophytes.<br><br>CO-4 Understand the application of Algae, Fungi, Lichens and Bryophytes.                |
| 2.      | <b>F.Y.B.Sc. Sem.-I</b><br><br><b>Course-</b><br><br><b>Plant morphology and Anatomy</b><br><br><b>Course code-</b><br><br><b>BO-112</b>         | CO-1 Understand the concepts and importance of plant morphology.<br><br>CO-2 Know the reproductive parts of the flower.<br><br>CO-3 Students will have acquired necessary skills to teach Botany in colleges.<br><br>CO-4 Gain the knowledge of terminologies in plant anatomy.                         |
| 3.      | <b>F.Y.B.Sc. Sem.-I</b><br><br><b>Course-</b><br><br><b>Practical based on BO-111 and BO-112</b><br><br><b>Course code-</b><br><br><b>BO-113</b> | CO-1 Gain the practical knowledge of reproductive structures of plants.<br><br>CO-2 Understand the life cycle pattern in Spirogyra, Agaricus and Riccia.<br><br>CO-3 Gain the knowledge about the types of fruit in plants.<br><br>CO-4 Understand the internal morphology of dicot and monocot plants. |
| 4.      | <b>F.Y.B.Sc. Sem.-II</b><br><br><b>Course-</b><br><br><b>Plant Life Utilization- II</b>  | CO-1 Gain the knowledge the of plant diversity<br><br>CO-2 Describe the life cycle and economic importance of Pteridophytes.<br><br>CO-3 Understand the life cycle and economic   |

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|    | <b>Course code-<br/>BO-121</b>  | importance of Gymnosperms.<br>CO-4 Know about the classification system in Angiosperms.   |
| 5. | <b>F.Y.B.Sc. Sem.-II<br/>Course-<br/>Principles of Plant Science<br/>Course code-<br/>BO-122</b>                          | CO-1 Know the importance and scope of Plant Physiology.<br>CO-2 Understand the various processes in plant physiology.<br>CO-3 Explain the concepts of cell biology and cell cycle.<br>CO-4 Understand the biochemical nature of DNA.  |
| 6. | <b>F.Y.B.Sc. Sem.-II<br/>Course-<br/>Practical based on<br/>BO-121 &amp; BO-122<br/>Course code-<br/>BO-123</b>           | CO-1 Understand the life cycle of Nephrolepis and Cycas.<br>CO-2 Know the comparative account of dicot and monocot plants.<br>CO-3 Gain the practical knowledge of mitosis and meiosis.<br>CO-4 Gain the practical knowledge of estimation of chlorophyll pigment, plasmolysis and DPD. |
| 7. | <b>S.Y.B.Sc. Sem.-III<br/>Course-<br/>Taxonomy of<br/>Angiosperms &amp;<br/>Plant Ecology<br/>Course code-<br/>BO-231</b> | CO-1 Understand the Taxonomy of Angiosperm.<br>CO-2 Classify the Angiosperm plants.<br>CO-3 Gain the knowledge about Plant families and plant nomenclature.<br>CO-4 Describe the plant ecology.   |
| 8. | <b>S.Y.B.Sc. Sem.-III<br/>Course-<br/>Plant Physiology<br/>Course code-</b>   | CO-1 Gain the Knowledge of Plant Physiology scope and Importance<br>CO-2 Understand the concept of Transpiration Ascent of sap.   |



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|     | <b>BO-232</b>  | CO-3 Describe the Nitrogen metabolism<br>CO-4 Get aware about physiology of flowering and seed germination.  |
| 9.  | <b>S.Y.B.Sc. Sem.-III</b><br><b>Course-</b><br><b>Practical based on BO-231 &amp; BO-232</b><br><b>Course code-</b><br><b>BO-233</b> | CO-1 Gain the practical knowledge of Taxonomic tools ecological instrument plant families.<br>CO-2 Understand the internal morphology of hydrophytes and xerophytes.<br>CO-3 Analysed the different test, processes of plant physiology.<br>CO-4 Gain the practical knowledge about seed germination, Transpiration DPD. |
| 10. | <b>S.Y.B.Sc. Sem.-IV</b><br><b>Course-</b><br><b>Plant Anatomy &amp; Embryology</b><br><b>Course code-</b><br><b>BO-241</b>          | CO-1 Understand the scope and importance of plant Anatomy.<br>CO-2 Classify the different types of tissue systems.<br>CO-3 Gain the knowledge about growth of plants.<br>CO-4 Describe the different processes in embryology.  |
| 11. | <b>S.Y.B.Sc. Sem.-IV</b><br><b>Course-</b><br><b>Plant Biotechnology</b><br><b>Course code-</b><br><b>BO-242</b>                     | CO-1 Understand the scope and importance of plant biotechnology.<br>CO-2 Gain the knowledge about Plant tissue culture and single cell protein.<br>CO-3 Understand the plant genetic Engineering, Genomics, Proteomics and Bioinformatics.<br>CO-4 Describe the Bioremediation and Bio fuel technology.                  |
| 12. | <b>S.Y.B.Sc. Sem.-IV</b><br><b>Course-</b><br><b>Practical based on</b>  | CO-1 Gain the practical knowledge of plant anatomy.<br>CO-2 Understand the practical technique of double stained temporary preparation of plant stem.  |

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|     | <b>BO-241 &amp; BO-242</b><br><b>Course code-</b><br><b>BO-243</b>  | CO-3 Understand the working principle of tissue culture lab instrument.<br>CO-4 Gain basic practical knowledge of plant tissue culture, Transgenic plants, Spirulina cultivation.  |
| 13. | <b>T.Y.B.Sc. Sem.-V</b><br><b>Course-</b><br><b>ALGAE &amp; FUNGI</b><br><b>Course code-</b><br><b>BO-351</b>             | CO-1 To study algae & fungi and their taxonomy.<br>CO-2 Classify the algae & fungi.<br>CO-3 Understand the economic importance of algae & fungi.<br>CO-4 Describe the plant characters.  |
| 14. | <b>T.Y.B.Sc. Sem.-V</b><br><b>Course-</b><br><b>Archegoniate</b><br><b>Course code-</b><br><b>BO-352</b>                  | CO-1 To study bryophytes & pteridophytes and their taxonomy.<br>CO-2 Classify the bryophytes & pteridophytes.<br>CO-3 Gain the knowledge of diversity and distribution of pteridophytes.<br>CO-4 Understand the evolution of bryophytes & pteridophytes.   |
| 15. | <b>T.Y.B.Sc. Sem.-V</b><br><b>Course-</b><br><b>Spermatophyta and Paleobotany</b><br><b>Course code-</b><br><b>BO-353</b> | CO-1 To understand economic importance and diagnostic character of plant family<br>CO-2 Gain the knowledge of pattern of origin of angiosperms over the time period.<br>CO-3 Students will come to know about the different members of higher plant group.<br>CO-4 Get an idea of about the process of fossil formation. |
| 16. | <b>T.Y.B.Sc. Sem.-V</b><br><b>Course-</b><br><b>Plant Ecology</b><br><b>Course code-</b>                                  | CO-1 Recognize the importance of population ecology as a discipline.<br>CO-2 Study of population in relation to the environment.<br>CO-3 Gain the knowledge of plant ecology   |

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|     | <b>BO-354</b>  | CO-4 To learn basic principles, understands the process of ecological data.   |
| 17. | <b>T.Y.B.Sc. Sem.-V</b><br><b>Course-</b><br><b>Cell &amp; Molecular Biology</b><br><b>Course code-</b><br><b>BO-355</b>           | CO-1 Students will learn about basics of cell.<br>CO-2 Gain the knowledge about cell organization and chemical composition of the biological membrane.<br>CO-3 It will provide an insight about cell cycle and cell division process.<br>CO-4 Students understand the molecular mechanism of DNA replication. |
| 18. | <b>T.Y.B.Sc. Sem.-V</b><br><b>Course-</b><br><b>Genetics</b><br><b>BO-356</b>  | CO-1 Understand the concept of genetics.<br>CO-2 Gain knowledge about interaction of gene through mendelian process.<br>CO-3 Understand mutation and variation with different genetic disorders.<br>CO-4 To determine sex linked inheritance, Cytoplasmic & Quantativeinhertance.                             |
| 19. | <b>T.Y.B.Sc. Sem.-V</b><br><b>Course-</b><br><b>Practical Based on BO-351 &amp; BO-352</b><br><b>Course code-</b><br><b>BO-357</b> | CO-1 Gain the knowledge about morphological and anatomical characters.<br>CO-2 Preparation of algal, fungal & bryophytes slides.<br>CO-3 Study of plant group with respective systematic position.<br>CO-4 Students learns practically about anatomical and reproductive characters.                          |
| 20. | <b>T.Y.B.Sc. Sem.-V</b><br><b>Course-</b><br><b>Practical Based on BO-353 &amp; BO-354</b>   | CO-1 Students learn preparation of botanical keys.<br>CO-2 Study of families with reference to systematic position, external and internal morphology.<br>CO-3 Acquisition of ecological data.   |

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|     | <b>Course code-<br/>BO-358</b>   | CO-4 Study of suitable ecosystem by various methods.   |
| 21. | <b>T.Y.B.Sc. Sem.-V<br/>Course-<br/>Practical Based on<br/>BO-355 &amp; BO-356<br/>Course code-<br/>BO-359</b> | CO-1 Study of various stages of mitosis and meiosis.<br>CO-2 Students learn about extraction and estimation about RNA and DNA.<br>CO-3 Students solve problems on gene mapping, multiple alleles and quantitative inheritance.<br>CO-4 Analysis and interpretation of monohybrid and dihybrid cross. |
| 22. | <b>T.Y.B.Sc. Sem.-V<br/>Course-<br/>Medicinal Botany<br/>Course code-<br/>BO-3510</b>                          | CO-1 Students understand the importance of medicinal plants.<br>CO-2 Students practice various methods of plant propagation.<br>CO-3 Learn to conserve endangered and endemic medicinal plant.<br>CO-4 Study different methods of ethnobotany.   |
| 23. | <b>T.Y.B.Sc. Sem.-V<br/>Course-<br/>Plant Diversity &amp;<br/>Human Health<br/>Course code-<br/>BO-3511</b>    | CO-1 Describe the different terminology of plant diversity<br>CO-2 Discuss the types and value of plant diversity.<br>CO-3 Explain ethical, aesthetic values of biodiversity.<br>CO-4 Examine and classify management of plant diversity, summarized the role of human welfare.                      |



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## DEPARTMENT OF ZOOLOGY

| Sr. No. | Course   | Outcomes  |
|---------|--|---|
| 1.      | <b>F.Y.B.Sc.SEM-I &amp; II</b><br><b>ZO-111,121:</b><br><b>Animal diversity I and II</b><br><b>[2019 [Pattern]</b> | CO-1 To understand the Animal diversity around us.<br>CO-2 To understand the underlying principles of classification of animals.<br>CO-3 To understand the terminology needed in classification.<br>CO-4 To understand the differences and similarities in the various aspects of classification.   |
| 2.      | <b>F.Y.B.Sc. SEM-I</b><br><b>ZO- 112:</b><br><b>Animal Ecology:</b>  | CO-1 The learners will be able to identify and critically evaluate their own beliefs actions in relation to professional and societal standards of ethics and it impact on ecosystem and biosphere.<br>CO-2 To understand anticipate, analyze and evaluate natural resource issues and act on a lifestyle that conserves nature.<br>CO-3 The Learner understands and appreciates the diversity of ecosystems and applies beyond the syllabi to understand the local lifestyle and problems of the community.<br>CO-4 The working in nature to save environment will help development of leadership skills to promote betterment of environment. |
| 3.      | <b>F.Y.B.Sc. SEM-II</b><br><b>ZO – 122:</b><br><b>Cell Biology</b>   | CO-1 Student will come to know the scope of cell biology.<br>CO-2 Identifications of the different structures of Prokaryotic, Eukaryotic.<br>CO-3 Knowledge of the structure of unit membranes and its different models.<br>CO-4 Understanding the different cell organelles.   |

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| 4. | <b>F.Y.B.Sc. SEM-I</b><br><b>Practical Zoology -I</b>                           | CO-1 Recognize the live forms of vertebrates and invertebrates.<br>CO-2 Analyze and describe zoological concepts, including morphology and anatomy.<br>CO-3 Explain conservation and sustainable use of animals;<br>CO-4 Explain and demonstrate the impact that animals have on human society.  |
| 5. | <b>S.Y.B.Sc.</b><br><b>ZO -231, 241:</b><br><b>Animal Diversity III&amp; IV</b> | CO-1 The students will be able to understand, classify and identify the diversity of higher vertebrates.<br>CO-2 The students will be able to understand the complexity of higher vertebrates<br>CO-3 The students will be able to understand different life functions of high ervertebrates.<br>CO-4 The students will be able to understand the linkage among different groups of higher vertebrates.  |
| 6. | <b>S.Y.B.Sc.</b><br><b>ZO:232,242:</b><br><b>Applied Zoology I&amp; II</b>      | CO-1 The learner understands the basics about beekeeping tools, equipment, and managing beehives.<br>CO-2 The learner understands the basic information about fishery, cultural and harvesting methods of fishes and fish preservation techniques.<br>CO-3 The learner understands the biology, varieties of silkworms and the basic techniques of silk production.<br>CO-4 The learner understands the types of agricultural pests, Major insect pests of agricultural importance and Pest control practices. |
| 7. | <b>S.Y.B.Sc. Sem-II &amp; IV</b><br><b>ZO 223: Practical course</b>             | CO-1 First-hand knowledge about identification of non-chordate and chordate specimens (fresh and preserved) along with larval forms and study of endoskeleton of vertebrates.  |

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|  |  | <p>CO-2 Understand the nature and basic concepts of cell biology, genetics, taxonomy, physiology, ecology and applied Zoology.</p> <p>CO-3 Analyze the relationships among animals, plants and microbes.</p> |
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## DEPARTMENT OF PHYSICS

| Sr. No. | Course   | Outcomes  |
|---------|--|---|
| 1.      | <b>F.Y.B.Sc. Sem-I</b><br><br><b>PHY-111 Mechanics and Properties of Matter</b>  | CO-1 Demonstrate an understanding of Newton's laws and applying them in calculations of the motion of simple systems.<br>CO-2 Use the free body diagrams to analyse the forces on the object.<br>CO-3 Understand the concepts of energy, work, power, the concepts of conservation of energy and be able to perform calculations using them.<br>CO-4 Understand the concepts of elasticity and be able to perform calculations using them.                                    |
| 2.      | <b>F.Y.B.Sc. Sem-I</b><br><br><b>PHY-112 Physics Principles and Applications</b> | CO-1 To understand the general structure of atom, spectrum of hydrogen atom.<br>CO-2 To understand the atomic excitation and LASER principles.<br>CO-3 To understand the bonding mechanism and its different types.<br>CO-4 To demonstrate an understanding of electromagnetic waves and its spectrum.  |
| 3.      | <b>F.Y.B.Sc. Sem-I</b><br><br><b>PHY-113 Physics Laboratory 1A</b>               | CO-1 Acquire technical and manipulative skills in using laboratory equipment, tools, and materials.<br>CO-2 Demonstrate an ability to collect data through observation and/or experimentation and interpreting data.<br>CO-3 Demonstrate an understanding of laboratory procedures including safety, and scientific methods.<br>CO-4 Demonstrate a deeper understanding of abstract concepts and theories gained by experiencing and visualizing them as authentic phenomena. |



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| 4. | <b>F.Y.B.Sc. Sem-II</b><br><b>PHY-121 Heat and Thermodynamics</b>   | <p>CO-1 Describe the properties of and relationships between the thermodynamic properties of a pure substance.</p> <p>CO-2 Describe the ideal gas equation and its limitations.</p> <p>CO-3 Describe the real gas equation.</p> <p>CO-4 Apply the laws of thermodynamics to formulate the relations necessary to analyze a thermodynamic process.</p>  |
| 5. | <b>F.Y.B.Sc. Sem-II</b><br><b>PHY-122 Electricity and Magnetism</b> | <p>CO-1 To understand the concept of the electric force, electric field and electric potential for stationary charges.</p> <p>CO-2 Able to calculate electrostatic field and potential of charge distributions using Coulomb's law and Gauss's law.</p> <p>CO-3 To understand the dielectric phenomenon and effect of electric field on dielectric.</p> <p>CO-4 To Study magnetic field for steady currents using Biot-Savart and Ampere's Circuital laws.</p>                                   |
| 6. | <b>F.Y.B.Sc. Sem-II</b><br><b>PHY-123 Physics Laboratory 1B</b>     | <p>CO-1 Acquire technical and manipulative skills in using laboratory equipment, tools, and materials.</p> <p>CO-2 Demonstrate an ability to collect data through observation and/or experimentation and interpreting data.</p> <p>CO-3 Demonstrate an understanding of laboratory procedures including safety, and scientific methods.</p> <p>CO-4 Demonstrate a deeper understanding of abstract concepts and theories gained by experiencing and visualizing them as authentic phenomena.</p> |
| 7. | <b>S.Y.B. Sc.</b>   | CO-1 Understand the complex algebra useful in  |

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|     | <b>SEM-III &amp; IV</b><br><b>PHY-231:</b><br><b>Mathematical Methods in Physics-I</b>                  | <p>physics co</p> <p>CO-2 Understand the concept of partial differentiation.</p> <p>CO-3 Understand the role of partial differential equations in phy.</p> <p>CO-4 Understand vector algebra useful in mathematics and phy.</p>  |
| 8.  | <b>S.Y.B. Sc.</b><br><b>SEM-III &amp; IV</b><br><b>PHY-232:</b><br><b>Electronics (Optional I)</b>      | <p>CO-1 Apply different theorems and laws to electrical circuits.</p> <p>CO-2 Understand the relations in electricity.</p> <p>CO-3 Understand the parameters, characteristics and working of transistors.</p> <p>CO-4 Understand the functions of operational amplifiers.</p>  |
| 9.  | <b>S.Y.B. Sc.</b><br><b>SEM-III &amp; IV</b><br><b>PHY-232:</b><br><b>Instrumentation (Optional II)</b> | <p>CO-1 Understand the concept of measurement.</p> <p>CO-2 Understand the performance of measuring instruments.</p> <p>CO-3 Design experiments using sensors.</p>  |
| 10. | <b>S.Y.B. Sc.</b><br><b>SEM-III &amp; IV</b><br><b>PHY-233: Practical Course (Laboratory 2A)</b>        | <p>CO-1 Use various instruments and equipment.</p> <p>CO-2 Design experiments to test a hypothesis and/or determine the value of an unknown quantity. Investigate the theoretical background of an experiment.</p> <p>CO-3 Setup experimental equipment to implement an experimental approach.</p> <p>CO-4 Analyze the data, plot appropriate graphs and reach conclusions from data analysis.</p> |

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| 11. | <b>S.Y.B. Sc.</b><br><b>SEM-III &amp; IV</b><br><b>PHY-241:</b><br><b>Oscillations, Waves,</b><br><b>and Sound</b>   | <p>CO-1 To study underlying principles of oscillations and it's scope in development.</p> <p>CO-2 To understand and solve the equations / graphical representations of motion for simple harmonic, damped, forced oscillators and waves.</p> <p>CO-3 To explain oscillations in terms of energy exchange with various practical applications.</p> <p>CO-4 To solve numerical problems related to undamped, damped, forced oscillations and superposition of oscillations.</p> |
| 12. | <b>S.Y.B. Sc.</b><br><b>SEM-III &amp; IV</b><br><b>PHY-242: Optics</b>   | <p>CO-1 Acquire the basic concept of wave optics.</p> <p>CO-2 Describe how light can constructively and destructively interfere.</p> <p>CO-3 Explain why a light beam spread out after passing through an aperture.</p> <p>CO-4 Summarize the polarization characteristics of electromagnetic wave.</p>   |
| 13. | <b>S.Y.B. Sc.</b><br><b>SEM-III &amp; IV</b><br><b>PHY-243: Practical</b><br><b>Course (Laboratory</b><br><b>2B)</b> | <p>CO-1 Use various instruments and equipment.</p> <p>CO-2 Design experiments to test a hypothesis and/or determine the value of an unknown quantity. Investigate the theoretical background of an experiment.</p> <p>CO-3 Setup experimental equipment to implement an experimental approach.</p> <p>CO-4 Analyze the data, plot appropriate graphs and reach conclusions from data analysis.</p>  |



  
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## DEPARTMENT OF MATHEMATICS

| Sr. No. | Course  | Outcomes   |
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| 1.      | <b>F.Y.B. Sc.</b><br><br><b>MT 111: Algebra</b>                       | <p>CO-1 Understand sets, relations, equivalence relations, and functions, including terminology and types.</p> <p>CO-2 Apply mathematical induction and the division algorithm to integers, calculating greatest common divisors and least common multiples using Euclid's methods.</p> <p>CO-3 Analyze prime numbers, congruence theory, and apply properties such as Fermat's theorem.</p> <p>CO-4 Master complex numbers, including algebraic properties, modulus, conjugates, exponential form, and De-Moivre's theorem.</p> |
| 2.      | <b>F.Y.B. Sc.</b><br><br><b>MT 112: Calculus - I</b>                  | <p>CO-1 Understand and apply properties of real numbers, sequences, and limits.</p> <p>CO-2 Analyze functions, including their graphs, limits, and continuity.</p> <p>CO-3 Apply calculus tools to solve problems involving sequences, limits, and continuity.</p> <p>CO-4 Utilize the intermediate value theorem and other theorems in calculus.</p>  |
| 3.      | <b>F.Y.B. Sc.</b><br><br><b>MT 113:<br/>Mathematics<br/>Practical</b> | <p>CO-1 Solve practical problems related to sets, functions, sequences, and limits from MT-111 through written exercises.</p> <p>CO-2 Utilize Maxima software effectively for solving mathematical problems from MT-111.</p> <p>CO-3 Apply theoretical concepts of calculus, including functions, limits, and continuity, through written exercises from MT-112.</p> <p>CO-4 Gain proficiency in using Maxima software for</p>   |

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|    |   | solving calculus problems from MT-112.   |
| 4. | <b>F.Y.B. Sc.</b><br><b>MT 121: Analytical Geometry</b>   | <p>CO-1 Understand transformations like translation and rotation in the coordinate plane and apply them to conic sections.</p> <p>CO-2 Solve problems related to planes, including equations, distance measurements, and relationships between planes.</p> <p>CO-3 Master equations and properties of lines in three-dimensional space, including angles with planes and distances from points to planes.</p> <p>CO-4 Analyze spheres using various forms of equations, including circles, intersections with lines, and tangent planes.</p> |
| 5. | <b>F.Y.B. Sc.</b><br><b>MT 122: Calculus-II</b>           | <p>CO-1 Understand derivatives, including the chain rule and applications like Caratheodary's theorem.</p> <p>CO-2 Apply mean value theorems and derivative tests to analyze functions.</p> <p>CO-3 Solve indeterminate forms using L'Hospital's rule and apply Taylor's theorem.</p> <p>CO-4 Master successive differentiation techniques and their applications.</p>   |
| 6. | <b>F.Y.B. Sc.</b><br><b>MT 123: Mathematics Practical</b> | <p>CO-1 Solve practical problems related to analytical geometry from MT-121 through written exercises.</p> <p>CO-2 Utilize Maxima software effectively for solving analytical geometry problems from MT-121.</p> <p>CO-3 Apply calculus concepts, including differentiation and differential equations, through written exercises from MT-122.</p> <p>CO-4 Gain proficiency in using Maxima software for solving calculus problems from MT-122.</p>  |
| 7. | <b>S.Y.B. Sc.</b><br><b>MT-231: Calculus of</b>           | <p>CO-1 Apply concepts of limits and continuity to</p>   |

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|    | <b>Several Variables</b>  | <p>functions of several variables.</p> <p>CO-2 Compute partial derivatives and higher derivatives, and use Clairaut's Theorem.</p> <p>CO-3 Analyze differentiable functions and apply the chain rule, Euler's theorem, and solve partial differential equations.</p> <p>CO-4 Determine extreme values of functions of two variables using necessary conditions and Lagrange multipliers.</p>   |
| 8. | <b>S.Y.B. Sc.<br/>MT-232(A):<br/>Numerical Methods<br/>and Its Applications</b> | <p>CO-1 Solve algebraic and transcendental equations using methods like bisection, false position, and Newton-Raphson.</p> <p>CO-2 Apply finite difference operators and Newton's and Lagrange's interpolation formulae for interpolation.</p> <p>CO-3 Perform numerical differentiation and integration using the trapezoidal rule and Simpson's rules.</p> <p>CO-4 Solve first-order ordinary differential equations using Euler's method, modified Euler's method, and Runge-Kutta methods.</p>   |
| 9. | <b>S.Y.B. Sc.<br/>MT 233:<br/>Mathematics<br/>Practical</b>                     | <p>CO-1 Solve problems related to limits, continuity, partial derivatives, and multiple integrals from MT-231 through written practicals.</p> <p>CO-2 Apply numerical methods to solve algebraic equations, perform interpolation, and conduct numerical differentiation and integration from MT-232 in written practicals.</p> <p>CO-3 Maxima software to solve advanced problems from MT-231, enhancing computational skills and understanding of calculus concepts.</p> <p>CO-4 Utilize Maxima software for solving complex numerical methods problems from MT-232, improving proficiency in numerical analysis</p> |

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| 10. | <b>S.Y.B. Sc.<br/>MT-241:Linear<br/>Algebra</b>             | <p>CO-1 Solve systems of linear equations using Gauss elimination and Gauss-Jordan elimination methods, understanding their applications and solving examples.</p> <p>CO-2 Analyze vector spaces, subspaces, and determine linear dependence and independence.</p> <p>CO-3 Compute dimensions of vector spaces and understand the concepts of row, column, and null space of matrices.</p> <p>CO-4 Apply the rank-nullity theorem to relate the rank and nullity of matrices and linear transformations.</p>   |
| 11. | <b>S.Y.B. Sc.<br/>MT 242(A): Vector<br/>Calculus</b>        | <p>CO-1 Understand and apply derivatives and integrals of vector-valued functions, including motion, differentiation rules, and curvature concepts.</p> <p>CO-2 Compute line integrals of scalar and vector fields, understanding path independence and conservative fields.</p> <p>CO-3 Calculate surface integrals, including parameterizations and orientation of surfaces, and apply these to vector fields.</p> <p>CO-4 Utilize integral theorems such as Green's Theorem, Stokes' Theorem, and the Divergence Theorem in various applications.</p> |
| 12. | <b>S.Y.B. Sc.<br/>MT 243:<br/>Mathematics<br/>Practical</b> | <p>CO-1 Solve practical problems related to matrices, systems of linear equations, and vector-valued functions from MT-241 through written exercises.</p> <p>CO-2 Apply numerical methods and computational techniques using Maxima software to solve problems from MT-241.</p> <p>CO-3 Solve practical problems related to integrals, line integrals, surface integrals, and integral</p>   |

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|  |  | <p>theorems from MT-242 through written exercises.</p> <p>CO-4 Utilize Maxima software to solve advanced problems in vector calculus from MT-242, enhancing computational skills and understanding of theoretical concepts.</p> |
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## DEPARTMENT OF CHEMISTRY

| Sr. No. | Course  | Outcomes  |
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| 1.      | <b>F.Y.B. Sc. Sem-I</b><br><b>CH-101</b><br><b>Physical Chemistry</b>   | <p>CO-1 Students will be able to apply thermodynamic principles to physical and chemical process.</p> <p>CO-2 Understand the relation between Free energy and equilibrium and factors affecting on equilibrium constant and exergonic and endergonic reaction.</p> <p>CO-3 Understand the Concept to ionization process occurred in acids, bases and pH scale and related concepts such as Common in effect, hydrolysis constant, ionic product and solubility product.</p> <p>CO-4 Degree of hydrolysis and pH for different salts , buffer solutions.</p> |
| 2.      | <b>F.Y.B. Sc. Sem-I</b><br><b>CH-102</b><br><b>Organic Chemistry</b>    | <p>CO-1 The students are expected to understand the fundamentals, principles and recent developments in the subject area.</p> <p>CO-2 To develop awareness of organic chemistry in day to day life.</p> <p>CO-3 To understand basic fundamental aspects of pharmaceutical and medicinal chemistry.</p> <p>CO-4 To familiarize with current and recent developments in Chemistry.</p>  |
| 3.      | <b>F.Y.B. Sc. Sem-II</b><br><b>CH-201</b><br><b>Inorganic Chemistry</b> | <p>CO-1 Understand the various theories and principles applied to reveal atomic structure Origin of quantum mechanics and its need to understand structure of hydrogen atom.</p> <p>CO-2 Understand the rules for filling electrons in various orbitals- Aufbau's principle, Pauli exclusion principle, Hund's rule of maximum multiplicity.</p>  |

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|    |   | <p>CO-3 To understand and describe Block, group, modern periodic law and periodicity.</p> <p>CO-4 Write name, symbol, electronic configuration, trends and properties.</p>   |
| 4. | <p><b>F.Y.B. Sc. Sem-II</b></p> <p><b>CH-202</b></p> <p><b>Analytical Chemistry</b></p> | <p>CO-1 Calculations of mole, molar concentrations and various units of concentrations which will be helpful for preparation of solution</p> <p>CO-2 Units such as parts per million, parts per billion, parts per thousand, solution-dilutant volume ratio, function density and specific gravity of solutions</p> <p>CO-3 Basics of type determination, characteristic tests and classifications, reactions of different functional groups.</p> <p>CO-4 Basics of chromatography and types of chromatography</p> |
| 5. | <p><b>F.Y.B. Sc. Sem-I</b></p> <p><b>CH-103: Chemistry Practical</b></p>                | <p>CO-1 Importance of chemical safety and Lab safety while performing experiments in laboratory</p> <p>CO-2 Determination of thermo chemical parameters and related concepts and techniques of pH measurements</p> <p>CO-3 Preparation of buffer solutions, elemental analysis of organic compounds (non instrumental)</p> <p>CO-4 Chromatographic Techniques for separation of constituents of mixtures.</p>  |
| 6. | <p><b>F.Y.B. Sc. Sem-II</b></p> <p><b>CH-203 : Chemistry Practical</b></p>              | <p>CO-1 Inorganic Estimations using volumetric analysis.</p> <p>CO-2 Synthesis of Inorganic compounds.</p> <p>CO-3 Analysis of commercial products.</p> <p>CO-4 Purification of organic compounds.</p>   |
| 7. | <p><b>S.Y.B. Sc. Sem-III</b></p>  | <p>CO-1 Explain / discuss / derive integrated rate laws, characteristics, expression for half-life and</p>   |

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|     | <b>CH-301</b><br><b>Physical and Analytical Chemistry</b>                              | <p>examples of zero order, first order and second order reactions.</p> <p>CO-2 Derivations of collision theory and transition state theory of bimolecular reaction and comparison.</p> <p>CO-3 Explain adsorption, classification of given processes into physical and chemical adsorption.</p> <p>CO-4 Apply adsorption process to real life problem.</p>  |
| 8.  | <b>S.Y.B. Sc. Sem-III</b><br><b>CH-302</b><br><b>Inorganic &amp; Organic Chemistry</b> | <p>CO-1 Students understood the terms related to molecular orbital theory</p> <p>CO-2 Students are able to Apply LCAO principle for the formation of MO's from AO's.</p> <p>CO-3 The student will be ready to understand the mechanisms and reactions of aromatic hydrocarbons, as well as the synthesis of alkyl and aryl Halides.</p> <p>CO-4 Students were able to understand and applying terminology used in organic and inorganic chemistry.</p>        |
| 9.  | <b>S.Y.B. Sc. Sem-IV</b><br><b>CH-401</b><br><b>Physical and Analytical Chemistry</b>  | <p>CO-1 Understand the terms in phase equilibria such as-system, phase in system, components in system, degree of freedom, one two component system, phase rule, etc</p> <p>CO-2 Apply solvent extraction to separate the components of from mixture interest</p> <p>CO-3 Apply conductometric methods of analysis to real problem in analytical laboratory.</p> <p>CO-4 Apply colorimetric methods of analysis to real problem in analytical laboratory.</p> |
| 10. | <b>S.Y.B. Sc. Sem-IV</b><br><b>CH-402</b>  | <p>CO-1 Students understood Isomerism in coordination complexes and able draw the structures.</p> <p>CO-2 Students will be able to apply principles of VBT</p>  |

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|     | <b>Inorganic &amp; Organic Chemistry</b>                                     | <p>for explaining bonding in Coordination Compound. Also able to Identifying, explaining inner and outer orbital complexes.</p> <p>CO-3 Students will be able to understand CFT and Application of crystal field theory.</p> <p>CO-4 Students will be able to understand, Identify and draw the structures of organic compound and their derivatives</p>   |
| 11. | <b>S.Y.B. Sc. Sem-III</b><br><b>CH-303</b><br><b>Practical Chemistry-III</b> | <p>CO-1 Verify theoretical principles experimentally</p> <p>CO-2 Interpret the experimental data on the basis of theoretical principles</p> <p>CO-3 Correlate the theory to the experiments. Understand / verify theoretical principles by experiment or explain practical output with the help of theory and perform organic and inorganic synthesis and able to follow the progress of the chemical reaction.</p> <p>CO-4 Set up the apparatus properly for the designed experiments.</p>  |
| 12. | <b>S.Y.B. Sc. Sem-IV</b><br><b>CH-403</b><br><b>Practical Chemistry-IV</b>   | <p>CO-1 Verify theoretical principles experimentally</p> <p>CO-2 Interpret the experimental data on the basis of theoretical principles</p> <p>CO-3 Correlate the theory to the experiments. Understand / verify theoretical principles by experiment or explain practical output with the help of theory and perform organic and inorganic synthesis and able to follow the progress of the chemical reaction.</p> <p>CO-4. Set up the apparatus properly for the designed experiments.</p> |
| 13. | <b>T.Y.B. Sc. Sem-V</b><br><b>CH-501</b><br><b>Physical Chemistry-</b>       | <p>CO-1 Know historical of development of quantum mechanics in chemistry.</p> <p>CO-2 Understand and explain the differences between classical and quantum mechanics.</p> <p>CO-3 Understand the term additive and constitutive</p>  |

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|     | I   | properties.<br>CO-4 Understanding of De Broglie hypothesis and the uncertainty principle.  |
| 14. | <b>T.Y.B. Sc. Sem-V</b><br><b>CH-502</b><br><b>Analytical Chemistry-I</b>         | CO-1 Students were Understood basic terms in gravimetry and use the terms.<br>CO-2 Understood parameters in used instrumental analysis and applying them in qualitative analysis.<br>CO-3 Student acquires the ability to solve problems based on theoretical knowledge.<br>CO-4 Students shall be ready to prepare analytical procedures for given samples.   |
| 15. | <b>T.Y.B. Sc. Sem-V</b><br><b>CH-503</b><br><b>Physical Chemistry Practical-I</b> | CO-1 Determine the molecular refractivity of the given liquids A, B, C and D.<br>CO-2 Determine the refractive index of a series of salt solutions and determine the concentration of a salt of unknown solution.<br>CO-3 To titrate $\text{Cu}^{2+}$ ions with EDTA photo metrically.<br>CO-4 To estimate of $\text{Fe}^{3+}$ ions by thiocyanate method.   |
| 16. | <b>T.Y.B. Sc. Sem-V</b><br><b>CH-504</b><br><b>Inorganic Chemistry-I</b>          | CO-1 To understand about inert and labile complexes, stability of complexes in aqueous solutions and their mechanism in various types of reactions.<br>CO-2 Student should be able to explain Nephelauxetic effect towards covalent bonding and electronic configuration of lanthanides and actinides.<br>CO-3 Student should be able to understand the meaning of metal & semiconductor.<br>CO-4 The difference between metal, semiconductor and insulator meaning of super conductors and their structure. |
| 17. | <b>T.Y.B. Sc. Sem-V</b><br><b>CH-505</b><br><b>Industrial Chemistry</b>           | CO-1 Students will be able to learn the Importance of chemical industry, meaning of the terms involved, comparison between batch and continuous process, knowledge of various industrial aspects.<br>CO-2 Students will learn Concept of basic chemicals, their uses and manufacturing process, knowing the physico-chemical principals involved in manufacturing process.   |

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|     |  | <p>CO-3 Concept of basic chemicals, their uses and manufacturing process, knowing the physico-chemical principals involved in manufacturing process.</p> <p>CO-4 Students will be able to know different types of soap products, chemistry of soap, raw materials required for soap manufacture, meaning of the term's surfactants, types of surfactants, raw materials for detergents, detergent builders, additives, washing action of soap and detergents.</p>                      |
| 18. | <p><b>T.Y.B. Sc. Sem-V</b></p> <p><b>CH-506</b></p> <p><b>Inorganic Chemistry Practical -I</b></p> | <p>CO-1 Student should know gravimetric estimation and able to perform estimation of Fe as Fe<sub>2</sub>O<sub>3</sub>.</p> <p>CO-2 Student should able to analysis of sodium bicarbonate from mixture by thermal decomposition method.</p> <p>CO-3 Able to know determination of water of crystallization by thermal decomposition.</p> <p>CO-4 Able to analysis of Food/Pharmaceutical sample for ash and sulphated ash example-Aspirin.</p>   |
| 19. | <p><b>T.Y.B. Sc. Sem-V</b></p> <p><b>CH-507</b></p> <p><b>Organic Chemistry-I</b></p>              | <p>CO-1 Students will be able to understand and write the structure the polynuclear and heteronuclear aromatic hydrocarbons.</p> <p>CO-2 Students will be able to understand the reactions and mechanisms.</p> <p>CO-3. To understand the meaning of active methylene group and its synthesis.</p> <p>CO-4. Students will be able to write the mechanism of some named rearrangement reactions and their applications.</p>   |
| 20. | <p><b>T.Y.B. Sc. Sem-V</b></p> <p><b>CH-508</b></p> <p><b>Chemistry of Biomolecules</b></p>        | <p>CO-1 The student will understand cell types, difference between a bacterial cell, plant cell and animal cell.</p> <p>CO-2 The student will understand the types of carbohydrates and their biochemical significance in living organism, structure of carbohydrates and reaction of carbohydrates.</p> <p>CO-3 The student will understand the types amino acid, types of proteins, structural features in proteins.</p> <p>CO-4 The student able to know the type of lipid with</p> |

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|     |  | example, structure of lipids and properties of lipids.   |
| 21. | <b>T.Y.B. Sc. Sem-V</b><br><b>CH-509</b><br><b>Organic</b><br><b>Chemistry</b><br><b>Practical-I</b> | CO-1 Students will be able to perform the quantitative chemical analysis of binary mixture, explain principles behind it.<br>CO-2 Students will be able to Separate, purify and analyze binary water insoluble mixture.<br>CO-3 Students will be able to understand the techniques involving drying and recrystallization by various method.<br>CO-4 Students will be able to learn the confirmatory test for various functional groups. |
| 22. | <b>T.Y.B. Sc. Sem-V</b><br><b>CH-510</b><br><b>Polymer Chemistry</b>                                 | CO-1 The students are expected to learn history of polymers.<br>CO-2 Difference between simple compounds and polymer.<br>CO-3 Difference between natural, synthetic, organic and inorganic polymers.<br>CO-4 Terms-Monomer, Polymer, Polymerization, Degree of polymerization, Functionality, Number average, Weight average molecular weight.   |
| 23. | <b>T.Y.B. Sc. Sem-V</b><br><b>CH-511</b><br><b>Environmental</b><br><b>Chemistry</b>                 | CO-1 Students should know Importance and conservation of environment.<br>CO-2 Students should know importance of biogeochemical cycles<br>CO-3 Students should know Water resources.<br>CO-4 Students should know Hydrological Cycle.  |
| 24. | <b>T.Y.B. Sc. Sem-VI</b><br><b>CH-601</b><br><b>Physical</b><br><b>Chemistry-II</b>                  | CO-1 Explanation of Daniel cell, Conventions to represent electrochemical cells.<br>CO-2 The primary reference electrode: The standard hydrogen electrode (SHE) with reference to diagram, Construction, representation, working and limitation, Secondary reference electrodes: (a) The calomel electrode, (b) The glass electrode (c) The silver-silver chloride electrode.  |

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|     |  | <p>CO-3 Nernst Equation for theoretical determination of EMF.</p> <p>CO-4 Sign convention for electrode potentials and Electrochemical series.</p>   |
| 25. | <p><b>T.Y.B. Sc. Sem-VI</b></p> <p><b>CH-602</b></p> <p><b>Physical Chemistry -III</b></p>         | <p>CO-1 Meaning of the terms-Solution, electrolytes, nonelectrolytes and colligative properties.</p> <p>CO-2 Application of colligative properties to determine molecular weight of non electrolyte, abnormal molecular weight.</p> <p>CO-3 Relation between Vant Hoff's factor and degree of dissociation of electrolyte by colligative property.</p> <p>CO-4 Factors affecting on solid state reactions, Rate laws for reactions in solid state, Cohesive Energy of ionic crystals based on coulomb's law and Born Haber Cycle.</p>  |
| 26. | <p><b>T.Y.B. Sc. Sem-VI</b></p> <p><b>CH-603</b></p> <p><b>Physical Chemistry Practical-II</b></p> | <p>CO-1 To determine the PKa value of given monobasic weak acid by potentiometric titration.</p> <p>CO-2 To prepare standard 0.2 M Na<sub>2</sub>HPO<sub>4</sub> and 0.1 M Citric acid solution, hence prepare four different buffer solutions using them. Determine the pH value of these and unknown solution.</p> <p>CO-3 To determine the degree of hydrolysis of aniline hydrochloride.</p> <p>CO-4 Determination of Pka of given weak acid by pH metry titration with strong base, To determine the resolving time of GM counter, Determination of SO<sub>4</sub><sup>2-</sup> and Cl<sup>-</sup> by turbidimetric method.</p> |
| 27. | <p><b>T.Y.B. Sc. Sem-VI</b></p> <p><b>CH-604</b></p>   | <p>CO-1 To understand various concepts in organometallic chemistry.</p>  |



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|     | <b>Inorganic Chemistry-II</b>  | <p>CO-2 To understand the essential properties of homogeneous catalysts-Give the catalytic reactions for Wilkinson's Catalysis, hydroformylation reaction, Monsanto acetic acid synthesis, Heck reaction</p> <p>CO-3 To understand the classification and essential properties of heterogeneous catalysts.</p> <p>CO-4 To understand and identify the biological role of inorganic ions &amp; compounds.</p>  |
| 28. | <b>T.Y.B. Sc. Sem-VI</b><br><b>CH-605</b><br><b>Inorganic Chemistry-III</b>          | <p>CO-1 Student will learn the concept of acid base and their theories.</p> <p>CO-2 Know the nature of solids, Know the crystal structures of solids.</p> <p>CO-3 Be able to define Pauling's univalent radius and crystal radius</p> <p>CO-4 Be able to solve simple problems based on Born- Haber cycle, Be able to differentiate between the defects.</p>  |
| 29. | <b>T.Y.B. Sc. Sem-VI</b><br><b>CH-606</b><br><b>Inorganic Chemistry Practical-II</b> | <p>CO-1 To know analysis of Iodine from Iodized salt.</p> <p>CO-2 To learn analysis of Calcium from milk powder.</p> <p>CO-3 Student should learn to synthesize ZnO nanoparticles.</p> <p>CO-4 Synthesis of amine complexes of Ni(II) and its ligand exchange Reaction by substitution method as well as student should be able to purification of water using cation/anion exchange resin and analysis by qualitative analysis /conductometry.</p> |
| 30. | <b>T.Y.B. Sc. Sem-VI</b><br><b>CH-607</b><br><b>Organic Chemistry-II</b>             | <p>CO-1 Students will learn the principle of mass spectroscopy, its instrumentation and nature of mass spectrum.</p> <p>CO-2 Students will be able to know about various types of spectroscopy and their applications.</p> <p>CO-3 Students will be able to determine the structure of simple organic compounds on the basis of</p>   |

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|     |   | <p>spectral data such as <math>\lambda</math> max values, IR frequencies, chemical shift (<math>\delta</math> values).</p> <p>CO-4 Students should be able to learn the use of models to draw different types of disubstituted cyclohexenes in chair form.</p>  |
| 31. | <p><b>T.Y.B. Sc. Sem-VI</b></p> <p><b>CH-608</b></p> <p><b>Organic Chemistry-III</b></p>          | <p>CO-1 Student should know different terms used such as Disconnection, Synthons, Synthetic equivalence, FGI, TM.</p> <p>CO-2 Student should know Wittig reaction, Mc Murry reaction and Diels-Alder reaction.</p> <p>CO-3 Student should be able to learn functional group inter-conversions and structural problems using chemical reactions.</p> <p>CO-4 Student should know the applications of following reagents Lithium aluminium hydride <math>\text{LiAlH}_4</math>, <math>\text{NaBH}_4</math>, DIBAL-H, <math>\text{Li}(\text{tBuO})_3\text{AlH}</math> Terpenoids Introduction, Isolation, Classification and Citral-structure.</p> |
| 32. | <p><b>T.Y.B. Sc. Sem-VI</b></p> <p><b>CH-609</b></p> <p><b>Organic Chemistry Practical-II</b></p> | <p>CO-1 students will be able to identify the functional group or Groups present in a compound, spin-spin interaction and structure elucidation.</p> <p>CO-2 students will be able to Achieve the practical skills required to estimations of glucose and glycine.</p> <p>CO-3 students will be able to Apply the principles of extraction.</p> <p>CO-4 students will be able to Describe the extraction separation process.</p>  |
| 33. | <p><b>T.Y.B. Sc. Sem-VI</b></p> <p><b>CH-610</b></p> <p><b>Chemistry of Soil and</b></p>          | <p>CO-1 To know classification of soil on the basis of pH.</p> <p>CO-2 Know the role of various fertilizers and manures required for plant growth and Know importance of manures as compared to chemical fertilizers.</p>   |

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|     | <b>Agrochemicals</b>  | <p>CO-3 Student is expected to understand the Reclamation and management of soil physical and chemical constraints.</p> <p>CO-4 Imparts knowledge on different pesticides, their nature and, mode of action and their fate in soil so as to monitor their effect on the environment.</p>   |
| 34. | <b>T.Y.B. Sc. Sem-VI</b><br><br><b>CH-611</b><br><br><b>Analytical Chemistry-II</b> | <p>CO-1 Student will be able to understand the procedure of solvent extraction and its applications.</p> <p>CO-2 Students understood chromatography its types and application in analysis of sample.</p> <p>CO-3 Students understood HPLC, method of quantitative analysis by HPLC. And its application.</p> <p>CO-4 Students will be able to learn quantitative analysis using GC and elemental analysis.</p> |



  
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## DEPARTMENT OF COMMERCE (PG)

| Sr. No. | Course  | Outcomes   |
|---------|---|--|
| 1.      | <b>M.Com.-I. SEM-I</b><br><br><b>Management Account</b><br><br><b>(Course Code - 101)</b>                     | CO-1 Students will understand importance of management accounting and functions of Management Accounting.<br>CO-2 Students will understand various decision-making techniques of marginal costing and its application in modern business.<br>CO-3 Product Pricing decision-making capacity of the students will be developed.<br>CO-4 Learners can prepare various budgets independently.  |
| 2.      | <b>M.Com.-I. SEM-I</b><br><br><b>Strategic Management</b><br><br><b>(Course Code- 102 )</b>                   | CO-1 To introduce the students to the emerging changes in the modern business environment<br>CO-2 To develop the analytical , technical and managerial skills of students in the various areas of Business Administration<br>CO-3 To empower to students with necessary skill to become effective future managers and leaders<br>CO-4 To develop technical skills among the students for designing and developing effective functional strategies for growth and sustainability of business. |
| 3.      | <b>M.Com.-I. SEM-I</b><br><br><b>Production and Operations Management</b><br><br><b>(Course Code -: 113 )</b> | CO-1 Students will be able to define the main goals, duties, and review of production and operation management and understand the significance of successful POM in achieving operational effectiveness and competitiveness.<br>CO-2 Students will thoroughly understand production systems, which will serve as a strong basis for their further exploration of production and operation management principles and practices.<br>CO-3 Students will learn about various operations          |

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|    |  | <p>management strategies and tactics, including inventory control and lean operations management.</p> <p>CO-4 To understand and develop deep insight of production &amp; operation management.</p>  |
| 4. | <p><b>M.Com.-I. SEM-I</b></p> <p><b>Financial Management</b></p> <p><b>(Course Code - 114)</b></p> | <p>CO-1 The Students will understand the Financial System of India and its role and importance in financial management.</p> <p>CO-2 Students will understand the concepts of financing and will gain knowledge on Financial Statement analysis.</p> <p>CO-3 Students will understand how to make Investment Decisions and the importance of Capital budgeting techniques.</p> <p>CO-4 Students will have a strong foundation in understanding the meaning and nature of working capital management and to formulate credit and collection policy.</p> |
| 5. | <p><b>M.Com.-I. SEM-I</b></p> <p><b>Consumer Behaviour</b></p> <p><b>(Course Code : 118)</b></p>   | <p>CO-1 The objective of the course is to impart knowledge regarding marketing management techniques and process;</p> <p>CO-2 To develop understanding of the marketing functions techniques and strategies.</p> <p>CO-3 To study the Introduction to Consumer Behaviour and Market Segmentation, Consumer Perception: Definition of Perception, Elements of Perception, Consumer Learning and Memory, Personality and Self Concept,</p> <p>CO-4 Motivation and involvement, attitude formation and change.</p>                                       |
| 6. | <p><b>M.Com.-I. SEM-I</b></p> <p><b>Marketing Technique</b></p> <p><b>(Course Code :- 117)</b></p> | <p>CO-1 To study and critically analyze the basic concepts &amp; techniques of Marketing.</p> <p>CO-2 To understand the, Introduction of Marketing, Marketing Organisation and Environment, Product Mix, Price and Place Mix, Promotion Mix/ marketing Communication.</p> <p>CO-3 To Study Marketing Communication</p> <p>CO-4 To Study people process and physical evidence.</p>   |
| 7. | <p><b>M.Com.-I. SEM-II</b></p> <p><b>Financial Analysis</b></p>                                    | <p>CO-1 The objective of the course is to enable students to acquire sound knowledge of</p>   |

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|    | <b>&amp; Control<br/>(Course<br/>Code -: 201)</b>  | <p>concepts, methods and techniques of management accounting and to make the students develop competence with their usage in managerial decision making and control.</p> <p>CO-2 To study the long term investment decisions cost of capital, marginal costing, short run managerial decision analysis, budget and budgetary control and standard costing.</p> <p>CO-3 To enable the students to acquire knowledge of financial analysis and control tools</p> <p>CO-4 To Make appropriate application and uses of financial analysis and control.</p>   |
| 8. | <b>M.Com.-I. SEM-II<br/>Industrial<br/>Economics<br/>(Course Code -<br/>202 A)</b>                       | <p>CO-1 To study the basic concepts of Industrial Economics.</p> <p>CO-2 To study the significance and problems of Industrialization.</p> <p>CO-3 To study the impact of Industrialization on Indian Economy.</p> <p>CO-4 To study the Introduction of Industrial Economics, Industrial Location, Industrial Productivity, Industrial Efficiency and Profitability, Industrial Profile and Problems and Industrial Imbalance.</p>  |
| 9. | <b>M.Com.-I. SEM-II<br/>Business Ethics<br/>and Professional<br/>Values<br/>(Course<br/>Code -: 213)</b> | <p>CO-1 The objective of the course is to enable students to study the Introduction of the Business Ethics and Professional Values, Indian Ethical Practices, Dilemmatic situations in Professional Ethics, Code of Ethics and conduct, Indian Approach to Business Ethics, Gandhian'.</p> <p>CO-2 To Approach in Management and Trusteeship, Gandhi's Doctrine of Satya and Ahinsa, Concept , importance and relevance of trusteeship Principle in Modern Business, Emergence of new values in Indian Industries after economic reforms of 1991.</p> <p>CO-3 To raise the student's general awareness on the ethical dilemmas at workplace.</p> <p>CO-4 To investigate whether ethics set any boundaries on competition, marketing, sales</p> |

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|     |  | and advertising.  |
| 10. | <b>M.Com.-I. SEM- II</b><br><b>Elements of Knowledge Management</b><br><b>(Course Code -: 214)</b>                 | CO-1 The objective of the course is to enable students to study the Introduction to Knowledge Management Process,<br>CO-2 To Organizational Learning, Knowledge Management Tools & Change Management and Knowledge Management Culture.<br>CO-3 To develop Analytical and Research oriented skills among the students.<br>CO-4 To promote research and innovation ideas based on Knowledge Management.   |
| 11. | <b>M.Com.-I. SEM- II</b><br><b>Customer Relationship Management &amp; Retailing</b><br><b>(Course Code -: 217)</b> | CO-1 To impart knowledge regarding customer relationship management, & retailing techniques, process and tools and develop an understanding of the CRM & retailing functions techniques and strategies.<br>CO-2 To Study the CRM An Introduction, Emerging CRM, CRM and I.T, Latest Development in CRM, CRM Implementation Issues, and People factor in CRM.<br>CO-3 To understand of the CRM & retailing functions techniques and strategies.<br>CO-4 To help students understand various issues related with CRM implementation |
| 12. | <b>M.Com.-I. SEM- II</b><br><b>Services Marketing Course</b><br><b>( Code -: 218)</b>                              | CO-1 To impart knowledge regarding services marketing process and tools.<br>CO-2 To develop understanding of the services marketing functions techniques and strategies.<br>CO-3 To develop service marketing strategies.<br>CO-4 To identify consumer perception and how to develop consumer trust, goodwill and loyalty.  |
| 13. | <b>M.Com.-II. SEM- III</b><br><b>Business Finance</b><br><b>(Course Code -: 301)</b>                               | CO-1 To acquaint the students with corporate finance required for Indian Industries.<br>CO-2 To make the students aware about the latest developments in the field of corporate finance.<br>CO-3 To enable the students to understand the traditional theories of capitalization and dividend distribution practices.<br>CO-4 To give detail exposure of working capital  |

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|     |   | management practice of finance to students<br>Skills to be developed.   |
| 14. | <b>M.Com.-II. SEM- III<br/>Research<br/>Methodology for<br/>Business</b><br><br>(Course Code - :<br>302 ) | CO-1 To acquaint the students with the areas of business research activities.<br>CO-2 To enhance capabilities of students to conduct the research in the field of business and social sciences.<br>CO-3 To enable students, in developing the most appropriate methodology for their research studies.<br>CO-4 To make them familiar with the art of using different research methods and techniques.   |
| 15. | <b>M.Com.-II. SEM- III<br/>Human Resource<br/>Management</b><br><br>(Course Code - :<br>313)              | CO-1 To acquaint the students with in-depth knowledge of HRM.<br>CO-2 To inculcate among students various practices followed by HR managers.<br>CO-3 To create understanding about recent trends in HRM<br>CO-4 To understand the E-HR and recent trends in Human Resource management.  |
| 16. | <b>M.Com.-II. SEM- III<br/>Organizational<br/>Behaviour</b><br><br>(Course Code - :<br>314)               | CO-1 To make the students understand various concepts of organisation behaviour.<br>CO-2 To provide in depth knowledge about process of formation of group behaviour in an organization set up.<br>CO-3 To understand the concept of stress and conflict and effects of work culture<br>CO-4 To know the motivational process and emotional intelligence.   |
| 17. | <b>M.Com.-II. SEM- III<br/>International<br/>Marketing</b><br><br>(Course Code - :<br>317)                | CO-1 The Course participants will become more familiar with the nature and practices of international marketing. They should feel equally confident to be able to distinguish international marketing mechanics from the domestic marketing models and approaches.<br>CO-2 They would be far more equipped to design and participate in designing an international marketing strategy.<br>CO-3 The spin-off benefits to the participants should be to develop in them a right attitude, inject enthusiasm and hone their interactive ability as |



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|     |   | <p>they address the issues and challenges of operating in the international markets.</p> <p>CO-4 To impart the knowledge regarding procedural aspects of export documentation.</p>  |
| 18. | <p><b>M.Com.-II. SEM- III</b><br/> <b>Marketing Research</b><br/> <b>(Course Code :- 318)</b></p>               | <p>CO-1 Marketing Research Department's Goals-Pragmatic, Selective, and Evaluative, Marketing Decision Support System (MDSS) - Scope &amp; Significance</p> <p>CO-2 The Market and Sales Analysis, Sales forecasting objective and subjective methods, Test marketing, Industrial versus consumer marketing research.</p> <p>CO-3 To impart the students to understand the various concepts regarding international marketing.</p> <p>CO-4 To impart the knowledge regarding world economy and current environment of global marketing.</p> |
| 19. | <p><b>M.Com.-II. SEM- IV</b><br/> <b>Capital Market and Financial Services ( Course Code :- 401 )</b></p>       | <p>CO-1 To enable students to acquire sound knowledge, concept and structure of capital market and financial services.</p> <p>CO-2 To acquaint the students with working of capital market.</p> <p>CO-3 To make the students aware about the latest developments in the field of capital market in India.</p> <p>CO-4 To give exposure of financial services offered by various agencies and financial adviser to students.</p>   |
| 20. | <p><b>M.Com.-II. SEM- IV</b><br/> <b>Industrial Economic Environment</b><br/> <b>( Course Code :- 402 )</b></p> | <p>CO-1 To study the basic concepts of Industrial Finance.</p> <p>CO-2 To study the effects of New Economic Policy.</p> <p>CO-3 To study the impact of Labour reforms on industries.</p> <p>CO-4 To enable the students to understand various transactions in stock exchanges and agencies involved in it.</p>  |
| 21. | <p><b>M.Com.-II. SEM- IV</b><br/> <b>Recent Advance in Business</b></p>   | <p>CO-1 To familiarise the students with the recent advancements in business administration</p> <p>CO-2 To develop an understanding about tools and</p>   |

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|     | <b>Administration</b><br>(Course<br>Code -: 413)  | their application in the business.<br>CO-3 To understand the basic concepts of Change Management and their approaches.<br>CO-4 To impart adequate knowledge and analytical of cross cultural Management.  |
| 22. | <b>M.Com.-II. SEM- IV</b><br><b>Project Work in Business Administration</b><br>( Course<br>Code -: 414) | CO-1 To develop research attitude of the students.<br>CO-2 To enrich the ability of research work among the students.   |
| 23. | <b>M.Com.-II. SEM- IV</b><br><b>Recent Advantages in Marketing</b><br>( Course<br>Code -: 417)          | CO-1 To Process of Creating a Marketing Strategy. Global v/s Local Marketing Strategy.<br>CO-2 To make students aware of the latest changes and challenges in digital marketing.<br>CO-3 To acquaint students with mechanisms of Delivering Service through Intermediaries and Modern E Channels<br>CO-4 To help students understand various issues related with sustainable marketing. |
| 24. | <b>M.Com.-II. SEM- IV</b><br><b>Project Work in Advanced Marketing</b><br>( Course<br>Code -: 418)      | CO-1 To develop research attitude of the students.<br>CO-2 To enrich the ability of research work among the students.   |



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## DEPARTMENT OF CHEMISTRY (PG)

| Sr. No. | Course  | Outcomes  |
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| 1.      | <b>M.Sc.-I Sem.-I</b><br><b>CCTP-1CHP-110-</b><br><b>Physical Chemistry-I</b><br><b>CCTP-Core</b><br><b>Compulsory Theory</b><br><b>Paper</b> | CO-1 Realize the terms State function, path function, exact differential and inexact differential, internal energy and enthalpy,<br>CO-2 Know the Helmholtz and Gibbs function, Entropy and entropy change in an ideal gas with temperature and pressure<br>CO-3 Learn Partial molar quantities, methods for determination of molar quantities, ideal solutions<br>CO-4 Understand the Raoult's, Henry's law, Gibbs function, colligative properties, Elevation in boiling point, depression.   |
| 2.      | <b>M.Sc.-I Sem.-I</b><br><b>CCTP-2 CHI-130-</b><br><b>Inorganic</b><br><b>Chemistry-I</b>   | CO-1 To understand the concept of symmetry and able to pass various symmetry elements through the molecule.<br>CO-2 Understand the concept and point group and apply it to molecules.<br>CO-3 Known the Projection operators and their use of construct SALC.<br>CO-4 To understand the Application of Group theory to Infrared Spectroscopy.   |
| 3.      | <b>M.Sc.-I Sem.-I</b><br><b>CCTP-3CHO-150-</b><br><b>Organic Chemistry-I</b>  | CO-1 To understand some fundamental aspects of organic chemistry, to learn the concept aromaticity, to understand the various types of aromaticity.<br>CO-2 To study heterocyclic compound containing one and two hetero atoms with their structure, synthesis and reactions.<br>CO-3 Learn the concept stereochemistry and its importance; their rules and the concept of chirality.<br>CO-4 Understand the role of various reaction intermediates like carbocation, carbanion, carbenes, radicals, and nitrates in organic reactions. |
| 4.      | <b>M.Sc.-I Sem.-I</b>   | CO-1 Students will be able to explore new areas of research in both Chemistry and allied fields of  |

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|    | <b>CBOP-1 CHG-190<br/>General Chemistry-<br/>ICBOP-Choice Based<br/>Optional Paper</b> | <p>science and technology.</p> <p>CO-2 Understand the Students will be able to function as a member of an interdisciplinary problem-solving team.</p> <p>CO-3 Understand to impart the student's thorough idea in the chemistry of carbohydrates, amino acids, proteins and nucleic acids etc.</p> <p>CO-4 Develop skills to critically read the literature and effectively communicate research in a peer setting.</p>  |
| 5. | <b>M.Sc.-I Sem.-II<br/><br/>CCTP-4 CHP-210-<br/>Physical Chemistry-<br/>II</b>         | <p>CO-1 Understand of the principle of Microwave, IR, Raman Electronic, NMR, ESR and Mossbauer spectroscopy.</p> <p>CO-2 Draw of the schematic Microwave, IR and Raman spectrum of di and triatomic molecules based on the selection rules.</p> <p>CO-3 Understand of decay kinetics and measurement of radioactivity.</p> <p>CO-4 Get knowledge of types of nuclear react.</p>  |
| 6. | <b>M.Sc.-I Sem.-II<br/><br/>CCTP-5CHI-230-<br/>Inorganic<br/>Chemistry-II</b>          | <p>CO-1 Understand to find out the no of microstates and meaningful term symbols, construction of microstate table for various configuration.</p> <p>CO-2 Understand to draw correlations diagram for various configurations in T<sub>2g</sub> O<sub>h</sub> ligand field.</p> <p>CO-3 Study the basic d-d transition, d-p mixing, charge transfer spectra.</p> <p>CO-4 Understand the various terms involved in magneto chemistry.</p>  |
| 7. | <b>M.Sc.-I Sem.-II<br/><br/>CCTP-6 CHO-250-<br/>Organic Chemistry<br/>-II</b>          | <p>CO-1 MOT and will be able to extend this in predicting reaction mechanism and stereochemistry of electro cyclic reactions.</p> <p>CO-2 The concepts in free radical reactions, mechanism and the stereo chemical outcomes.</p> <p>CO-3 The basic principle of spectroscopic methods and their applications in structure elucidation of organic compounds using given spectroscopic data or spectra.</p> <p>CO-4 Understand the factors affecting UV-absorption spectra, Interpret IR-spectra on basic values of IR-frequencies.</p> |

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| 8.  | <b>M.Sc.-I Sem.-II</b><br><b>CBOP-2 CHG-290-</b><br><b>GeneralChemistry-II</b>   | CO-1 To impart the student's thorough idea in the chemistry of carbohydrates, amino acids, proteins and nucleic acids etc.<br>CO-2 Students will be able to function as a member of an interdisciplinary problem-solving team.<br>CO-3 Develop skills to critically read the literature and effectively communicate research in a peer setting.<br>CO-4 Understand the importance of chemical biology research and interdisciplinary work. |
| 9.  | <b>M.Sc.-I Sem.-I</b><br><b>CCPP-1CHP-107-</b><br><b>Practical Course –I</b><br><b>CCPP -Core</b><br><b>Compulsory</b><br><b>Practical Paper</b> | CO-1 Calculate molar and normal solution of various concentrations.<br>CO-2 Determine specific rotations and percentage of two optically active substances by polar metrically.<br>CO-3 Study the energy of activation and second order reaction.<br>CO-4 Understand the colorimetry and Spectrophotometric technique.   |
| 10. | <b>M.Sc.-I Sem.-II</b><br><b>CCPP-2</b><br><b>CHP-227-Practical</b><br><b>Course-II</b>  | CO-1 Study of synthesis of coordination complexes.<br>CO-2 Understand the structural determination of metal complexes by conduct metric measurement.<br>CO-3 Understand the inorganic characterization techniques, Inorganic Kinetics and Ion – Exchange Chromatography.<br>CO-4 Students are trained to different purification techniques in organic chemistry like recrystallization, distillation, steam distillation.                  |
| 11. | <b>M.Sc.-II Sem.-III</b><br><b>CHA-390</b><br><b>Electro analytical</b><br><b>and radio analytical</b><br><b>methods of analysis</b>             | CO-1 Study of colorimeter, Faraday 1st law, Faraday 2nd law.<br>CO-2 Study of voltammetry and palaeographic method of analysis.<br>CO-3 Study of amperometry and their applications.<br>CO-4 Learn radio analytical methods of analysis, activation analysis.  |
| 12. | <b>M.Sc.-II Sem.-III</b><br><b>CHA-391</b><br><b>Pharmaceutical</b>  | CO-1 Study of apparatus for test and assay, cleaning of glassware, role of FDA in pharmaceutical industry.   |

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|     | <b>analysis.</b>  | <p>CO-2 Learn biological test and assay, microbiological test and assay, physical test, determination, limit test sterilization.</p> <p>CO-3 Analysis of vegetable drug, sources of impurities in pharmaceutical raw materials and finished products.</p> <p>CO-4 Learn standardization and quality control of different raw materials.</p> |
| 13. | <b>M.Sc.-II Sem.-III</b><br><b>CHA-392</b><br><b>Advanced analytical techniques</b>   | <p>CO-1 Study the classical approach for aqueous extraction, solid phase extraction, micro extraction and SFE.</p> <p>CO-2 Learn: AAS, FES, ICPAES, and DCP.</p> <p>CO-3 Study atomic fluorescence, resonant ionization and LASER based enhanced ionization.</p> <p>CO-4 Study of different detectors and their applications.</p>           |
| 14. | <b>M.Sc.-II Sem.-III</b><br><b>CHA-380</b><br><b>Geochemical and alloy analysis and analytical method development and validation.</b> | <p>CO-1 To understand assay validation and inter laboratory transfer.</p> <p>CO-2 Study the statistical analysis and analytical figure.</p> <p>CO-3 Learn the analysis of geological materials and alloys.</p> <p>CO-4 Study the analysis of soil, sampling, chemical analysis as a measure of soil fertility.</p>                          |
| 15. | <b>M.Sc.-II Sem.-IV</b><br><b>CHA-490</b><br><b>Analytical spectroscopy</b>   | <p>CO-1 Study of ESCA, Detectors and their applications.</p> <p>CO-2 Learn X-ray method of analysis, numerical problems.</p> <p>CO-3 Understand an introduction to microscopy, its applications.</p> <p>CO-4 Study of chemiluminescence's, Fluorescence and phosphorescence.</p>  |

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| 16. | <b>M.Sc.-II Sem.-IV</b><br><b>CHA-491</b><br><b>Analytical methods for analysis of fertilizer detergent, water and polymer</b> | CO-1 Study of analysis of fertilizer, sampling and sample preparation, Kendal's method.<br>CO-2 Understand the analysis of soap and detergents, UV-spectroscopic analysis of detergent.<br>CO-3 Study of water pollution and analysis of polluted water.<br>CO-4 Learn the polymer chemistry, analysis and testing of polymer, measurement of molecular weight and size. |
| 17. | <b>M.Sc.-II Sem.-IV</b><br><b>CHA-492</b><br><b>Pollution monitoring and control and analysis of body fluid.</b>               | CO-1 Study of pollution monitoring, removal of heavy toxic metals Cr, Hg.<br>CO-2 Learn the removal of particulate matters, SO <sub>2</sub> and NO <sub>x</sub> .<br>CO-3 Study the collection of specimen blood, urine, faces.<br>CO-4 Learn the analysis of blood and urine, Vitamin in body fluid.  |
| 18. | <b>M.Sc.-II Sem.-IV</b><br><b>CHA-481</b><br><b>Analytical toxicology and food analysis.</b>                                   | CO-1 Study of acute poisoning, clinical toxicology.<br>CO-2 Learn the isolation, identification and determination of narcotics,<br>CO-3 Study the classification function, analysis of carbohydrate, Protein.<br>CO-4 Study the food preservatives, identification determination, and composition.   |
| 19. | <b>M.Sc.-II Sem.-III</b><br><b>CHA-387</b><br><b>Analysis of materials</b>   | CO-1 Study the gravimetric and volumetric analysis of ores and alloy.<br>CO-2 Prepare a various inorganic complex and determine its % purity.<br>CO-3 Preparation of nonmaterial.<br>CO-4 To understand the chromatographic techniques.  |
| 20. | <b>M.Sc.-II Sem.-IV</b><br><b>CHA-487</b><br><b>Instrumental Analysis.</b>   | CO-1 Spectral analysis best on instrumental techniques.<br>CO-2 Photometric determination.<br>CO-3 Study of Conduct meter, FES, Polarography.<br>CO-4 Analysis of riboflavin by photoflurometry.   |

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| 21. | <b>M.Sc.-II Sem.-IV</b><br><b>CHA-488</b><br><b>Organic Chemistry</b><br><b>Practical</b> | CO-1 Study the dissolution of tablet.<br>CO-2 Learn the spectroscopic techniques.<br>CO-3 Study Volumetric and gravimetric estimation.<br>CO-4 Analysis of quinine sulphate by photoclinochemistry. |
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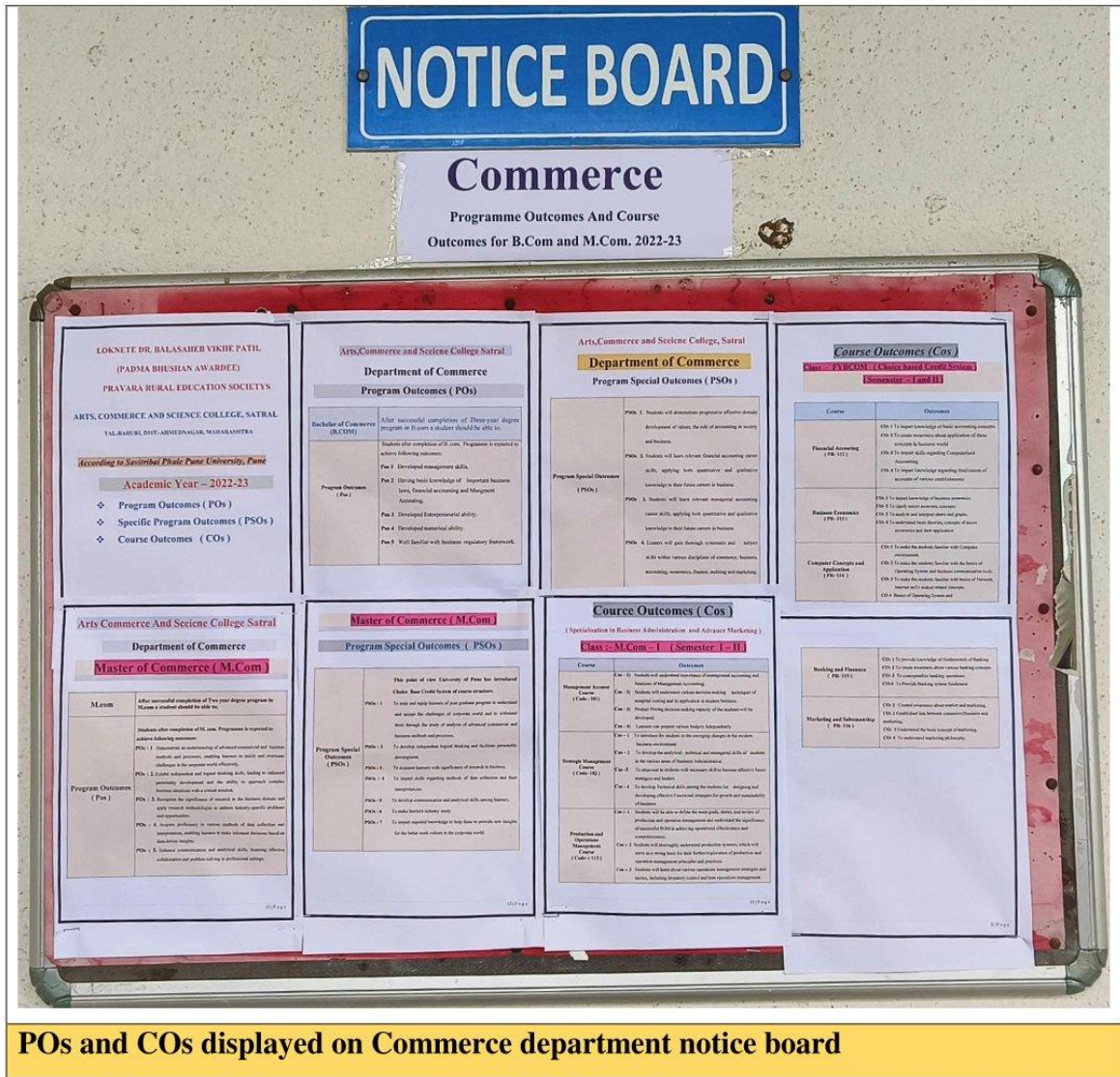


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**Sample of POs and COs displayed on college notice board**



**POs and COs displayed on Commerce department notice board**



Latitude: 19.510355  
 Longitude: 74.481168  
 Elevation: 534.46±49 m  
 Accuracy: 4.6 m  
 Time: 07-04-2022 11:53  
 Note: Chemistry POs and COs

POs and COs displayed on Chemistry department notice board



POs and COs displayed on Marathi department notice board





POs and COs displayed on Hindi department notice board



*Dangraam*  
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