



## **Program outcomes Bachelor of Arts (BA)**

Graduates of this degree will be knowledgeable on following points on completion.  
They will be able to:

### **Cognitive skills:**

Understand knowledge in the field of Humanities, Social Sciences and Environmental issues.

- ▶ Develop social, political, historic, economic and literary consciousness and will be better able to appreciate different civilizations, culture,
- ▶ Cultivate the sensibility to discern the evolution of civilizations and cultures.
- ▶ Up to date with contemporary developments and develop a sociological sensibility to critically understand the social phenomena that affects their lives.
- ▶ Learn three languages along with three major subjects.
- ▶ Have advanced reading, writing, speaking, interpretive and composition skills in three languages.
- ▶ Use communication and soft skills.
- ▶ Speak, read, write and listen clearly in person and through electronic media in English and in one/two Indian language/s, and make meaning of the world by connecting people, ideas, books, media and technology.
- ▶ Elicit views of others, mediate disagreements and help reach conclusions in group settings.
- ▶ Take informed actions from different perspectives.

### **Employability:**

- ▶ Become eligible for employment in tourism, media, hospitality, and other industries.
- ▶ Become employable in non-governmental organizations.
- ▶ Places them in ideal situation for such jobs,
- ▶ Equips them to clear competitive exam conducted for public sector jobs.
- ▶ Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes.

### **Values:**

- ▶ Appreciate the literary and cultural diversity.
- ▶ Think critically about the issues of contemporary relevance and hold an informed opinion on them.



- ▶ Cultured and good citizen of India.
- ▶ Understand fundamental values of Indian Constitution.
- ▶ Demonstrate empathetic social concern and equity centred national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.
- ▶ Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.

  
**I/C PRINCIPAL**  
Smt. Meenalben Mehta College, Panchgani  
(Arts, Commerce & Science)  
Tal. Mahabaleshwar, Dist. Satara



“Education for Knowledge, Science & Refined Culture.” -Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha, Kolhapur's

**Smt. Meenalben Mehta College, Panchgani**

**2023-24**

**B. A. III ECONOMICS  
(CBCS PATTERN)**

## **COURSE OUTCOMES**

Principles of Micro Economics- I (ELECTIVE COURSE- 7) DSE E-71

After successful completion of this course, the students will be able to:

- Explain what economics is and explain why it is important
- Understand consumer decision making and consumer behaviour
- Define the concept of utility and satisfaction derive revenue and cost figures as well as curves Understand producer decision making and producer behaviour

ECONOMICS OF DEVELOPMENT (ELECTIVE COURSE- 8) DSE – E - 72

- Identify The Dimensions of Development
- Distinguish The Fundamental and Contemporary Development Debate
- Know The Theories of Economic Development
- realise the role of state in economic development.

INTERNATIONAL ECONOMICS- I (ELECTIVE COURSE- 9) DSE – E 73

- Explain International Trade
- Understand the Measurement of Gains From
- International Trade
- Distinguish Different Rates of Exchange



- Measure The Terms of Trade

RESEARCH METHODOLOGY IN ECONOMICS- I (ELECTIVE COURSE- 10) DSE – E 74

- Get Acquainted with The Basic Concepts of Research and Its Methodologies.
- Select and Define Appropriate Research Problem and Parameters.

HISTORY OF ECONOMIC THOUGHTS- I (ELECTIVE COURSE- 11) DSE – E 75

- Understand The Basic Economic Ideas of Various Economic Thinkers of the World
- Understand The Development of Economic Thoughts

PRINCIPLES OF MICRO ECONOMICS- II (ELECTIVE COURSE- 12) DSE E 196

- Identify the market structure
- Analyse the economic behaviour of individual firms and markets
- Analyse a firm's profit maximising strategies under different market conditions
- Understand the factor pricing

ECONOMICS OF PLANNING (ELECTIVE COURSE- 13) DSE – E 197

- Get Acquainted with Economic Planning and Its Importance in Development
- Get Acquainted with Development of Planning and Planning Machinery in India
- Evaluate Sectoral Performance of the Indian Economy
- Compare and Analyse Indian Models of Economic Development

INTERNATIONAL ECONOMICS- II (ELECTIVE COURSE- 14) DSE – E 198

- Distinguish Between Balance of Trade and Balance of Payments
- Analyse the Balance of Payments
- Understand the Various Types of Foreign Capital



- Analyse The Impact of International Institutions On Indian Economy.

RESEARCH METHODOLOGY IN ECONOMICS- II (ELECTIVE COURSE- 15) DSE – E – 199

- Understand The Sampling Techniques as A Method of Data Collection
- Use Techniques of Data Analysis in Research
- Write A Research Report And Thesis
- Write A Research Proposal (Grants)

HISTORY OF ECONOMIC THOUGHTS- II (ELECTIVE COURSE- 16) DSE – E 200

- Understand The Economic Concepts and Theories of Neo-Classical And Indian Thinkers.
- Understand The Development of Economic Thoughts

  
**Head,**  
Department of Economics,  
Smt. Menalben Mehta College, Paachgani



**Smt. Meenalben Mehta College, Panchgani**

**Department of English**

**2023-24**

**Aims and Objectives:**

1. To require the linguistic competence necessarily required in various life situations.
2. To enable students understand grammatical structures and their meaning.
3. To help them understand grammatical structures in written and spoken form.
4. To enable them understand the importance of English grammar in various competitive exams.

**Course Outcomes:** - After the completion of the course the students are able to:

**1. B. A. I – Compulsory English**

- Use communication skills in English.
- Know human values through poems and prose.

**2. B. A. I. Modern Indian Writing in English Translation (Paper I/II)**

- Understand the translated Modern Indian literature in English.

**3. B. A. II. Compulsory English**

- Apply language skills used in both oral and written English.
- Cultivate a broad human and cultured outlook.

**4. B. A. II. Literature and Cinema (Paper III/V)**

- Elaborate critical approaches to engage with film adaptations.
- Understand clearly literature through film adaptations of literary texts.

**5. B. A. II. Partition Literature (Paper IV/VI)**

- Recognize partition scenario with hidden human dimensions of the partition.
- Elaborate the impact of partition on society through literary texts.

**6. B. A. III Compulsory English**

- Communicate in English, in their day-to-day lives as well as at workplaces.
- Acquire soft skills required in real life.
- Learn to appreciate and enjoy reading poetry and prose passages.

**7. B. A. III. Introduction to Literary Criticism (Paper VII/XII)**

- Know the major trends, concepts and various literary movements.
- Write critical appreciation of poetry.

**8. B. A. III. English Poetry (Paper VIII/XIII)**

- Understand poetry from various cultures and traditions.
- Experience intellectual, moral and linguistic pleasures.

**9. B. A. III English Drama (Paper IX/XIV)**

- Define the elements and forms of drama like comedy, tragedy or problem plays.
- Identify dramatic aspects such as conflict, climax, and characters in plays.



**10. B. A. III Novel in English (Paper X/XV)**

- Interpret novel as a form of literature with its types like realistic, campus, science fiction and trans-fiction.
- Analyze plot, setting and point of view of novels.

**11. Language and Linguistics (Paper XI/XVI)**

- Use aspects of phonology like speech mechanism and organs of speech in communication.
- Perform the morphological analysis of words
- Identify form, function and types of words, phrases and clauses

**12. B. Com. I English for Business Communication**

- Use language skills and basic units of grammar.
- Acquire business competence.

**13. B. Com. II English for Business Communication**

- Communicate in English used in the various businesses and strengthen the employability skills.

**14. B. Sc. I English for Communication**

- Make use of English in specific fields like advertising, social media and science.

**15. B. Sc. III English for Communication**

- Utilize language skills in personal as well as business communication.
- Contribute to the welfare of humanity in life.

  
**Head,**  
Department of English,  
Smt. Meenalbes Mehta College Panchgani

"Education for Knowledge, Science & Refined Culture"

-Shikshanmarshi Dr. Babuji Saunkhe

Shri Swami Vivekanand Shikshan Sansta Kolhapur's

## **Smt. Meenalben Mehta College, Panchgani**

**Department of Hindi (2023-24)**

### **Programmes Specific Outcomes (PSO's) & Course Outcomes (CO's)**

**Hindi U.G.PROGRAM OUTCOME**

#### **I. PROGRAM OUTCOME OF BACHELOR OF ARTS (B.A.)**

- Student seeking admission for B.A. programme are expected to imbue with following quality which help them in their future life to achieve the expected goals.
  - a. Realization of human values.
  - b. Sense of social service.
  - c. Responsible and dutiful citizen.
  - d. Critical temper
  - e. Creative ability.

#### **Programmes Specific Outcomes (PSO's)**

- 1. Developing reading, writing, speaking and listening skills.
  2. Availing the job opportunities in translation.
  3. Increasing the critical attitude about literary writing.
  4. Creating an interest in literature.
  5. Imbuing the literary research attitude.





## Course Outcomes (CO's)

### B.A. I Paper No I and II (हिंदी गद्य साहित्य)

1. आधुनिक हिंदी गद्य साहित्य का परिचय देना |
2. आधुनिक हिंदी गद्य साहित्य के विविध विधाओं का परिचय देना |

### B.A. I (आवश्यक हिंदी) (सृजनात्मक एवं व्यावहारिक लेखन)

1. सृजनात्मक हिंदी साहित्य का परिचय देना |
2. व्यावहारिक हिंदी साहित्य का परिचय देना |

### B.A. II Paper No III and V (मध्यकालीन एवं आधुनिक हिंदी काव्य )

1. मध्यकालीन एवं आधुनिक हिंदी काव्य साहित्य का परिचय देना |
2. आधुनिक हिंदी रोजगार उन्मुख शिक्षा और कौशल का परिचय देना |

### B.A. II Paper No IV and VI (आधुनिक हिंदी गद्य साहित्य)

1. आधुनिक हिंदी गद्य साहित्य का परिचय देना |
2. आधुनिक हिंदी लेखकों का परिचय देना |

### B.A. III Paper No VII and XII (विधा विशेष का अध्ययन)

1. आधुनिक हिंदी उपन्यास साहित्य का परिचय देना |
2. आधुनिक हिंदी आत्मकथा साहित्य का परिचय देना |

### B.A. III Paper No VIII and XIII( साहित्यशास्त्र)

1. साहित्य के विभिन्न अंगों का परिचय देना |
2. भारतीय एवं पाश्चात्य समीक्षा सिद्धांत का परिचय देना |

### B.A. III Paper No IX and IVX (हिंदी साहित्य का इतिहास)

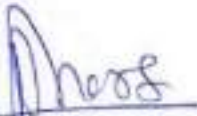
1. हिंदी साहित्य के आदिकाल, भक्तिकाल का परिचय देना |
2. हिंदी साहित्य के रीतीकाल, आधुनिक का परिचय देना |

### B.A. III Paper No X and XV (प्रयोजनमूलक हिंदी )

1. पारिभाषिक शब्दावली का परिचय देना |
2. जनसंचार इलेक्ट्रॉनिक माध्यमों का परिचय देना |

### B.A. III Paper No XI and XVI (भाषा विज्ञान एवं हिंदी विज्ञान एवं हिंदी भाषा)

1. भाषा के उत्पत्ति विषयक विविध सिद्धांतों का परिचय देना |
2. भाषाविज्ञान के प्रधान अंगों का परिचय देना |



Narendra Phadatre  
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Dr. Satish Desai  
I/C Principal

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“ज्ञान, विज्ञान आणि सुलभकार योगादी शिक्षणप्रसार”  
- शिक्षणमहर्षी डॉ बापूजी मारुंगे  
श्री स्वामी विवेकानंद शिक्षण संस्था कोल्हापूर संचलित  
श्रीमती मीनलबेन महेता कॉलेज, पाचगणी



## Department of Marathi

2023 - 24

### Program Outcome- B.A. Marathi

After completion of program student will be able to

- 1) Demonstrate knowledge of Marathi literature with all its conceptual terminologies.
- 2) Recognize the use of key concepts and terms in Literary criticism to interpret literary texts.
- 3) Analyze structure of language at different levels (Phonological, morphological, and syntactic)
- 4) Display the skills and abilities for media and publication.

### Program Outcome- M.A. Marathi

After completion of program student will be able to

- 1) Demonstrate the critical theories and their Knowledge.
- 2) Show the research attitude and abilities.
- 3) Demonstrate creative impulse in writing works of Literature.
- 4) Apply linguistic knowledge in Marathi.

  
**Head,**  
Department of Marathi,  
Shri. Minalben Maheta College, Panchgani



  
**प्रभारी प्राचार्य**  
श्रीमती मीनलबेन महेता कॉलेज, पाचगणी  
(आर्ट्स, कॉमर्स अँड सायन्स)  
ता. महाबळेश्वर, जि. सातारा-412805



“ज्ञान, विज्ञान आणि सुसंस्कार यांसाठी शिक्षणप्रसार  
-शिक्षणमहर्षी डॉ. बापूजी साळुंखे

श्री स्वामी विवेकानंद शिक्षण संस्था, कोल्हापूर

श्रीमती मीनलबेन महेता कॉलेज, पांचगणी .



Department of Marathi

COURSE OUT COMES

B. A. 2019 - 2024

Sr. No.	Course code	Course Title	COURSE OUT COMES
<b>B. A. I SEM I / II</b>			
1.	71208 71254	Marathi CGE- 1 शब्दसंहिता Marathi CGE- 2 शब्दसंहिता	C.O.1 विद्याध्यायी मराठी भाषा आणि साहित्याविषयी अभिरुची विकसित होते. C.O.2 मराठी साहित्य परंपरा लेखक, कवी यांचा परिचय होतो. C.O.3 विद्याध्यायामध्ये मातृभाषा, राष्ट्रीय एकात्मता आणि मानवी मूल्यांविषयी जाणीव निर्माण होते. C.O.4 विद्याध्यायाना व्यक्तिमत्त्व विकास पडवून स्पर्धा परीक्षांची पूर्वतयारी होते. C.O.5 निबंध लेखनाच्या माध्यमातून भाषा उपयोजनाची कौशल्ये विकसित होतात.
2.	71216 71262	Marathi I DSC – A1 अक्षरबंध Marathi II DSC – A13 अक्षरबंध	C.O.1 विद्याध्यायी मराठी भाषा आणि साहित्याविषयी अभिरुची विकसित होते. C.O.2 मराठी साहित्य परंपरा लेखक, कवी यांचा परिचय होतो. C.O.3 विद्याध्यायामध्ये मातृभाषा, राष्ट्रीय एकात्मता आणि मानवी मूल्यांविषयी जाणीव निर्माण करते. C.O.4 विद्याध्यायाना व्यक्तिमत्त्व विकास पडवून स्पर्धा परीक्षांची पूर्वतयारी होते. C.O.5 चित्रपट आणि प्रसारमाध्यमे यांच्या लेखन आणि उपयोजनाच्या आकलनाचा अवकाश वाढविणे C.O. 6 कथामधील मूल्य शोधण्याचे तंत्र अवगत होते C.O. 7 कवितामधील मूल्य शोधण्याचे तंत्र अवगत होते
<b>B. A. II SEM- III</b>			
3	73346/77646	Marathi III DSC – C1	C.O.1- नाट्य वाङ्मयाचे स्वरूप लक्षात येते. C.O.2- नाटकाच्या संहितेचा अभ्यास करता येतो. C.O.3 समकालीन नाटकातून नाटककाराच्या समकालाचे प्रतिबिंब अभ्यासता येते. C.O.4 नाट्याभ्यासातून प्रयोगरूप नाटक व नाट्यक्षेत्रातील ज्ञानसंपादनार्थ चालना मिळते. C.O.5 नाट्याभ्यासातून सभ्यता, संस्कृती, राष्ट्रीय एकात्मता व बंधुता वाढीस लागते. C.O.6 विद्याध्यायामध्ये संवाद कौशल्य विकसित होते
4	73347/77647	Marathi IV DSC – C2	C.O.1 मराठी काव्यपरंपरा व प्रवाहांची ओळख होते. C.O.2 मराठी काव्यातून प्रकटणारे माणूस आणि समाज यातील परस्पर संबंधाचे आकलन होते. C.O.3 कवितेच्या कलात्मक आकृतीबंधाचे मोल अभ्यासात येते. C.O.4 काव्यलेखनाची कौशल्ये अवगत होतात.
<b>B. A. II SEM- IV</b>			
5	73433/78833	Marathi V	C.O.1 आत्मचरित्र वा वाङ्मयप्रकारची ओळख होते.



		DSC – C25	C.O.2 आत्मचरित्र कारख्या व्यक्तिमत्त्वाने वृद्धप्रभेदा आणि समकालाचे आकलन होते. C.O.3 भारताच्या वेगवेगळ्या प्रांताचे व प्रदेशातील जीवनदर्शन समजते. C.O.4 आत्मवृत्तपर लेखनकौशल्ये विकसित होतात.
73434/78834		Marathi VI DSC – C26	C.O.1 कादंबरी वाङ्मयप्रकारची ओळख होते. C.O.2 मानवी मूल्यांविषयी जाणीव निर्माण होते. C.O.3 वृत्तांतलेखन कौशल्ये अवगत होते. C.O.4 कादंबरीमधील मूल्य शोधण्याचे तंत्र अवगत होते
<b>B. A. III SEM- V</b>			
7.	75571/79636	Marathi VII DSE- E1 साहित्यविचार	C.O.1 पीकाल्य, पाश्चात्य वआधुनिकभारतीय साहित्यशाखाचे स्वरूप लक्षात येते. C.O.2 ललित व ललितेतर साहित्याचे स्वरूप ध्यानात येते. C.O.3 साहित्य प्रयोजनाचा आकलन होते. C.O.4 साहित्याची निर्मितीप्रक्रिया जाणून घेण्याचे कौशल्य प्राप्त होते. C.O. 5 भाषेतील अलंकाराचे स्वरूप लक्षात येते.
8	75572/79637	Marathi VIII DSE- E2 मराठी भाषा व भाषा विज्ञान	C.O.1 भाषेच्या उत्पत्तीचे स्वरूप लक्षात येते. C.O.2 भाषा विज्ञानाचा परिचय होतो. C.O.3 भाषा विज्ञान आणि मराठी भाषा यांच्या सहसंबंधाचे आकलन होते. C.O.4 स्वनविचार , रूपविचार व वाक्यविचारांचा परिचय होतो. C.O. 5 मराठी भाषेविषयी विद्यार्थ्यांची आयड विकसित होते.
9	75573/79638	Marathi IX DSE- E3 मध्ययुगीन मराठी वाङ्मयाचा इतिहास ( प्रारंभ ते इ. स. १५००)	C.O.1 मध्ययुगीन मराठी वाङ्मयाचा स्थूल परिचय होतो. C.O.2 मध्ययुगीन मराठी वाङ्मयाचे स्वरूप आणि वैशिष्ट्ये अभ्यासता येतात. C.O.3 मध्ययुगीन मराठी वाङ्मयातील महत्त्वाचे ग्रंथकार आणि ग्रंथ यांचा स्थूल परिचय होतो.
10	75574/79639	Marathi X DSE- E4 मराठी भाषा आणि अर्थजनाच्या संघी	C.O.1 सर्जनशील लेखनप्रक्रियेचे आकलन होते. C.O.2 वैचारिक लेखनाचे स्वरूप लक्षात येते. C.O.3 शोधनिबंध व प्रकल्पलेखनाचे कौशल्य प्राप्त होते. C.O.4 आंतरजावावरील मराठी लेखनपद्धतीचे आकलन होते.
11	75575/79640	Marathi XI DSE- E5 वाङ्मयीन प्रवाह : मध्ययुगीन	C.O.1 मध्ययुगीन महाराष्ट्र व महानुभवपंथ यांचा परिचय होतो. C.O.2 महानुभव वाङ्मयाच्या प्रेरणा व स्वरूप लक्षात येते. C.O.3 महानुभावीय ग्रंथकार केशोबास यांचा परिचय होतो. C.O.4 दृष्टांतपाठातील आशयाचे आणि अभिव्यक्तीचे स्वरूप लक्षात येते C.O.5 दृष्टांतपाठातील भाषिक वैभवाचा परिचय होतो.
<b>B. A. III SEM- VI</b>			
12	75771/80071	Marathi XII DSE- E126 साहित्यविचार	C.O.1 शब्दशक्तीचे आकलन होते. C.O.2 साहित्यातील रसाचे स्वरूप व रस प्रक्रिया लक्षात येते. C.O.3 साहित्यनिर्मितीच्या आनंदाचे स्वरूप समजते. C.O.4 आवहार भाषा, भाख भाषा आणि साहित्यभाषा यातील भेदाचे आकलन होते. C.O.5 साहित्यभाषेचे आकलन होते. C.O.6 भाषेतील छंद व वृत्ते यांचे स्वरूप लक्षात येते.
13	75772/80072	Marathi XIII DSE- E127 मराठी भाषा व भाषा विज्ञान	C.O.1 मराठी भाषेची वर्णव्यवस्था समजते. C.O.2 छवती व अर्थपरिवर्तनाची कारणे व प्रकार यांचे स्वरूप लक्षात येते. C.O.3 प्रमाणभाषेचे स्वरूप व विशेषांचे आकलन होते. C.O.4 मराठीच्या बोलींचे स्वरूप लक्षात येते.

14	75773/80073	Marathi XIV DSE- E128 मध्ययुगीन मराठी साहित्याचा इतिहास (इ. स. १५०० ते इ. स. १८००)	C.O.1 मध्ययुगीन महाराष्ट्र व महानुभवपंथ यांचा परिचय होतो. C.O.2 महानुभव वाङ्मयाच्या प्रेरणा व स्वरूप लक्षात येते. C.O.3 पंडित कवी व त्यांची रचना यांचा परिचय होतो. C.O.4 बखर वाङ्मय आणि शाहिरी वाङ्मय यांचे स्वरूप लक्षात येते.
15	75774/80074	Marathi XV DSE- E129 मराठी भाषा आणि अर्थाजनाच्या संघी	C.O.1 प्रसारमाध्यमातील अर्थाजनाच्या संघी आणि भाषिक कौशल्ये यांचा परिचय होतो. C.O.2 स्पर्धा परीक्षामध्ये मराठी भाषा विषयाचे महत्त्व समजते. C.O.3 उद्योग व सेवा क्षेत्रात मराठी भाषेद्वारे अर्थाजनाप्राप्ती संदर्भात ज्ञान प्राप्त होते. C.O.4 मुद्रितशोधन करण्याचे कौशल्य अवगत होते. C.O.5 नोकरी व रोजगाराच्या संघी शोधता येतात. C.O.6 मुद्रितशोधक म्हणून रोजगार मिळवता येतो.
16	75775/80075	Marathi XVI DSE- E130 वाच्य प्रकार : ललित गद्य ( व्यक्तिचित्रण)	C.O.1 ललित गद्य साहित्यप्रकाराची ओळख होते. C.O.2 व्यक्तिचित्रण संकल्पना व स्वरूप लक्षात येते. C.O.3 व्यक्तिचित्रण, ललित लेखनाची प्रेरणा मिळते. C.O.4 प्रवाहानुरूप मराठीतील व्यक्तिचित्रणाचा परिचय होतो. C.O.6 'मुख्यानेगळी माणस' मधील व्यक्तिचित्रणाचे आकलन होते.



Head,

Department of Marathi

Smt. Meenaiben Jadhav College, Fanchganj



**प्रभारी प्राचार्य**  
श्रीमती मीनाबेन जाधव कॉलेज, फांचगंज  
(आर्ट्स, कॉमर्स अँड सायन्स)  
ता. महाबळेश्वर, जि. सातारा-412805



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## Department of Political Science

### Program Specific Outcomes



### Program Specific Outcomes BA

- Understanding political ideas : Students should be able to understand the ideas of political thinkers, and the concepts of liberalism, multiculturalism, and communitarianism.
- Understanding political issues : Students should be able to analyze political issues using historical and comparative knowledge.
- Understanding the Indian constitution : Students should be able to understand the structure and operation of the Indian constitution at the state and central levels.
- Understanding power politics: Students should be able to analyze how power operates at the local, national, regional, and global levels.
- Understanding social and ethical responsibilities: Students should be able to reflect on their social and ethical responsibilities.

  
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Prin. Abhuykumar Salunkhe  
M. A.

Secretary  
Prin. Shubhangi Gawade  
B. Sc., B. Ed

Principal  
Dr. Satish Desai  
M. A., Ph. D



## Department of Political Science

### Course Specific Outcomes 2023-24



#### B.A - I Sem-I Intro. to Political Science

- Students learn about the basic concepts and theories of political theory, and the different approaches to studying it.
- Students learn about the structure and functions of political systems, institutions, and processes.
- Students learn about the consequences of different political ideologies, practices, and historical paths.

#### B.A - I Sem- II Indian Constitution

- Students will be able to get familiar with background of Indian Constitution.
- Students will be able to understand some major provisions of the Constitution.
- Students will be able to understand the context of the constitution related issues.

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Prin. Shubhangi Gawade  
B. Sc., B. Ed

Principal  
Dr. Satish Deshpande  
M. A.



## Department of Political Science

### Course Specific Outcomes 2023-24

#### B.A - II Sem- III Political Process in India

- Imparting knowledge of Political Process in India.
- Understanding of approaches in Political Process of India.

#### B.A - II Sem: III Indian Political Thought Part –I

- Understand the historical development of Indian Political Thoughts.
- Understand the relevance of ancient ideas with present time.

#### B.A - II Sem: III Public Administration I

- To impart knowledge about the nature, scope importance of Public Administration.
- The student will get knowledge about contemporary concepts of Public Administration.

  
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Dr. Satish Desai  
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### Department of Political Science

#### Course Specific Outcomes 2023-24

#### B.A - II Sem - IV Local- Self Government in Maharashtra

- To Develop local leadership.
- Understand the Constitutional Provision of Local - Self Government.

#### B.A - II Sem- IV Indian Political Thought – II

- The student will get knowledge about the development of Indian Political thoughts.
- Students can understand the different thoughts

#### B.A - II Sem: IV Public Administration II

- Get information about Personnel Administration.
- Understand New Trends in Public Administration.

  
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### Department of Sociology

#### Programme Outcomes- 2023-2024

- Understanding sociological knowledge
- Sociology Outcome Sociology is the most contemporary and versatile of the Social Sciences.
- Students should be able to recognize, interpret, and apply sociological knowledge.
- Students should be able to create sociological explanations for social phenomena.
- Understand basic concepts and theoretical perspectives in Sociology and how they are used in sociological explanation of social behavior.
- Students should be able to conduct sociological inquiry and analyze social scientific data.
- Students should be able to make sociological sense of relevant data.
- Students should be able to understand the importance of cultural context and identify differences and commonalities within diverse cultures.
- Students should be able to use sociological knowledge to inform policy debates and promote public understanding.
- Students should be able to communicate orally and in writing about sociological concepts.

  
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### **Department of Sociology**

#### **Course Outcomes 2023-24**

##### **B.A. Part – I Sem – I, Introduction To Sociology Paper – I**

1. The student learns to apply to sociological perspective in understanding how society shapes our individual lives.
2. It also provides a foundation for the other more detailed and specialized course in sociology.
3. The student learns how to read and interpret complex ideas and texts and to present them in a cogent manner.

##### **B.A.PART – I Sem – II, Principles Of Sociology Paper**

1. The course is intended to introduce the student to a sociological way of thinking.
2. It also provides a foundation for the other more detailed and specialized course in sociology.
3. The course provides competitive atmosphere for the student.

  
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### Department of Sociology

### Course Outcomes 2023-24

#### B.A.- Part- II, Social Issues in India

1. To acquaint the student's Sociological study of Social Issues.
2. To able attention of the students for to need to study 'Socio- Cultural, Economic, and legal issues in India.

#### B.A. Sociology -(CBCS) Part – II Social Movement in India

#### Semester - III, Paper No. IV - Social Movement in India

- 1.To understand the variety of ideas and debates about social movements in India as well as Maharashtra.
- 2.To able critically engages with the multiple socio-political forces and ideologies which shape the terrain of the nation.

#### B.A. Part-Sociology (CBCS) – II - DSC – D31

#### Semester - IV, Paper No. V –Gender and Violence

1. To understand approaches of violence such as: Gendered violence is routine and spectacular, structural as well as situated.
2. To create ability to understand of the logic of that violence and awareness about peaceful society with reference of India.

  
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### Department of Sociology

### Course Outcomes 2023-24

#### B.A. Sociology -(CBCS) Part – II - DSC – D32

#### Semester - IV, Paper No. VI –Sociology of Health

1. To acquaint knowledge within students to the sociology of health, illness, and medical practice.
2. To able to understand the significance of socio-cultural dimensions in the construction of illness and medical knowledge.
3. To able to examine theoretical perspectives the dynamics shaping these constructions. Negotiations of health and illness are explored through ethnographies.

#### B.A.- Part- III [Sociology]

#### Course: B. A. III SOCIOLOGY-(CBCS) -Semester – V, DSE – E66

#### Paper No. VII -Western Sociological Thinkers

- 1) Understanding the grand foundational themes of sociology.
- 2) Application of theories and concepts from classical sociological theories to develop intellectual openness and curiosity.
- 3) Appreciation of the classical concepts and theories to develop awareness of the limits of current knowledge.

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### Department of Sociology

#### Course Outcomes 2023-24

#### B. A. III SOCIOLOGY-(CBCS) Semester - V, DSE - E67,

##### Paper No. VIII- Methods Of Social Research (Part-I)

- 1) Students are introduced to the concept of conducting research, which is inclusive of formulating research designs, methods, and analysis of data.
- 2) Students learn to differentiate between qualitative and quantitative aspects of research in terms of collection and subsequent analysis of data.
- 3) Through the competing theoretical perspectives and methodologies, students can understand that social reality is multi-faceted, heterogeneous, and dynamic in nature.

#### B. A. III SOCIOLOGY -(CBCS) Semester - V, DSE - E68

##### Paper No. -IX -Political Sociology

- 1) An ability to comprehend the embeddedness of political and the social in each other.
- 2) Familiarity with different theoretical and conceptual issues in political sociology and a capacity to use them to grasp political phenomena in a cross-cultural and comparative perspective
- 3) Be able to understand and appreciate the diversity of ways in which politics operates historically and spatially to generate a more expansive notion of the realm of the political.

  
i/c Principal  
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Tal. Mahabaleshwar, Dist. Satara



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-Shikshanmaharshi Dr. Bapuji Salunkhe  
Shri Swami Vivekanand Shikshan Sanstha, Kolhapur's

## Smt. Meenalben Mehta College, Panchgani

Tal- Mahabaleshwar, Dist: Satara- 412805  
Affiliated to Shivaji University, Kolhapur

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Founder Shikshanmaharshi Dr Bapuji Salunkhe B A, B T D, D Lit	President Hon. Chandrakant Patil Revenue Minister (Mah State)	Chairman Prin. Abhaykumar Salunkhe M. A.	Secretary Prin. Shubhangi Gawade B. Sc., B. Ed	Principal Dr. Satish Desai M. A., Ph. D
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### Department of Sociology

### Course Outcomes 2023-24

#### B. A. III SOCIOLOGY - (CBCS) Semester - V, DSE - E69 -

#### Paper No. - X -HUMAN RIGHTS

- 1) Conceptual understanding about the Human Rights
- 2) Identify issues and problems relating to the realization of human rights
- 3) Understand the nature & role of human rights in India
- 4) Contribute to the resolution of human rights issues and problems
- 5) Educate the society about the human rights and duties to create responsible citizenry

#### B. A. III SOCIOLOGY -(CBCS) Semester - V, DSE - E70

#### Paper No. - XI -SOCIOLOGY OF RELIGION-

- 1) Students will be acquainted with representative texts that symbolize the development of knowledge in the field of Sociology of Religion. They will be able to identify different theories, approaches and concepts that make up the study of religion, distinguish between them and use terms specific to the field in specific context.
- 2) Students will be able to make a link between texts and paraphrase their arguments and use these to communicate their ideas in research papers, projects, and presentations.
- 3) By encompassing contemporary developments, the course enables students to think about linkages between religion and society at various levels.

  
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Founder Shikshanmaharshi Dr Bapuji Salunkhe B.A, B.T.D, D.Lit	President Hon. Chandrakant Patil Revenue Minister (Mah State)	Chairman Prin. Abhaykumar Salunkhe M. A.	Secretary Prin. Shubhangi Gawade B. Sc., B. Ed	Principal Dr. Satish Desai M. A., Ph. D
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### Department of Sociology

#### Course Outcomes 2023-24

#### B. A. III SOCIOLOGY -(CBCS) Semester - VI, DSE - E191

##### Paper No. - XII -INDIAN SOCIOLOGICAL THINKERS

- 1) Understanding the characteristics and dynamics of the social world, and how postclassical sociologists attempt to understand the social world.
- 2) Appreciating the relevance and limits of the contemporary theories or theoretical approaches to make sense of social reality.
- 3) Understanding the basic methodological approaches of the thinkers, through some original texts and their role in building sociological knowledge.

#### B. A. III SOCIOLOGY-(CBCS) Semester - VI, DSE - E192

##### Paper No. - XIII- METHODS OF SOCIAL RESEARCH (Part-II)

- 1) Students are introduced to the concept of conducting research, which is inclusive of formulating research designs, methods, and analysis of data.
- 2) The thrust of the course is on empirical reasoning, understanding and analysis of social reality, which is integral to the concepts of quantitative research. Students learn to differentiate between qualitative and quantitative aspects of research in terms of collection and subsequent analysis of data.
- 3) Through the competing theoretical perspectives and methodologies, students can understand that social reality is multi-faceted, heterogeneous, and dynamic in nature.

  
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### **Department of Sociology**

#### **Course Outcomes 2023-24**

#### **B. A. III SOCIOLOGY -(CBCS) Semester - VI, DSE - E193**

##### **Paper No. - XIV- SOCIAL ANTHROPOLOGY**

- 1) To provide the conceptual understanding about anthropology
- 2) To understand the social aspects of tribal's in India.

#### **B. A. III SOCIOLOGY -(CBCS) Semester - VI, DSE - E194**

##### **Paper No. - XV- RURAL SOCIOLOGY**

- 1) An empathy for and ability to engage rural communities as living societies and understand grasp they condition as human condition.
- 2) An appreciation of rural world and familiarity with the trajectory of theoretical conversation on rural issues and their social, political and policy implications.

#### **B. A. III SOCIOLOGY - (CBCS) Semester - VI, DSE - E195**

##### **Paper No. - XVI -URBAN SOCIOLOGY**

1. To appreciate the significance of the city and the process of urbanization and its Consequences across the globe, through cross disciplinary texts and ethnographic studies.
4. To develop critical thinking and a reflective perspective through exposure to multicultural Thought; to enhance disciplinary knowledge, research-related skills and develop a problem-solving competence.

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**Smt. Meenalben Mehta College, Panchgani**  
**Department of Geography**



**Program Specific Outcomes**

- 1) The Students are known the Human development by studying these Physical branches of Geography.
- 2) The students are understood the branches of Geography, concepts in Physical Geography and Geomorphology and Climatology in detail.
- 3) The students are acquired knowledge about the basic and fundamental concepts of soil geography.
- 4) The students are understood soil is key resource for the development of any country with concept, causes and controlling factors of soil erosion, soil degradation and Conservation of Soils. Along with the concept, need and methods soil of management.
- 5) Students are known classification, characteristics and distribution of soils.
- 6) The students are understood the Human Geography as a basic branch of Geography along with the Dichotomy, Environmentalism and possibilism.
- 7) The students are well prepared with the knowledge of the racial groups in the world

प्रभोवती  
श्रीमती मीनालबेन मेहता कॉलेज, पाचगणी  
(आर्ट्स, कॉमर्स अँड सायन्स)  
ता.महाबळेश्वर, जि.सातारा-412805

# Smt. Meenalben Mehta College, Panchgani

## Dept. of History Course Outcomes



### **B.A.I History in accordance with NEP**

(From June 2022 onwards)

#### **Paper I: Rise of the Maratha Power**

After studying the course the student will be able to-

- CO 1. Understand the history of the rise of Maratha power.
- CO 2. Explain the life and work of Chhatrapati Shivaji Maharaj.
- CO 3. Explain the Contribution of Maratha leaders and people to protect freedom and sovereignty of the region.
- CO 4. Understand the contribution of Chh. Sambhaji Maharaj, Chh. Rajaram Maharaj and Maharani Tarabai led the Maratha struggle of independence against the Mughal rule.

#### **Paper II: Polity, Society and Economy under the Marathas (1600-1707)**

After studying the course the student will be able to-

- CO 1. Know the rapid changes in the history of the Marathas.
- CO 2. Understand the initiated fundamental changes in the political, socio-economic and cultural life of the people.
- CO 3. Understand the administration policy of the Chh. Shivaji Maharaj.
- CO 4. Know the trade and agriculture system in the Maratha period.

### **B.A.II History in accordance with NEP**

(Introduced from June 2023 onwards)

#### **Paper III: History of the Modern Maharashtra (1900-1960)**

After studying the course the student will be able to.....

- CO 1. Understand the beginnings and growth of nationalist consciousness in Maharashtra.
- CO 2. Explain the contribution of Maharashtra to the national movement.
- CO 3. Give an account of various movements of the peasants, workers, women and backward classes.
- CO 4. Know the background and events which led to the formation of separate state of Maharashtra.



### **Paper V: History of Modern Maharashtra (1960-2000)**

After completion of the course, the student will....

- CO 1. Acquaint himself with the contribution of eminent leaders of Maharashtra.
- CO 2. Know about the economic transformation of Maharashtra.
- CO 3. Understand the salient features of change in society.
- CO 4. Explain the growth of education.

### **B.A.II History in accordance with NEP**

(Introduced from June 2023)

#### **Paper IV: History of India (1757-1857)**

After studying this course, the student will....

- CO 1. Acquaint themselves with significant events leading to establishment of the rule of East India Company.
- CO 2. Know the colonial policy adopted by the company to consolidate its rule in India.
- CO 3. Understand the structural changes initiated by colonial rule in Indian economy.
- CO 4. Explain the various revolts against rule of the East India Company.

#### **Paper VI: History of Freedom Struggle (1858-1947)**

After completion of this course, the student will be able to....

- CO 1. Understand the events which lead to the growth of nationalism in India.
- CO 2. Acquaint himself with major events of the freedom struggle under the leadership of Mahatma Gandhi.
- CO 3. Explain the contribution of Revolutionaries, Left Movement and Indian National Army.
- CO 4. Know the concept of communalism and the causes and effects of the partition of India.

### **B.A.II IDS in accordance with NEP**

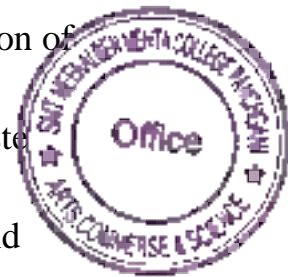
(Introduced from June 2023)

#### **Paper I: Social Reforms in India**

After completion of the course, the student will be able to....

- CO 1. Understand the salient features of prominent socio-religious reform movements.
- CO 2. Explain the thought and work of Mahatma Phule for radical transformation of Indian Society.

- CO 3. Know the measures taken by Rajashri Shahu Maharaj for emancipation of lower lower classes and women.
- CO 4. Understand the thoughts of Ambedkar on the annihilation of the caste system and untouchability in India.
- CO 5. Know the Indian contribution embodies the values of social justice and equality.



### **Paper II: Social Reforms in Maharashtra**

After studying the course, the student will be able to ....

- CO 1. Know about the beginnings of social reforms in Maharashtra by the Paramhansa Mandali and Prarthana Samaj.
- CO 2. Understand the contribution of women reformers.
- CO 3. Explain the contribution of social reformers in the fight for social justice.
- CO 4. Explain the role played by the educational reformers in transformation of society.

### **B.A.III History**

(Syllabus to be implemented from June 2020 onwards)

Semester –V, Course VII DSE E-61

#### **Paper VII: Early India (from beginning to 4<sup>th</sup> c. Bc.)**

##### **Course Outcomes:**

After studying the course, the student will be able to ....

1. Understand the transition of humans in India from Hunters to Farmers.
2. Explain the transition from Early to later Vedic period.
3. Clarify the causes for the first and second urbanization.
4. Give an account of the teachings of Gautama Buddha and Vardhaman Mahavir.
5. Describe the rise and growth of the Mauryan Empire.
6. Explain the salient features of Ashoka's Dhamma.

### **B.A.III History**

Semester V, Course No: VIII DSE E-62

#### **Paper No. VIII History of Medieval India (1206-1526 AD)**

##### **Course Outcomes:**

After studying the course the student will be able to...

- 1) Describe the different types of historical sources available for writing the history of medieval India
- 2) Explain the contributions of medieval rulers like Allaudin Khilji, Muhammad-binTuqhlaq, Krishnadevraya, and Mahmud Gavan



- 3) Give an account of the administration and economy of the Delhi sultanate and Vijayanagar Empire
- 4) Elucidate the significant developments which took place in religion, society and culture.

### **B.A. Part III**

Semester V, Course No: IX DSE E-63

#### **Paper No. IX Age of Revolutions**

##### **Course Outcomes:**

After studying the course the student will be able to...

- 1) Explain the causes and consequences of the Reformation
- 2) Give an account of the role played by Martin Luther
- 3) Explain the salient features of the Industrial revolution
- 4) Give an account of the American Revolution.
- 5) Explain the causes, effects and major events of French Revolution
- 6) Explain the role of major leaders of the French Revolution

### **B.A. Part – III**

Semester V, Course No. X DSE E-64

#### **Paper No. X Political History of the Marathas**

Course Outcomes: After studying the course the student will be able to...

- 1) Describe the political conditions of the Marathas upto the year 1740
- 2) Explain the role of Balaji Bajirao.
- 3) Explain the causes and effects of the Battle of Panipat.
- 4) Understand the political condition of the Marathas after 1761.
- 5) Critically analyze the causes for the decline of Maratha power.

### **B.A. Part III**

Semester V, Course No. XI DSE E-65

**Paper No. XI History: Its Theory** (Field visit to any important historical place, monuments and record offices is essential) sources.

##### **Course Outcomes:**

After studying the course the student will be able to...

- 1) Understand the definition and scope of the subject of History
- 2) Know the process of acquiring historical data
- 3) Explain the process of presenting and writing history
- 4) Understand the methods of writing history.



## **SEMESTER VI**

### **B.A. Part III**

Semester VI, Course No. XII DSE E-186

#### **Paper No. XII Ancient India (From 4th c. BC to 7th c. AD)**

##### **Course Outcomes:**

After studying the course the student will be able to...

- 1) Know the political, economic and religious developments which took place in early historic India
- 2) Explain the role played by Major Satavahana, Kushana, Gupta and Vakataka Kings
- 3) Give an account of the developments in the Post-Gupta period
- 4) Have an informed opinion about the society and culture of Ancient India

### **B.A. Part III**

Semester VI, Course No. XIII DSE E-187

#### **Paper No. XIII History of Medieval India (1526-1707 AD)**

##### **Course Outcomes:**

After studying the course the student will be able to...

- 1) Know about the various sources for writing Medieval Indian history
- 2) Explain the role of rulers like Babar, Akbar, Chandbibi and Ibrahim Adilshah II
- 3) Gain knowledge about the administrative and revenue system
- 4) Describe the condition of Industry and trade
- 5) Explain important developments in religion, society and culture

### **B.A. Part III**

Semester VI, Course No: XIV. DSE E-188

#### **Paper No. XIV Making of the Modern World (16th to 19th Century)**

##### **Course Outcomes:**

After studying the course the student will be able to...

- 1) Know the causes and consequences of the Glorious revolution in England
- 2) Explain the concept of Nationalism and account for its rise and spread.
- 3) Describe the unification of Italy and Germany.
- 5) Explain the significance of the Partition of Africa
- 6) Know the life and thoughts of important leaders like Metternich, Karl Marx and Abraham Lincoln

### **B.A. Part III**

Semester VI, Course No. XV DSE E-189

### **Paper No. XV Polity, Economy and Society under the Marathas**

#### **Course Outcomes:**

After studying the course the student will be able to...

- 1) Know the various sources for writing the history of the Marathas
- 2) Explain the significant developments in the polity of the Marathas
- 3) Describe the economic conditions
- 4) Explain the social conditions.



### **B.A. Part III**

Semester VI, Course No. XVI DSE E-190

### **Paper No. XVI Methods and Applications of History**

#### **Course Outcomes:**

After studying the course the student will be able to...

- 1) Understand the nature of archival sources
- 2) Gain conceptual clarity about recent trends in history.
- 3) Know about the application of history in museums.
- 4) Explain the concept and scope of heritage tourism.



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## Smt. Meenalben Mehta College, Panchgani

(Affiliated to Shivaji University, Kolhapur)

2023-2024

### Department of Commerce



#### **Programme Outcomes, Programme Specific Outcomes, and Course Outcomes**

##### **Mechanism of Communication:**

The College has clearly stated learning outcomes of the Programs and Courses. The following mechanism is followed by the institution to communicate the learning outcomes to the teachers and students.

- Hard Copy of syllabus and Learning Outcomes are available in the departments for ready reference to the teachers and students.
- Learning Outcomes of the Programs and Courses are displayed on the walls outside each department.
- Soft Copy of Curriculum and Learning Outcomes of Programs and Courses are also uploaded to the Institution website for reference.
- The importance of the learning outcomes has been communicated to the teachers in IQAC Meeting and College Committee Meeting.

#### **Programme Outcomes**

**PO1:** This program will provide Industries, Banking Sectors, Insurance Companies, Financing companies, Transport Agencies, Warehousing etc., well trained professionals to meet the requirements.

**PO2:** After completing graduation, students will get skills regarding various aspects like Marketing Manager, Selling Manager, over all Administration abilities of the Company.

**PO3:** Capability of the students to make decisions at personal & professional level will increase after completion of this course.

**PO 4:** Students can independently start up their own Business.

**PO5:** Students will get thorough knowledge of finance and commerce.

**PO6:** The knowledge of different specializations in Accounting, costing, banking and finance with the practical exposure helps the students to stand in organization.

## Programme Specific Outcomes



**PSO1:** Students will be able to demonstrate progressive learning of various tax issues and the forms related to individuals. Students will be able to demonstrate knowledge in setting up a computerized set of accounting books.

**PSO2:** By goodness of the preparation they can turn into a Manager, Accountant, Management Accountant, Bank Manager, Auditor, Company Secretary, Teacher, Professor, Stock Agents, Government employments and so on.

**PSO3:** Students will be able to prove proficiency with the ability to engage in different professional exams like C.A., C S, CMA, ICWA and other courses.

**PSO4:** The students will acquire the knowledge, skill in different areas of communication, decision making, innovations and problem solving in day to day business activities.

**PSO5:** Students will gain thorough systematic and subject skills within various disciplines of finance, auditing and taxation, accounting, management, communication, computer.

**PSO6:** Students can also get the practical skills to work as accountant, audit assistant, tax consultant, and computer operator as well as other financial supporting services.

**PSO7:** Students will learn relevant Advanced accounting career skills, applying both quantitative and qualitative knowledge to their future careers in business.

**PSO8:** Students will be able to do their higher education and can make research in the field of finance and commerce.

## Course Outcomes

### B.Com. I (NEP)

(Revised as per NEP 2020)

#### Financial Accounting Paper I & II

After completing this course students will able

- To know basic concepts of accounting, accounting process/cycle
- To acquaint with skill of recording transactions related to amalgamation of partnership firm.
- To apply skills of accounting for consignment transactions.
- To make use of knowledge and skill for accounting of professionals.
- To acquaint with skill of recording transactions related to single entry system.
- To apply skills of accounting for conversion of partnership firm into a limited company.
- To make use of knowledge and skill for accounting of branches.
- To understand the knowledge about computerized accounting.



### **Principles of Marketing Paper I & II**

After completing this course students will able

- To know various marketing concepts, basics of marketing and assess consumer behaviour.
- To understand rural market, rural consumers and enlighten about various recent trends and development in marketing.
- To understand four basic elements of i.e. Product, Price Promotion, Place (4Ps of Marketing) armed with various Skills about branding, labeling and advertisement.
- To know about management of retailing operations and changing scenario of retail business in India.

### **Management Principles & Applications Paper I & II**

After completing this course students will able

- To get an idea about the basic managerial process and planning works in real life
- To develop decision making skills to evaluate various alternatives and situations.
- To acquaint with the knowledge of organizing various resources.
- To understand the concepts of authority and process of delegation of authority.
- To understand importance of proper direction and to develop their communication skill.
- To get an idea about motivation concept and theories
- To develop their leadership skill
- To understand and utilize techniques of coordination and control

### **Insurance Paper I & II**

After completing this course students will able

- To gain basic knowledge of principles and practice of insurance and life insurance.
- To enable the students to know the fundamentals of Insurance.
- To give exposure to the students about life insurance products, Procedural part and life insurance business in India.
- To enables the students to know the fundamentals of General Insurance.
- To give exposure to the students about general insurance, procedural part, general insurance business and FDI in insurance in India.
- To learn the importance, types, conditions & procedure to take general insurance like marine, fire and accidental Insurance.

### **Micro Economics Paper I & II:**

After completing this course students will able

- To get knowledge of Micro Economic concepts and inculcate an analytical approach to the subject matter.
- To apply tools of consumer behavior and firm theory to business situation.
- To arouse the students interest by showing the relevance and use of various economic theories.
- To apply economic reasoning to solve business problems.
- To apply tools of consumer behavior and firm theory to business situation.
- To understand the concept of demand and demand forecasting.
- To acquaint students with the concept of cost of production and revenue.



### **English for Business Paper I & II:**

After completing this course students will able

- To inculcate human values among the students through poems and prose.
- To improve the language and business competence of the students. To acquaint students with communication skills.
- To inculcate human values among the students through poems and prose.
- To improve the language and business competence of the students.
- To offer relevant and practically helpful pieces of prose and poetry to students so that they not only get to know the beauty and communicative power of English but also its practical application.
- To acquaint students with communication skills.

## **B.Com. II (NEP)**

### **Corporate Accounting Paper I & II**

After completing this course students will able

- Demonstrate accounting for issue of bonus shares, rights shares and sweat equity.
- Demonstrate accounting for issue of debentures and redemption of debentures.
- Explain the accounting of profit/loss prior to and after incorporation.
- Practice the fundamental accounting process on Tally ERP.
- Demonstrate accounting for redemption of Preference Shares.
- Compute the value of shares as per distinct methods and differentiate between them.
- Simulate practice of preparing financial statements as per the provisions of Indian Companies Act, 2013.
- Practice the store accounting through Tally ERP.

### **Fundamentals of Entrepreneurship Paper I & II**

After completing this course students will able

- To impart theoretical knowledge of Entrepreneurship
- To develop Entrepreneurship qualities and skills
- To acquaint students with Steps involved in the formation of Small Enterprises
- To enlighten students with Recent Trends and Concepts in Entrepreneurship



### **Business Statistics Paper I & II**

After completing this course students will able

- to explain the scope of statistics in business and apply sampling techniques in real life.
- to summarize data by means of measures of central tendency and dispersion.
- to explain the merits and demerits of various measures of central tendency and dispersion.
- to carryout analysis of bivariate data using simple correlation and simple linear regression.
- understand discrete and continuous random variables, their respective probability distributions.
- Identify the applications of Binomial, Poisson and normal distributions.
- Measure trend and seasonal variations in time series data.
- Compute and interpret simple and weighted index numbers.
- Construct and apply variable and attribute control charts.

### **English for Business Communication Paper I &**

**II** After completing this course students will able

- To enable the students to develop communication skills in English
- To equip the students with the language skills for use in their personal, academic and professional lives
- To develop students' employability skills
- To help students to enter the job market with confidence and develop their ability to work effectively
- To help students to learn and practice language skills and soft skills
- To facilitate and help the students to acquire communication skills
- To enable the students to cultivate a broad, humane and cultured outlook.
- To enable the students to develop communication skills in English
- To equip the students with the language skills for use in their personal, academic and professional lives
- To develop students' employability skills
- To help students to enter the job market with confidence and develop their ability to work effectively
- To help students to learn and practice language skills and soft skills
- To facilitate and help the students to acquire communication skills
- To enable the students to cultivate a broad, human and cultured outlook.

### **Macro Economics Paper I & II**

After completing this course students will able

- The macro variables and nature and scope of macro economics.
- The relevance of national income concepts and their applications.
- Process of value of money determination.
- Theory of output and employment generation.
- Theories of trade cycle in connection with business.

- Theory of Public finance relating to economy, business and citizens.
- The trade and business practices through international trade theories.
- The determination of rate of exchange.

#### **Money and Financial System Paper I & II**

After completing this course students will able

- Students explain the concept of money, its new incarnations and flow in to the economy
- Students understood the financial system and its operation
- Students understand the nature of banking business and practices
- Students understand the changing nature of financial system
- Students equipped explain and make use of the E- Banking services
- Students enable to analyse the stance of RBI's monetary policy



## B.Com. III (CBCS)



### Advanced Accountancy Paper I

After completing this course students will able

- To know important terms used in banking, accounting process and preparation of financial statements of banks.
- To understand accounting for farms and hire purchase system.
- To understand accounting situations of insurance claim.
- To get theoretical as well as practical knowledge of Tally with GST.

### Advanced Accountancy Paper II (Auditing)

After completing this course students will able

- To understand the concept, objectives and types of audit
- To know the auditing of specific items in financial statements.
- To know the company auditor. (Company auditor's eligibility, qualification, disqualification powers and duties etc.)
- To understand the audit process of banks, insurance Companies, Charitable Trust, Hotel and Hospital

### Advanced Accountancy Paper III

After completing this course students will able

- To know elements of cost and understand preparation of cost sheet and quotation.
- To know financial statement analysis and its techniques like ratio analysis.
- To understand preparation of cash flow statement.

### Advanced Accountancy Paper IV (Taxation)

After completing this course students will able

- To understand the basic concepts of income tax and basis of charge
- To know exemptions and deductions from total income
- To identify the residential status and its implication on tax liability
- To understand the manner of computation of total income
- To know the basic concepts about GST

### Modern Management Practices Paper I & II

After completing this course students will able

- To get knowledge of modern management practices being used by the corporate world.
- To understand the importance and applicability of various modern management practices & quality standards like six sigma, benchmarking, ISO, TQM.
- To familiarize with the modern management practices being used by the corporate world.
- To acquaint the importance and applicability of various modern management practices.



### **Business Environment Paper I & II**

After completing this course students will able

- To acquaint with the emerging Issues in business at National and International Level in the light of New Economic Policies.
- To understand the significance and position of Indian economy at the world level.
- To understand the scenario of agricultural and industrial Sectors.
- To understand Indian economy is facing some of the fundamental economic problems. Make plans and solutions to these being as a citizen.
- To understand the correlations between economical and social problems.
- To gain knowledge of the plans and strategies toward foreign capital and multinational corporations.
- To acquaint with the functions, mechanism and performance of International financial, trade and regional cooperation institutions.

### **Co-Operative Development Paper I & II**

After completing this course students will able

- To understanding of the meaning and principles of Co-operation.
- To learn concepts & functions of agricultural and Non-agricultural Credit Co-operative institutions.
- To understand the impact of Globalization on Co-operative movement among students.
- To study the Co-operative movement in Maharashtra.
- To understand the cooperative legislations and fund management.
- To understand the institutional arrangement for cooperative education and training.
- To understand the nature, registration, legislation and audit of housing Cooperatives
- To understand the cooperative audit system and provisions

### **Business Regulatory Framework Paper I &**

**II** After completing this course students will able

- To well verse in basic provisions regarding legal frame work governing the business world.
- To understand the basic concepts, terms & provisions of Mercantile Laws.
- To know the laws affecting trade business, and commerce.
- To create legal awareness.
- To Acquaint with the latest laws governing business and commercial transactions

### **Industrial Management Paper I, II, III & IV**

After completing this course students will able

- Understanding the concept Industrial Management.
- Acquaintance with the Work Environment.
- Acquaintance with the Plant Maintenance.
- Acquaintance with Financial Management.
- Understanding the concept of Production Management and PPC.
- Acquaintance with the Productivity.
- Acquaintance with the Inventory Management.
- Acquaintance with Logistic Management.
- Knowledge about the Human Resource Management.



- To Acquaintance with the Employee Training
- Acquaintance with the Human Resource Management.
- Acquaintance with Recent Trends in HRM.
- Knowing the meaning and concept about the Employee Remuneration.
- Acquaintance with the Industrial Relations.
- Acquaintance with the Employee Safety, Health and Moral.
- Acquaintance with HR Accounting.



  
**Head,**  
Department of Commerce,  
Smt. Meenalben Mehta College, Panchgani

  
T/C Principal  
Smt. Meenalben Mehta College, Panchgani  
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Tal. Mahabaleshwar, Dist. Satara



॥ ज्ञान, विज्ञान आणि सुसंस्कार यांसाठी शिक्षण प्रसार ॥ - शिक्षणमहर्षी डॉ. बापूजी साकुंभे

Shri Swami Vivekanand Shikshan Sanstha, Kolhapur's

**Smt. Meenalben Mehta College, Panchgani**

(Arts, Commerce and Science)

**DEPARTMENT OF BOTANY**

**PROGRAMME OUTCOMES (PO)  
PROGRAMME SPECIFIC OUTCOMES  
(PSO) COURSE OUTCOMES (CO)**

# Smt. Meenalben Mehta College, Panchgani

## Department of Botany



Programme Outcomes (PO), Programme Specific Outcomes (PSO), Course Outcomes (CO)

### INTRODUCTION:

For every stream, broad expectations listed by the university as well as Institution. The goal of creating an academic program assessment plan is to facilitate continuous program level improvement. A program assessment plan should be developed collaboratively among faculty who teach the program. A program level outcome assessment plan provide faculty with a clear understanding of how their program is assessed.

**Program Outcomes (POs)** is a systematic method for collecting, analyzing, and using information to answer questions about projects, policies and programs particularly about their effectiveness and efficiency. In both the public and private sectors, stakeholders often want to know whether the programs they are funding, implementing, voting for, receiving or objecting to are producing the intended effect. While program evaluation first focuses around this definition, important considerations often include how much the program costs per participant, how the program could be improved, whether the program is worthwhile, whether there are better alternatives, if there are unintended outcomes, and whether the program goals are appropriate and useful. Evaluators help to answer these questions, but the best way to answer the questions is for the evaluation to be a joint project between evaluators and stakeholders

**Programme Specific Outcomes (PSOs)** are narrow statements that describe what the students are expected to know and would be able to do upon the graduation. Program outcomes represent broad statements that incorporate many areas of inter-related knowledge and skills developed over the duration of the program through a wide range of courses and experiences. They represent the big picture, describe broad aspects of behaviour, and encompass multiple learning experiences.

**Course outcomes (Cos)** also referred as learning outcomes are measurable statements that concretely formally state what students are expected to learn in a course. While goals or objectives can be written more broadly, learning outcomes describe specifically how learners will achieve the goals.



## **Degree Programme: B.Sc. in Botany**

### **Programme Outcome**

After completion of the programme, the students will develop ability:

1. To develop rationality and scientific temperament
2. To acquire general grasp of science and technology
3. To understand the scientific terms, concepts. Facts, phenomenon and their interrelationships
4. To develop necessary skills required for designing, recording and Analyzing the results of experiments
5. To develop analytical skills to tackle real life problems
6. To apply their knowledge in industry and self-employment

### **Programme Specific Outcome (PSO)**

1. To know and identify flora from their own environment.
2. To identify and study the use of medicinal plants.
3. To study large and small aquatic plants especially microscopic algae with the microscope.
4. To develop their own firm to sell the different types of plants which have great demand in different colleges and universities.
5. To acquire knowledge about some plants as some plants are drought indicators, some, rain indicators and some, water indicators.





## Course outcomes (Cos)

### B. Sc. III (Botany)

#### Course DSE –E25 Genetics and Plant Breeding

- CO1. Students will learn about concept of heredity and variation along with various branches and application of genetics
- CO2. Learners will have basic information and understanding about Mendelism, terminology involved and various laws involved.
- CO3. The students will make an understanding about interactions involved in genes Multiple allele
- CO4. Students will be well versed with evidences of evolution and population genetics and evolution.

#### Course XDSE –E26 Microbiology, Plant Pathology and Mushroom Culture Technology

- CO1. The learners will be made acquainted with fundamentals of plant pathology, and important terminologies and significance.
- CO2. The students will be having a wide exposure to various institutes working on such area, concept of disease cycle, disease development and its mechanism.
- CO3. The students will be made versed with methods of studying plant diseases, fungal, bacterial, mycoplasma, nematodal, viral plant disease, non parasitic diseases.
- CO4. The course will provide insights in principles of plant disease control and molecular diagnostics and transgenic in crop protection.
- CO5. The learner of the course will understand the scope and importance of Mushroom cultivation.
- CO6. The student will be introduced to conventional techniques, methods and practices Mushroom cultivation.



**Course XI DSE –E27 Cytology and Research Techniques in Biology**

CO1. Organisation of cell its history and type of cells: prokaryotic and eukaryotic

CO2. Physical and chemical nature of cell matrix

CO3. Plant cell cytoplasmic constituents, cell organelles and their structure and function

CO4. Learner will be acquainted with nuclear organization and chromosome structures, types and functions.

CO5. The student will understand central Dogma of molecular biology, and various process involved in it.

CO6. Learner will be acquire knowledge related to genetic material, its nature, forms, various structure models and laws.

CO7. Learners will be enlightened with DNA replication, experiments involved in providing it and its mechanism, DNA damage and repair.

CO8. Students will also learn about gene organization, transcription, genetic code and translation, gene activation and regulation.

CO9. The student will be introduced to techniques, methods and practices in botanical research

**Course: DSE–E28 Horticulture and Gardening**

CO1. The students will be made aware about the introduction, importance and application of horticulture and floriculture.

CO2. The learner of the course will be acquainted with nutritive values of the horticultural important fruits and vegetables.

CO3. The Students will learn and understand various methods of plant propagation in horticultural plants with special practices involved like training and pruning.

CO4. The learner of the course will be able to understand the production technology involved in fruits and vegetables.

CO5. The students will be introduced to ornamental horticulture, its origin and history. Gardens of India, various styles and concept of floriculture its scope and importance.

CO6. The learner will be understating flower industry so as to create an interest to become an entrepreneur.



### **Course: DSE –F25 Plant Biochemistry and Molecular Biology**

CO1. The learner of the course will understand details on plant physiology, photosynthesis, and different pathways.

CO2. The students will have knowledge on respiration, structure of mitochondrion, and various cycles involved like glycolysis, TCA, ETS and ATP synthesis.

CO3. The learners will understand translocation of organic solutes, and stress physiology.

CO4. The learners of the course will be made available knowledge on carbohydrates, amino acids, proteins, lipids.

CO5. The students will understand definition and nature of enzymes and properties of enzymes.

CO6. The students will be acquainted with definition and types of secondary metabolites.

### **Course: DSE –F26 Bioinformatics, Biostatistics and Economic Botany**

CO1. The students of the course will be introduced to biostatistics, its scope and application.

CO2. The learner will be made acquainted with sample and sampling methods used in biostatistics.

CO3. The students will be made available about knowledge on collection and representation of data.

CO4. The learners will be made understand measures of central tendency and dispersion.

CO5. The students will understand correlation and regression, probability and types of theoretical probability distribution.

CO6. The learners of the course will understand the tests of significance of mean, computation of seed testing and plant growth indices.

CO7. The learners will understand the analysis of data on vegetation studies.

CO8. The learner of the course will have a in depth knowledge on applied medicinal botany, concepts of major metabolic pathway, ethnobotany.

CO9. The students will be made well versed with economic botany, its scopes and NWFPs with origin evolution source and uses of economically importance botanicals.



## Course outcomes (COs)

### B. Sc. II (Botany)

#### Course: DSC C13: PLANT SYSTEMATICS AND ANATOMY

CO1. The students of the course will also be acquainted with introductory taxonomy, ICN, botanical gardens

The students will be able know the objectives, importance and scope of plant systematics.

CO2. The learners will get acquainted with sources of data on systematics, botanical nomenclature.

CO3. The learner will have a deep knowledge on different plant families and its characterization features.

CO4. The students will have an in deep knowledge about different types of tissues with understanding of their role in plant system

CO5. The learner of the course will also understand the process of tissues systems in plants and will be able to know the growth types happening in the plant body.

CO6. The learner will also get an in deep idea about plant anatomy, with its application.

CO7. The course also emphasize on understanding of Primary and secondary structure of plant body

#### Course: DSC C14: GENETICS AND MOLECULAR BIOLOGY

CO1. Students will learn about concept of heredity and variation along with various branches and application of genetics

CO2. Learners will have basic information and understanding about Mendelism, terminology involved and various laws involved.

CO3. The students will make an understanding about interactions involved in genes Multiple allele

CO4. Learners will be enlightened with DNA replication, experiments involved in providing it and its mechanism, DNA damage and repair.

CO5. Students will also learn about gene organization, transcription, genetic code and translation, gene activation and regulation.





**Course: DSE –F27 Plant Biotechnology and Paleobotany**

CO1. The learner of the study will be introduced to biotechnology its history.

CO2. The students will be introduced to brief history and importance of plant tissue culture and its application

CO3. The learner of the course will be introduced to germplasm and cryopreservation strategies.

CO4. The students will be made available with information on transgenic plants as bioreactors.

CO5. The learners of the course will be taught about non symbiotic nitrogen fixation, biological nitrogen fixation.

CO6. The students will be made versed with biotechnology and society.

CO7. The students will understand importance of learning paleobotany, this will help in comparing the present day plants with primitive fossil plants.

**Course : DSE –F28 Bio fertilizers and Herbal Drug Technology**

CO1. The students will be introduced to pharmacognosy its origin history and scope.

CO2. The learner will be introduced to ayurvedic pharmacy, tridosha concept, ayurvedic principles and formulations

CO3. The students will be made understand analytical medicinal botany along with cultivation, collection and processing of herbal drugs

CO4. The students will understand importance of biofertilizer

CO5. The students will learn various Organic manures



### Course outcomes (COs)

#### B. Sc. I (Botany)

##### **Course: DSC- 13 A: Biodiversity of Microbes, Algae And Fungi**

- CO1. The learner of the course will have an interrelationship between the living world and environment.
- CO2. The students of the course will also be well versed with introduction of biodiversity of microbes, discovery, characters and economic importance of viruses and bacteria.
- CO3. The learner will also get an in deep idea about plant group algae, with its economic importance.
- CO4. The learners will also knowledge of Fungi, with its economic importance.

##### **Course: DSC- 14 A: Biodiversity Of Archegoniate- Bryophytes, Pteridophytes, Gymnosperms**

- CO1. The learner will get acquainted with life cycles of lower and higher cryptogams
- CO2. The learner will understand Bryophytes and Pteridophytes in details with classification, morphology and anatomy.
- CO3. The learner will understand gymnosperms in details with classification, morphology and anatomy.
- CO4. The learners will also knowledge of Biodiversity of Archegoniate and its importance.

##### **Course: DSC- 13 B: Plant Ecology**

- CO1. The learner of the course will have an interrelationship between the living world and environment.
- CO2. The learners will understand ecological factors, ecological adaptations.
- CO3. The students of the course will understand plant communities and succession
- CO4. The students of the course will also be acquainted with ecosystem and phyto-geography

##### **Course: DSC- 14 B: Plant Taxonomy**

- CO1. The students of the course will also be acquainted with introductory taxonomy, ICBN, botanical gardens  
The students will be able know the objectives, importance and scope of plant systematics.
- CO2. The learners will get acquainted with sources of data on systematics, botanical nomenclature.
- CO3. The learner will have a deep knowledge on different plant families and its characterization features.
- CO4. The learners will also knowledge of morphological, floral and distinguishing characters of plant families with examples of plants along with their economic importance.



**Course: DSC D13: Plant Ecology And Economic Botany**

CO1. Students will also learn Basic Concept, Levels of organization and Types of ecosystems

CO2. Learners will be enlightened with origin of cultivated Plants.

CO3. The learner of the course will have a in depth knowledge on applied medicinal botany, ethnobotany.

CO4. The students will be made well versed with economic botany, its scopes and origin evolution source and uses of economically importance botanicals.

**Course: DSC D14: Plant Physiology, Nursery And Gardening Techniques**

CO1. Learners will have an in deep knowledge about importance of plant physiology and its application

CO2. The course also emphasize on understanding of various processes such as photosynthesis and respiration in plants.

CO3. The students will understand the role of plant growth regulators its types and also the process of flowering.

CO4. The learner of the course will be acquainted with nutritive values of the horticultural important fruits and vegetables.

CO5. The Students will learn and understand various methods of plant propagation in horticultural plants with special practices involved like training and pruning.

Department of Physics  
Course Outcomes



Class	Semester	Paper Name & Number	Outcomes
B.Sc.I	Sem.-I	DSC -1A Mechanics - I paper I	<ol style="list-style-type: none"> <li>1. The students will understand exact how to know vector or scalar.</li> <li>2. The students will learn difference between partial and ordinary differential equations.</li> <li>3. The students learn Newton's laws of motion and how to calculate moment of inertia in rotational motion.</li> <li>4. The students will understand laws of conservation of linear and angular momentum and its uses.</li> </ol>
		DSC-2A Mechanics -II paper II	<ol style="list-style-type: none"> <li>1. The students will be capable to discuss gravitational laws of motion and how it's applicable in satellites.</li> <li>2. The student will know the oscillation and from this how to calculate gravitational force.</li> <li>3. The students will be able to discuss elasticity and its type.</li> <li>4. The students will be able to get an idea behind the surface tension and how it works exactly.</li> </ol>
	Sem.-II	DSC B: Electricity and Magnetism-I Paper-III	<ol style="list-style-type: none"> <li>1. The students will understand how to get scalar and vector and also dot and cross products and its physical significance.</li> <li>2. The students will be able to discuss concept of electrostatic field, Gauss's theorem and information about capacitance, condenser, light polarization.</li> </ol>
		DSC-2B Electricity and	<ol style="list-style-type: none"> <li>1. The students will be able to understand circuits in it LCR and how to introduce head phone and resistance control the voice.</li> <li>2. The students will understand magnetism and its types.</li> </ol>

		<b>Magnetism -II Paper IV</b>	<ol style="list-style-type: none"> <li>The students will understand basics of Faraday's law , Lenz's law.</li> <li>The student will get the knowledge of electromagnetic theory and basic Maxwell's laws.</li> </ol>
<b>B.Sc.II</b>	<b>Sem.-III</b>	<b>DSC- C1 – Thermal physicsand statistical Mechanics -I paper No. V</b>	<ol style="list-style-type: none"> <li>The students will understand kinetic theory of gases and thermometry.</li> <li>The students get knowledge about laws of thermodynamics , workdone , how Carnot's engine work, Reversible and irreversible process.</li> </ol>
		<b>DSC-C2 Waves and optics-I paper No. VI</b>	<ol style="list-style-type: none"> <li>The student will explain oscillations and how superimpose waves, Lissajous figures.</li> <li>The students will understand basic concepts of oscillations.</li> <li>The students will get the knowledge of waves and it's motion and it's velocity..</li> <li>The students will understand basic ideas of sound and how to control it.</li> <li>The students will get the knowledge to do experiment of viscosity ,</li> <li>The students will get the knowledge about basic of vaccum pumps and how to control pressure.</li> </ol>
	<b>Sem.-IV</b>	<b>DSC-D1 Thermal physicsand statistical mechanics-II paper No. VII</b>	<ol style="list-style-type: none"> <li>The students will understand themodynamics and it's problem.</li> <li>The students will get the knowledge about application of black body radiation. And laws in this.</li> <li>The introduction of basic of classical statistics and it's states.</li> <li>Student will learn the basics of quantum statistics.</li> </ol>
		<b>DSC- D2 Waves and optics -II aperNo. VIII</b>	<ol style="list-style-type: none"> <li>The students will get the knowledge about the cardinal points.</li> <li>The students will get the knowledge about resolving power of optical instruments basically optics.</li> <li>The students will understand the polarization of light.</li> <li>Student will be capable of understanding the interference of light., Newton's rings.</li> <li>Student will learn the basic knowledge Diffraction and theory of grating.</li> </ol>



<b>B.Sc. III</b>	<b>Sem.-V</b>	<b>DSE-E1 Mathematical Physics Paper No. -IX</b>	<ol style="list-style-type: none"> <li>1. The students will get how to calculate partial differential equations and difference between partial and ordinary differential equation.</li> <li>2. The students will understand frobenious method and special functions.</li> <li>3. The students will acquire new concept of integrals.</li> <li>4. The students will understand the complex analysis..</li> </ol>
		<b>DSE-E2- Quantum Mechanics Paper No.- X</b>	<ol style="list-style-type: none"> <li>1. The students will getting Idea nof wave particles and uncertainty relation.</li> <li>2. The students will get knowledge of schrodinger's wave equations and how to calculate Wigan values.</li> <li>3. The students will know idea of operators in quantum mechanics.</li> <li>4. The students will understand application of schrodinger's wave equations.</li> </ol>
			5.
		<b>DSE- E3 Classical Mechanics and classical Electrodynamics Paper No. XI</b>	<ol style="list-style-type: none"> <li>1. The students will understand Lagrangian formulation and in it how to calculate degrees of freedom D'Alembert principle.</li> <li>2. The students will get knowledge of techniques of calculus of variation.</li> <li>3. The students will understand special theory of relativity.and some transformation.</li> <li>4. The students will get knowledge of Poisson's and Laplace's equations and it's physical significance.</li> </ol>
		<b>DSE-E4- Digital and analogcircuits and instrumentation paper No. XII</b>	<ol style="list-style-type: none"> <li>1. The students will able to understand basic digital logic gates.</li> <li>2. The students will get knowledge of transistor amplifier and sinusoidal oscillator and work.</li> <li>3. The students will able to basics of CRO.</li> <li>4. The students will get knowledge op-amp and it's characteristics.</li> </ol>



<b>Sem.-VI</b>	<b>DSE-F1 Nuclear and particle physics. Paper No. – XIII</b>	<ol style="list-style-type: none"> <li>1. The students will able to understand general properties of nuclei and nuclear model.</li> <li>2. The students will able to understand the cyclotron it's construction and working same as Synchrocyclotron working and construction.</li> <li>3. The students will able fo understand which are the nuclear detectors.</li> <li>4. Students will able to understand basic idea of particle physics.</li> </ol>
	<b>DSE-F2- Solid state physics Paper No. XIV</b>	<ol style="list-style-type: none"> <li>1. The students will get knowledge of basic crystal structures.</li> <li>2. The students will get knowledge X-rays diffraction, Brillounin zone and hysteresis.</li> <li>3. Student will learn magnetic properties of matter and types of Magnetism.</li> <li>4. The students will get knowledge of concepts of density states , Hall effect and it's related things</li> </ol>
	<b>DSE-F 3 Atomic and molecular physics and Astophysics Paper No. XV</b>	<ol style="list-style-type: none"> <li>1. The students will get knowledge of atomic spectra, fine structure doublets.</li> <li>2. The students will get knowledge about Molecular spectra mainly in hydrogen atom.</li> <li>3. Students will able to understand the Raman spectra.</li> <li>4. Students will able to understand big bang theory and some laws about galaxy..</li> <li>5. The students will get knowledge stellar evolution, related to sun.</li> </ol>
	<b>DSE-F4 Energy studies and materials science Paper No. XVI</b>	<ol style="list-style-type: none"> <li>1. Students will able to understand the energy and realted are wind energy.</li> <li>2. Students will able to understand solar energy and it's utilisation.</li> <li>3. Students will able to understand the biomass energy.</li> <li>4. Students will able to understand the Idea of superconductivity.</li> <li>5. Students will able to understand of nanotechnology and how to synthesise the material.</li> </ol>



**Head**

**Department of Physics  
Program Outcome**

Paper No	Name	Expected Outcome
I (SEMI)	DSC 1A Mechanics I	Vector analysis and differential equations are strong mathematical tools to understand higher level physical Phenomena. They are directly applicable in practical electrical circuits. Trouble shooting in electrical circuit and network analysis can be easily done by the students. Another application is in mechanics this is helpful in understanding kinetics of moving bodies.
II (SEMI)	DSC-2 A Mechanics II	<ol style="list-style-type: none"> <li>1. Understand the concepts of friction and the concepts of elasticity, fluid mechanics and be able to perform calculations using them.</li> <li>2. Understand Newton's laws of gravitation, geostationary satellite and can apply their knowledge for different application of satellite</li> <li>3. Understand the surface tension and how to apply their knowledge to determine surface tension of various liquids</li> <li>4. Demonstrate quantitative problem solving skills in all the topics covered.</li> </ol>
I II (SEMI)	DSC- 1B ELECTRICITY AND MAGNETISM- II	<ol style="list-style-type: none"> <li>1. To understand the vector analysis and its application in electrostatics</li> <li>2. To understand different concepts of electrostatics and application in dielectrics</li> </ol>
IV (SEMII)	DSC- 2B ELECTRICITY AND MAGNETISM- II	<ol style="list-style-type: none"> <li>1. Understand the basics of electromagnetism and will be prepared to understand classical electrodynamics at third year</li> <li>2. Understand the basics of magnetism and fantastic phenomena of electromagnetic induction</li> <li>3. Students are able to understand the Maxwell equations and electromagnetic wave propagation</li> </ol>
V (SEM III)	DSC C1 Thermal Physics and Statistical Mechanics -I	<ol style="list-style-type: none"> <li>1. Understand the types of thermometers and their usage</li> <li>2. To comprehend the basic concepts of thermodynamics and its applications in Physical situations</li> <li>3. Understand property 'entropy'</li> </ol>
VI (SEM III)	DSC C2 Waves and Optics	<p>By studying the basics of this paper student learn about different types of frequencies and energy transferred in coupled oscillatory systems.</p> <p>Ultrasonic waves have different applications. They are mainly seen in sonography and</p>





		<p>measuring of elastic moduli of materials and Sound navigation and ranging devices, transducers and others. Therefore basics must be understood thoroughly.</p> <p>Good acoustics are basics requirements in the architecture of the building. Student gets clear idea about the various musical notes and reverberation time, intensity levels and pitch of the sound.</p> <p>Fluid dynamics is essential to study the aerodynamics, and various lubricants used in practical life.</p>
VII (SEMIII)	DSC D1 Thermal Physics and Statistical Mechanics -I	<p>To understand the concepts of black body radiation and other laws that forms basis for modern physics</p> <p>To understand the basics of statistical Mechanics with a emphasis on classical and quantum statistics</p>
VIII(SEMIII)	DSC D2 Waves and Optics	<ol style="list-style-type: none"> <li>1. To understand the concept of cardinal points</li> <li>2. To understand resolving power of optical instruments</li> <li>3. Understand optical phenomena such as polarisation, interference and diffraction in terms of the wave model.</li> <li>4 analyse simple examples of interference and diffraction phenomena.</li> </ol>
IX (SEMIV)	Mathematical and statistical Physics	<ol style="list-style-type: none"> <li>1. Understand the physical phenomena at the undergraduate level and get exposure to important ideas of statistical mechanics.</li> <li>2. Students are able to solve simple problems in probability, understand the concept of independent events and work with standard continuous distributions</li> <li>3. Understand the difference between different statistics, classical as well as quantum.</li> <li>4. Students have an idea of the functions of complex variables; solve non homogeneous differential equations and partial differential equations using simple methods which can be used in various physics phenomena.</li> </ol>
X (SEMIV)	Quantum mechanics	<p>The science behind miniaturization of devices is Quantum Mechanics. Today's buzz word is Nano. Hence to understand clearly the atomic level phenomena this paper is essential.</p> <p>Students get clear idea about the working principles of microscopic techniques.</p>
XI (SEMIV)	Classical Mechanics	<p>Students learn about the Universal phenomena governing the motion of Macroscopic bodies and also they learn to apply the principles of this subject in understanding the motion of</p>



		planets and other celestial bodies. Lagrangian formulation in this paper helps them to understand working principles of machines used in day to day life. Transfer of energy observed in natural phenomena can be easily understood.
XII (SEM V)	Atomic and Molecular Spectra, Astronomy and Astrophysics	<ol style="list-style-type: none"> <li>1. With basic background of vector atom model, students will learn about optical spectra with examples and origin of fine doublet spectra due to spin-orbit interaction and the effect of weak and strong magnetic fields on atomic spectra.</li> <li>2. To comprehend molecular spectroscopy and Raman Scattering. This paper will widen student's knowledge of possible applications of spectroscopy in the different fields.</li> <li>3. To understand different cosmological theories, origin of solar system and the different properties of the Sun.</li> </ol>
XIII (SEM VI)	Nuclear and Particle Physics	<ol style="list-style-type: none"> <li>1. Understand nuclear properties and nuclear behavior.</li> <li>2. Understand the type isotopes and their applications.</li> <li>3. Demonstrate and understand the quantum mechanical concepts.</li> <li>4. Demonstrate quantitative problem solving skills in all the topics covered</li> </ol>
XIV (SEM VI)	Energy Studies and Materials Science	<ol style="list-style-type: none"> <li>1. To comprehend available energy resources and need of renewable energy sources</li> <li>2. To comprehend potential in wind and solar energy and method to use these resources.</li> <li>3. Students will get acquainted with properties of materials like superconductivity and atomic disorders in them</li> <li>4. The course will introduce interdisciplinary concept "Nanomaterials"; their properties and methods to develop them</li> </ol>
XV (SEM VI)	Electrodynamics and Electromagnetic waves	Students will be able to understand the physical interpretation and applications of Maxwell's equations. They should able to analyze fields under time varying situations.
XVI (SEM VI)	Solid State Physics	Students after learning this paper will develop a liking towards research in materials. They will come to know how structure of the material is intimately associated with its property and functionality. Thus this paper concludes with solid state electronic devices.

1991  
**Head**  
 Department of Physics  
 Smt. Meenalben Mehta College, Panchgani  
 (Arts, Commerce & Science)



*[Signature]*  
**HC PRINCIPAL**  
 Smt. Meenalben Mehta College, Panchgani  
 (Arts, Commerce & Science)  
 Tal. Mahabaleshwar, Dist. Satara

## Department of Physics

### Program Specific Outcome

- Demonstrate a rigorous understanding of the core theories & principles of physics, which include mechanics, electromagnetism, thermodynamics, & quantum mechanics.
- Learn the Concept of Quantum Mechanics, Relativity, introduced at degree level in order to understand nature at atomic levels.
- Provide knowledge about material properties and its application for developing technology to ease the problems related to society.
- Understand the set of physical laws, describing the motion of bodies, under influence of system of forces.
- Understand the relationship between particles & atom, as well as their creation & decay.
- Relate the structure of atoms & subatomic particles.
- Understand physical properties of molecule the chemical bonds between atom as well as molecular dynamics.
- Analyze the application of mathematics to problem in physics & development of mathematical method suitable for such application & for formulation of physical theories.
- Learn the structure of solid materials & their different physical properties along with

  
Head  
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Smt. Meenalben Mehta College, Panchgani  
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(Arts, Commerce & Science)  
Dist. Mahabaleshwar, Dist. Satara





Sri Swami Vivekanand Shikshan Sanstha's

Meenalben Mehta College of Arts, Science and Commerce, Panchgani, Tal. Mahabaleshwar, Dist. Satara

DEPARTMENT OF CHEMISTRY  
**B.Sc. Chemistry**  
**Course Outcomes (COS)**

Class and Duration	Courses		Course Outcomes (COS)
B.Sc. I (CBCS) 2018- 19 To 2021- 22	Paper I (Inorganic Chemistry)	CO 1	Getting to know the structure of atoms and their principles, details of periodic table
		CO 2	Knowing various types of ionic bond and ionic compound study
		CO 3	Knowing study of Molecular orbital Theory
	Paper II (Organic Chemistry)	CO 1	Understanding the fundamentals of Organic Chemistry
		CO 2	Imparting the knowledge of stereochemistry of different organic compounds among the students
		CO 3	Studying aromaticity, electrophilic substitution reactions and their mechanism
		CO 4	Knowing various method of preparation and chemical reaction of cyclo alkane, cyclo alkene and alkadiene
	Paper III (Physical Chemistry)	CO 1	Impart the knowledge regarding chemical thermodynamics and feasibility, direction and equilibrium condition of reactions
		CO 2	Understanding mechanism of reaction and to get optimum conditions for a reaction by utilising the study of Chemical Kinetics
	Paper IV (Analytical Chemistry)	CO 1	Provide a basic understanding of the principles , instrumentation and applications of chemical analysis
		CO 2	Study various chromatographic techniques like paper, thin layer, column, and gas chromatography
		CO 3	Impart basic knowledge regarding titrimetric analysis
CO 4		Making aware about water and fertilizer analysis	
B.Sc. I NEP (2020) 2022-23	Paper I (Inorganic Chemistry)	CO 1	Getting to know the structure of atoms and their principles, details of periodic table
		CO 2	Knowing various types of ionic bond and ionic compound study
		CO 3	Knowing study of Molecular orbital Theory
	Paper II (Organic Chemistry)	CO 1	Understanding the fundamentals of Organic Chemistry
		CO 2	Imparting the knowledge of stereochemistry of



			different organic compounds among the students
		CO 3	Studying aromaticity, electrophilic substitution reactions and their mechanism
		CO 4	Knowing various method of preparation and chemical reaction of cyclo alkane, cyclo alkene and alkadiene
	Paper III (Physical Chemistry)	CO 1	Impart the knowledge regarding chemical thermodynamics and feasibility, direction and equilibrium condition of reactions
		CO 2	Understanding mechanism of reaction and to get optimum conditions for a reaction by utilising the study of Chemical Kinetics
	Paper IV (Analytical Chemistry)	CO 1	Provide a basic understanding of the principles , instrumentation and applications of chemical analysis
		CO 2	Study various chromatographic techniques like paper, thin layer, column, and gas chromatography
		CO 3	Impart basic knowledge regarding titrimetric analysis.
		CO 4	Making aware about water and fertilizer analysis
Class and Duration	Courses		Course Outcomes (Cos)
B.Sc. II (Old) 2017-18 To 2018-19	Paper V (Physical Chemistry)	CO 1	Understanding mechanism of reaction and get optimum conditions for a reaction by utilising the study of Chemical Kinetics
		CO 2	Making students capable of understanding redox reactions and to construct electrochemical cells learn various laws of electrochemistry and their applications
		CO 3	Study the properties of liquids like surface tension
		CO 4	Know about surface phenomena like adsorption w.r.t. its characteristics, determination and applications
	Paper VI (Industrial Chemistry)	CO 1	Providing a basic understanding of the principles, instrumentation and applications of chemical analysis
		CO 2	Studying various chromatographic techniques like paper, thin layer, column, and gas chromatography electrochemistry and their applications
		CO 3	Explaining the difference between classical and industrial chemistry, unit operations, unit processes, flow sheets etc
		CO 4	Knowing the process of corrosion and how to deal with it by using electroplating
		CO 5	Getting familiar with the industrial process with respect to paper industry, soaps and detergents etc



	Paper VII (Inorganic Chemistry)	CO 1	Knowing study of 14 elements in the periodic table
		CO 2	Knowing the new productivity
		CO 3	Knowing the Studying of electronic configuration, oxidation state, colour spectra, and magnetic properties
		CO 4	Knowing about the study of solving energies of the metals, semiconductors and superconductors
		CO 5	Knowing the study of various organ metallic compounds is very useful in various fields like agriculture, pesticides, and pharmaceuticals
	Paper VIII (Organic Chemistry)	CO 1	Imparting knowledge about the synthesis, reactivity and applications of carboxylic acids
		CO 2	Knowing amines and diazorium salts with respect to classification, preparation and applications
		CO 3	Understanding the nomenclature and reactivity of aldehydes, ketones
		CO 4	Studying the classification, configuration and structure of carbohydrates
		CO 5	Learning the basic knowledge of conformational analysis of organic compounds
B.Sc. II (CBCS)  2019-20 To 2022-23	Paper V (Physical Chemistry)	CO 1	Understanding mechanism of reaction and get optimum conditions for a reaction by utilising the study of Chemical Kinetics
		CO 2	Making students capable of understanding redox reactions and to construct electrochemical cells learn various laws of electrochemistry and their applications
		CO 3	Study the properties of liquids like surface tension, viscosity, refractive index and their experimental determination
		CO 4	Know about surface phenomena like adsorption w.r.t. its characteristics, determination and applications
	Paper VI (Industrial Chemistry)	CO 1	Providing a basic understanding of the principles, instrumentation and applications of chemical analysis
		CO 2	Studying various chromatographic techniques like paper, thin layer, column, and gas chromatography electrochemistry and their applications
		CO 3	Explaining the difference between classical and industrial chemistry, unit operations, unit processes, flow sheets etc
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		CO 4	Studying the classification, configuration and structure of carbohydrates
		CO 5	Learning the basic knowledge of conformational analysis of organic compounds
B.Sc. II NEP 2020 2023-24	Paper V (Physical Chemistry)	CO 1	Understanding mechanism of reaction and get optimum conditions for a reaction by utilising the study of Chemical Kinetics
		CO 2	Making students capable of understanding redox reactions and to construct electrochemical cells learn various laws of electrochemistry and their applications
		CO 3	Study the properties of liquids like surface tension, viscosity, refractive index and their experimental determination
		CO 4	Know about surface phenomena like adsorption w.r.t. its characteristics, determination and applications
	Paper VI (Industrial Chemistry)	CO 1	Providing a basic understanding of the principles, instrumentation and applications of chemical analysis
		CO 2	Studying various chromatographic techniques like paper, thin layer, column, and gas chromatography electrochemistry and their applications
		CO 3	Explaining the difference between classical and industrial chemistry, unit operations, unit processes, flow sheets etc
		CO 4	Knowing the process of corrosion and how to deal with it by using electroplating
		CO 5	Getting familiar with the industrial process with



B.Sc. III (Old) 2018-19 To 2019-20	Paper VII (Inorganic Chemistry)		respect to paper industry soaps and detergents etc
		CC 1	Knowing study of 14 elements in the periodic table
		CC 2	Knowing the new productivity
		CC 3	Knowing the Studying of electronic configuration, oxidation state, colour spectra, and magnetic properties
		CC 4	Knowing about the study of solving energies of the metals, semiconductors and superconductors
	CC 5	Knowing the study of various organ metallic compounds is very useful in various fields like agriculture, pesticides, and pharmaceuticals.	
	Paper VIII (Organic Chemistry)	CC 1	Imparting knowledge about the synthesis, reactivity and applications of carboxylic acids
		CC 2	Knowing amines and diazotium salts with respect to classification, preparation and applications
		CC 3	Understanding the nomenclature and reactivity of aldehydes, ketones
		CC 4	Studying the classification, configuration and structure of carbohydrates
		CC 5	Learning the basic knowledge of conformational analysis of organic compounds
	Paper IX (Physical Chemistry)	CC 1	Making students capable of understanding redox reactions and to construct electrochemical cells and learning various laws of electrochemistry and their applications
		CC 2	Imparting the concepts of quantum mechanics, like Schrodinger equation and quantum numbers
		CC 3	Learning about interaction between radiation and matter which leads to molecular spectroscopy
		CC 4	Understanding various laws of photochemistry and photo physical processes
Paper X (Inorganic Chemistry)	CC 1	Knowing the study of electronic configuration, oxidation state, colour spectra, and magnetic properties	
	CC 2	Studying of co-ordination chemistry needs an understanding of the different terms used further topic covers Werner's theory, EAN, VBT, VSEPR, CFSE, and MO theory	
	CC 3	Knowing the study of catalyst, non-aqueous solvents and chelation	
Paper XI (Organic Chemistry)	CC 1	Studying about introduction to spectroscopy	
	CC 2	Imparting the knowledge of UV, Visible spectroscopy and its application	
	CC 3	Understanding IR Spectroscopy and its application	
	CC 4	Studying NMR Spectroscopy and its application	
	CC 5	Knowing Mass Spectroscopy and its application	





	CO 6	Solving combined spectroscopic problems
Paper XII (Industrial Chemistry)	CO 1	Studying various chromatographic techniques like paper, thin layer, column, and gas chromatography
	CO 2	Imparting basic knowledge regarding titrimetric analysis
	CO 3	Getting familiar with the industrial process with respect to sugar industry, soaps and detergents, heavy chemicals production industries etc
	CO 4	Getting introduction the nano materials with respect to preparation, characterisation, and applications
Paper XIII (Physical Chemistry)	CO 1	Understanding mechanism of reaction and get optimum conditions for a reaction by utilising the study of Chemical Kinetics
	CO 2	Knowing about surface phenomena like adsorption w.r.t. its characteristics, determination and application
	CO 3	Getting the knowledge about Phase equilibria, wrt one, two and three component systems study crystal structure by using Bragg's equation
	CO 4	Developing practical skill regarding chemical kinetics and get acquaint to handle various instruments like potentiometer, conductometer, refractometer, colorimeter, pH meter, viscometer, stalagmometer etc.
Paper XIV (Inorganic Chemistry)	CO 1	Knowing that nuclear energy may be boon and bane and know the radioactivity elements in the series of actinides
	CO 2	Coming to know that manufacturing process of iron and steel and study of various methods
	CO 3	Knowing that some biological role of alkali and alkaline earth metals, Hb, Mb, and some enzymes
	CO 4	Knowing the various types of reaction mechanism of the inorganic co-ordinated compounds
Paper XV (Organic Chemistry)	CO 1	Making students capable of understanding Name reactions and their mechanism
	CO 2	Studying the applications of different reagents in organic synthesis
	CO 3	Imparting the knowledge of different natural products
	CO 4	Knowing about pharmaceutical chemistry and study of different drugs
	CO 5	Understanding the knowledge of electrophilic addition to carbon carbon double and triple bond compounds
Paper XVI (Analytical)	CO 1	Studying various chromatographic techniques like paper, thin layer, column, and gas chromatography

B.Sc. III (CBCS) (2020-21 To 2023-24)	Chemistry)	CO 2	Imparting basic knowledge regarding titrimetric analysis
		CO 3	Learning about analytical techniques like potentiometry, conductometry, flame photometry, colorimetry, spectrophotometry
		CO 4	Knowing about pharmaceutical chemistry and study of different drugs
	Paper IX (Inorganic Chemistry)	CO 1	Knowing the study of electronic configuration, oxidation state, colour spectra, and magnetic properties
		CO 2	Studying of co-ordination chemistry needs an understanding of the different terms used further topic covers Werner's theory, EAN, VBT, VSEPR, CFSE, and MO theory
		CO 3	Knowing the study of catalyst, non-aqueous solvents and chelation
	Paper X (Organic Chemistry)	CO 1	Studying about introduction to spectroscopy.
		CO 2	Imparting the knowledge of UV, Visible spectroscopy and its application.
		CO 3	Understanding IR Spectroscopy and its application.
		CO 4	Studying NMR Spectroscopy and its application.
		CO 5	Knowing Mass Spectroscopy and its application.
		CO 6	Solving combined spectroscopic problems.
	Paper XI (Physical Chemistry)	CO 1	Making students capable of understanding redox reactions and to construct electrochemical cells and learning various laws of electrochemistry and their applications
		CO 2	Imparting the concepts of quantum mechanics, like Schrodinger equation and quantum numbers
		CO 3	Learning about interaction between radiation and matter which leads to molecular spectroscopy
CO 4		Understanding various laws of photochemistry and photo physical processes.	
Paper XII (Analytical Chemistry)	CO 1	Studying various chromatographic techniques like paper, thin layer, column, and gas chromatography	
	CO 2	Imparting basic knowledge regarding titrimetric analysis	
	CO 3	Learning about analytical techniques like potentiometry, conductometry, flame photometry, colorimetry, spectrophotometry	
	CO 4	Knowing about pharmaceutical chemistry and study of different drugs	
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	CO 3	Knowing that some biological role of alkali and alkaline earth metals, Hb, Mb, and some enzymes
	CO 4	Knowing the various types of reaction mechanism of the inorganic co-ordinated compounds
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	CO 3	Getting the knowledge about Phase equilibria, wrt one, two and three component systems study crystal structure by using Bragg's equation
	CO 4	Developing practical skill regarding chemical kinetics and get acquaint to handle various instruments like potentiometer, conductometer, refractometer, colorimeter, pH meter, viscometer, stalagmometer etc
Paper XVI (Industrial Chemistry)	CO 1	Studying various chromatographic techniques like paper, thin layer, column, and gas chromatography
	CO 2	Imparting basic knowledge regarding titrimetric analysis
	CO 3	Getting familiar with the industrial process with respect to sugar industry, soaps and detergents, heavy chemicals production industries etc
	CO 4	Getting introduction the nano materials with respect to preparation, characterisation, and applications.



Shri Swami Vivekanand Shikshan Sarstha's

Meenalben Mehta College of Arts, Science and Commerce, Panchgani, Tal. Mahabaleshwar,  
Dist. Satara

DEPARTMENT OF CHEMISTRY

M. Sc.

**COURSE OUTCOMES**

Class and Duration	Course	Course Outcomes
M.Sc. I (2022-2023)	Paper I (Inorganic Chemistry)	Getting to know the General characteristic and properties of transition elements, Crystal field splitting.
		Understanding the preparation, structure, physical and chemical properties of metal carbonyls.
		Knowing study of Synthesis, bonding, structure and reactivity of organometallic compounds.
		Understanding the Thermodynamic vs. kinetic stability, Stability constant, Stepwise and overall stability constants of metal complexes.
	Paper II (Organic Chemistry)	Understanding the types of reactions & their structure & reactivity..
		Studying aromaticity in Benzenoid and non – Benzenoid compounds.
		Knowing study of Name reaction with mechanism.
		Imparting the knowledge of stereochemistry of different organic compounds among the students
	Paper III (Physical Chemistry)	Impart the knowledge regarding chemical thermodynamics and feasibility, direction and equilibrium condition of reactions.
		Provide a basic understanding of the thermodynamic probability and entropy
		Understanding the Colloidal Systems-Sols, Adsorption, adsorption isotherms.
		Provide a basic understanding of the Macromolecules & Chemistry of polymerization.
	Paper IV (Analytical Chemistry)	Provide a basic understanding of the Analytical Chemistry, Chemical analysis, instrumental methods, Analytical methods, Techniques of analysis.
		Impart the knowledge regarding to the Quantitative Analysis.



M.Sc. II (2020-2021) Onwards		Study various chromatographic techniques like HPLC, thin layer, column, and gas chromatography.
		Getting to know the information about various Electroanalytical Techniques.
	Paper V (Inorganic Chemistry)	General discussion on the properties of the non-transition elements.
		Knowing study of Stereochemistry and bonding in Main group compounds & Non-aqueous solvents.
		Imparting knowledge about the Solid state chemistry & Bioinorganic Chemistry.
		Understanding the Chemistry of f-block elements.
	Paper VI (Organic Chemistry)	Studying the rearrangements reactions & Photochemical reactions.
		Knowing Enamines, Hydroboration, & application of oxidizing agents
		Understanding the Reduction reactions & Protection of functional group.
		Studying the Organometallic compounds & Methodologies in organic synthesis
	Paper VII (Physical Chemistry)	Imparting the concepts of quantum mechanics, like Schrodinger equation and quantum numbers
		Understanding various laws of photochemistry and photophysical processes.
		Making students capable of understanding redox reactions and to construct electrochemical cells and learning various laws of electrochemistry and their applications.
		Understanding mechanism of reaction and get optimum conditions for a reaction by utilising the study of Chemical Kinetics.
	Paper VIII (Analytical Chemistry)	Studying about various spectroscopy techniques.
		Knowing about Advanced Analytical Tools like NMR, MS.
Studying the various techniques of thermal analysis.		
Understanding concept of AAS & FES		
Paper IX (Advanced Analytical Techniques)	CO-1 Understanding the principles, Instrumentation, of Mass Spectrometry.	
	CO-2 Knowing study of Nanotechnology and Nano Chemistry.	

		CO-3 Studying of various Advanced Instrumentation Techniques like, SEM, TEM, EDS, EDAX, STMAFM.
		CO-4 Studying of various Advanced Instrumentation Techniques like, XFS, ESR, XPS, SIMS.
Paper X (ORGANO ANALYTICAL CHEMISTRY)		CO-1 Provide a basic understanding of the Advanced techniques of analysis: UV-Visible, IR, 1H-NMR (Recapitulation), 13CNMR, Mass spectroscopy.
		CO-2 Impart the knowledge regarding Drug Analysis & Vitamins.
		CO-3 Understanding concept of Clinical Analysis & Body fluid analysis.
		CO-4 Impart the knowledge regarding Pesticides Analysis & Forensic Analysis
Paper XI (ELECTROANALYTICAL TECHNIQUES IN CHEMICAL ANALYSIS)		CO-1 Impart the knowledge regarding the Voltammetric techniques.
		CO-2 Provide a basic understanding of the classification of colloids, & Types of emulsions.
		CO-3 Understanding the concept of Particle size analysis by laser light scattering.
		CO-4 Studying of ion selective electrode & Electrophoresis.
Paper XII (ENVIRONMENTAL CHEMICAL ANALYSIS AND CONTROL)		CO-1 Provide a basic understanding of the Sampling in analysis.
		CO-2 Impart the knowledge regarding to the various Electrochemical and spectral methods for Environmental analysis.
		CO-3 Making aware about Air & Water Pollutant.
		CO-4 Making aware about organic pollutants.
Paper XIII (MODERN SEPARATION METHODS IN ANALYSIS)		CO-1 General discussion on the Advanced Gas Chromatographic Techniques. .
		CO-2 Knowing study of Advanced Liquid Chromatographic Techniques.
		CO-3 General discussion on the Ion Chromatography & its Principles, structure and characteristics.



		CO-4 Imparting knowledge about the Modern extraction and Chromatographic separation techniques
	Paper XIV (ORGANIC INDUSTRIAL ANALYSIS)	CO-1 Studying the Industrial Analysis of oils, Fats, Soaps & detergents.
		CO-2 Understanding the Food and Food Additive Analysis.
		CO-3 Explaining the Analysis of cosmetics products like Cream & lotions.
		CO-4 Studying the analysis of Paints, pigments & the Petroleum Products.
	Paper XV (ADVANCED METHODS IN CHEMICAL ANALYSIS)	CO-1 Studying the Fluorescence and Phosphorescence Spectrophotometry.
		CO-2 Understanding mechanism of reaction and get optimum conditions for a reaction by utilising the study of Chemical Kinetics.
		CO-3 Study the Basic principles Photoelectron spectroscopy
		CO-4 Knowing about X-ray spectroscopy
	Paper XVI (APPLIED ANALYTICAL CHEMISTRY)	Knowing about Spectrochemical Methods of Analysis.
		Understanding concept of Metals & Alloys.
		CO-3 Making aware about Soil and fertilizer analysis.
		CO-4 Understanding concept of Analysis of Commercial materials & explosive materials like TNT, RDX.
M.Sc. I (2019-2020) To 2021-2022	Paper I (Inorganic Chemistry)	CO-1 Getting to know the General characteristic and properties of transition elements, Crystal field splitting.
		CO-2 Understanding the preparation, structure, physical and chemical properties of metal carbonyls.
		CO-3 Knowing study of Synthesis, bonding, structure and reactivity of organometallic compounds.
		Understanding the Thermodynamic vs. kinetic stability, Stability constant, Stepwise and overall stability constants of metal complexes.
	Paper II (Organic Chemistry)	Understanding the types of reactions & their structure & reactivity..



		CO-2 Studying aromaticity in Benzenoid and non – Benzenoid compounds.
		CO-3 Knowing study of Name reaction with mechanism.
		CO-4 Imparting the knowledge of stereochemistry of different organic compounds among the students
Paper III (Physical Chemistry)		CO-1 Impart the knowledge regarding chemical thermodynamics and feasibility, direction and equilibrium condition of reactions.
		CO-2 Provide a basic understanding of the thermodynamic probability and entropy.
		CO-3 Understanding the Colloidal Systems-Sols, Adsorption, adsorption isotherms.
		CO-4 Provide a basic understanding of the Macromolecules & Chemistry of polymerization
Paper IV (Analytical Chemistry)		CO-1 Provide a basic understanding of the Analytical Chemistry, Chemical analysis, instrumental methods, Analytical methods, Techniques of analysis.
		CO-2 Impart the knowledge regarding to the Quantitative Analysis
		Study various chromatographic techniques like HPLC, thin layer, column, and gas chromatography.
		CO-4 Getting to know the information about various Electroanalytical Techniques.
Paper V (Inorganic Chemistry)		CO-1 General discussion on the properties of the non-transition elements,
		CO-2 Knowing study of Stereochemistry and bonding in Main group compounds & Non-aqueous solvents.
		CO-3 Understanding the Chemistry of f-block elements
		CO-4 Imparting knowledge about the Solid state chemistry & Bioinorganic Chemistry.
Paper VI (Organic Chemistry)		Studying the rearrangements reactions & Photochemical reactions.
		CO-2 Knowing Enamines, Hydroboration, & application of oxidizing agents.
		CO-3 Understanding the Reduction reactions & Protection of functional group.





		CO-4 Studying the Organometallic compounds & Methodologies in organic synthesis.
	Paper VII (Physical Chemistry)	CO-1 Imparting the concepts of quantum mechanics, like Schrodinger equation and quantum numbers
		CO-2 Understanding various laws of photochemistry and photophysical processes.
		CO-3 Making students capable of understanding redox reactions and to construct electrochemical cells and learning various laws of electrochemistry and their applications.
		CO-4 Understanding mechanism of reaction and get optimum conditions for a reaction by utilising the study of Chemical Kinetics.
	Paper VIII (Analytical Chemistry)	CO-1 Studying about various spectroscopy techniques.
		CO-2 Knowing about Advanced Analytical Tools like NMR, MS.
		CO-3 Studying the various techniques of thermal analysis.
		CO-4 Understanding concept of AAS & FES.
M.Sc. II (2019-2020)	Paper IX (Advanced Analytical Techniques)	CO-1 Understanding the principles, Instrumentation, of Mass Spectrometry
		Knowing study of Nanotechnology and Nano Chemistry.
		CO-3 Studying of various Advanced Instrumentation Techniques like, SEM, TEM, EDS, EDAX, STM, AFM.
		CO-4 Studying of various Advanced Instrumentation Techniques like, XFS, ESR, XPS, SIMS.
	Paper X (ORGANO ANALYTICAL CHEMISTRY)	CO-1 Provide a basic understanding of the Advanced techniques of analysis: UV-Visible, IR, <sup>1</sup> H-NMR (Recapitulation), <sup>13</sup> CNMR, Mass spectroscopy.
		CO-2 Impart the knowledge regarding Drug Analysis & Vitamins.
		CO-3 Understanding concept of Clinical Analysis & Body fluid analysis.
		CO-4 Impart the knowledge regarding Pesticides Analysis & Forensic Analysis.
	Paper XI (ELECTROANALYTICAL)	CO-1 Impart the knowledge regarding the Voltammetric techniques.



TECHNIQUES IN CHEMICAL ANALYSIS)	CO-2 Provide a basic understanding of the classification of colloids, & Types of emulsions.
	CO-3 Understanding the concept of Particle size analysis by laser light scattering.
	CO-4 Studying of ion selective electrode & Electrophoresis.
Paper XII (ENVIRONMENTAL CHEMICAL ANALYSIS AND CONTROL)	CO-1 Provide a basic understanding of the Sampling in analysis.
	CO-2 Impart the knowledge regarding to the various Electrochemical and spectral methods for Environmental analysis.
	CO-3 Making aware about Air & Water Pollutant.
	CO-4 Making aware about organic pollutants.
Paper XIII (MODERN SEPARATION METHODS IN ANALYSIS)	CO-1 General discussion on the Advanced Gas Chromatographic Techniques.
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	CO-3 General discussion on the Ion Chromatography & its Principles, structure and characteristics.
	Imparting knowledge about the Modern extraction and Chromatographic separation techniques
Paper XIV (ORGANIC INDUSTRIAL ANALYSIS)	CO-1 Studying the Industrial Analysis of oils, Fats, Soaps & detergents
	Understanding the Food and Food Additive Analysis.
	CO-3 Explaining the Analysis of cosmetics products like Cream & lotions.
	CO-4 Studying the analysis of Paints, pigments & the Petroleum Products
Paper XV (ADVANCED	CO-1 Studying the Fluorescence and Phosphorescence Spectrophotometry.



	METHODS IN CHEMICAL ANALYSIS)	CO-2 Understanding mechanism of reaction and get optimum conditions for a reaction by utilising the study of Chemical Kinetics.
		CO-3 Study the Basic principles Photoelectron spectroscopy
		CO-4 Knowing about X-ray spectroscopy
	Paper XVI (APPLIED ANALYTICAL CHEMISTRY)	CO-1 Knowing about Spectrochemical Methods of Analysis.
		CO-2 Understanding concept of Metals & Alloys.
		CO-3 Making aware about Soil and fertilizer analysis.
		CO-4 Understanding concept of Analysis of Commercial materials & explosive materials like TNT, RDX
M.Sc. I (2018-2019)	Paper I (Inorganic Chemistry)	CO-1 Getting to know the General characteristic and properties of transition elements, Crystal field splitting.
		CO-2 Understanding the preparation, structure, physical and chemical properties of metal carbonyls.
		CO-3 Knowing study of Synthesis, bonding, structure and reactivity of organometallic compounds.
		Understanding the Thermodynamic vs. kinetic stability, Stability constant, Stepwise and overall stability constants of metal complexes.
		CO-1 Understanding the types of reactions & their structure & reactivity.
	Paper II (Organic Chemistry)	CO-2 Studying aromaticity in Benzenoid and non - Benzenoid compounds.
		CO-3 Knowing study of Name reaction with mechanism.
		CO-4 Imparting the knowledge of stereochemistry of different organic compounds among the students
		CO-1 Impart the knowledge regarding chemical thermodynamics and feasibility, direction and equilibrium condition of reactions.
	Paper III (Physical Chemistry)	CO-2 Provide a basic understanding of the thermodynamic probability and entropy.
		CO-3 Understanding the Colloidal Systems-Sols, Adsorption, adsorption isotherms.
		CO-4 Provide a basic understanding of the Macromolecules & Chemistry of polymerization



Paper IV (Analytical Chemistry)	CO-1 Provide a basic understanding of the Analytical Chemistry, Chemical analysis, instrumental methods, Analytical methods, Techniques of analysis.
	CO-2 Impart the knowledge regarding to the Quantitative Analysis
	Study various chromatographic techniques like HPLC, thin layer, column, and gas chromatography.
	CO-4 Getting to know the information about various Electroanalytical Techniques.
Paper V (Inorganic Chemistry)	CO-1 General discussion on the properties of the non-transition elements,
	CO-2 Knowing study of Stereochemistry and bonding in Main group compounds & Non-aqueous solvents.
	CO-3 Understanding the Chemistry of f-block elements.
	CO-4 Imparting knowledge about the Solid state chemistry & Bioinorganic Chemistry.
Paper VI (Organic Chemistry)	CO-1 Studying the rearrangements reactions & Photochemical reactions.
	CO-2 Knowing Enamines, Hydroboration, & application of oxidizing agents.
	CO-3 Understanding the Reduction reactions & Protection of functional group.
	CO-4 Studying the Organometallic compounds & Methodologies in organic synthesis.
Paper VII (Physical Chemistry)	CO-1 Imparting the concepts of quantum mechanics, like Schrodinger equation and quantum numbers
	CO-2 Understanding various laws of photochemistry and photophysical processes.
	CO-3 Making students capable of understanding redox reactions and to construct electrochemical cells and learning various laws of electrochemistry and their applications.
	CO-4 Understanding mechanism of reaction and get optimum conditions for a reaction by utilising the study of Chemical Kinetics.



	Paper VIII (Analytical Chemistry)	CO-1 Studying about various spectroscopy techniques.
		CO-2 Knowing about Advanced Analytical Tools like NMR, MS.
		CO-3 Studying the various techniques of thermal analysis.
		CO-4 Understanding concept of AAS & FES.
M.Sc. II (2018-2019)	Paper IX (Advanced Analytical Techniques)	CO-1 Understanding the principles, Instrumentation, of Mass Spectrometry.
		CO-1 Knowing study of Nanotechnology and Nano Chemistry.
		CO-3 Studying of various Advanced Instrumentation Techniques like, SEM, TEM, EDS, EDAX, STM, AFM.
	Paper X (ORGANO ANALYTICAL CHEMISTRY)	CO-4 Studying of various Advanced Instrumentation Techniques like, XFS, ESR, XPS, SIMS.
		CO-1 Provide a basic understanding of the Advanced techniques of analysis: UV-Visible, IR, <sup>1</sup> H-NMR (Recapitulation), <sup>13</sup> CNMR, Mass spectroscopy.
		CO-2 Impart the knowledge regarding Drug Analysis & Vitamins.
		CO-3 Understanding concept of Clinical Analysis & Body fluid analysis.
	Paper XI (ELECTROANALYTICAL TECHNIQUES IN CHEMICAL ANALYSIS)	CO-4 Impart the knowledge regarding Pesticides Analysis & Forensic Analysis.
		CO-1 Impart the knowledge regarding the Voltammetric techniques.
		CO-2 Provide a basic understanding of the classification of colloids, & Types of emulsions.
		CO-3 Understanding the concept of Particle size analysis by laser light scattering.
	Paper XII (ENVIRONMENTAL CHEMICAL	CO-4 Studying of ion selective electrode & Electrophoresis.
CO-1 Provide a basic understanding of the Sampling in analysis.		



ANALYSIS AND CONTROL )	CO-2 Impart the knowledge regarding to the various Electrochemical and spectral methods for Environmental analysis.
	CO-3 Making aware about Air & Water Pollutant.
	CO-4 Making aware about organic pollutants.
	CO-1 General discussion on the Advanced Gas Chromatographic Techniques.
Paper XIII (MODERN SEPARATION METHODS IN ANALYSIS)	CO-2 Knowing study of Advanced Liquid Chromatographic Techniques.
	CO-3 General discussion on the Ion Chromatography & its Principles, structure and characteristics.
	Imparting knowledge about the Modern extraction and Chromatographic separation techniques
	CO-1 Studying the Industrial Analysis of oils, Fats, Soaps & detergents
Paper XIV (ORGANIC INDUSTRIAL ANALYSIS)	CO-2 Understanding the Food and Food Additive Analysis.
	CO-3 Explaining the Analysis of cosmetics products like Cream & lotions.
	CO-4 Studying the analysis of Paints, pigments & the Petroleum Products
	CO-1 Studying the Fluorescence and Phosphorescence Spectrophotometry.
Paper XV (ADVANCED METHODS IN CHEMICAL ANALYSIS)	CO-2 Understanding mechanism of reaction and get optimum conditions for a reaction by utilising the study of Chemical Kinetics.
	CO-3 Study the Basic principles Photoelectron spectroscopy
	CO-4 Knowing about X-ray spectroscopy
	CO-1 Knowing about Spectrochemical Methods of Analysis.
Paper XVI (APPLIED ANALYTICAL CHEMISTRY)	CO-2 Understanding concept of Metals & Alloys.
	CO-3 Making aware about Soil and fertilizer analysis.
	CO-4 Understanding concept of Analysis of Commercial materials & explosive materials like TNT, RDX



**Department of Chemistry**  
**Programme Specific Outcome**

<b>Sr. No.</b>	<b>Programme Specific Outcome</b>
PSO 1	Promote understanding of basic facts & concepts in chemistry while retaining the excitement of chemistry.
PSO 2	Make students capable of studying chemistry in academic & industrial courses.
PSO 3	Expose the students to various emerging new areas of chemistry & apprise them with their prevalent in their future studies & their applications in various spheres of chemical sciences.
PSO 4	Develop problem solving skills in students.
PSO 5	Develop ability & to acquire the knowledge of terms, facts, concepts, processes techniques & principles of subjects.
PSO 6	Expose & develop interest in the field of chemistry.
PSO 7	Develop proper aptitude towards the subjects.
PSO 8	Skills in chemistry practical work, experiments, laboratory materials & proper handling of instruments
PSO 9	Enhancement of scientific attitude & scientific hobbies
PSO 10	Abilities to apply scientific methods, collection of scientific data, problem solving, Research Paper Writing, etc
PSO 11	Appreciation of the subject, contributions of scientists, scientific methods, scientific programs, etc.

"Dissemination of Education for Knowledge, Science and Culture."

- Shikshanmaharshi Dr. Bapuji Salunkhe

Smt. Meenalben Mehta College, Panchgani

(Arts, Commerce & Science)

Department of Zoology



Course Title	Course Outcomes
<b>Animal Diversity - I</b>	<p>After successfully completing this course, students:</p> <ul style="list-style-type: none"><li>• The students will be able to understand the Animal diversity around us.</li><li>• The student will be able to identify and classify the animals.</li><li>• The students will be able understand the importance of classification of animals and classify them effectively using the six levels of classification.</li><li>• To understand the terminology needed in classification.</li><li>• To classify invertebrates and to be able to understand the possible group of the invertebrate observed in nature.</li><li>• To explain conservation and sustainable use of non-chordate animals.</li></ul>
<b>Cell Biology and Evolutionary Biology</b>	<p>After successfully completing this course, students:</p> <ul style="list-style-type: none"><li>• Understand the importance of cell as a structural and functional unit of life.</li><li>• Understands and compares between the prokaryotic, eukaryotic Cell and Ultrastructure and functions of Cell organelle.</li><li>• Students will understand the history of life, evolutionary theories.</li><li>• Understand the mass extinction in evolution.</li><li>• Describe and explain evolutionary theories, Urey - Miller experiment, Oparin Theory.</li><li>• Preserve and conserve fossils which are the major evidences of Evolution.</li><li>• Explain Process of Evolutionary change.</li></ul>
<b>Animal Diversity and Insect Vectors</b>	<p>After successfully completing this course, students will be able to:</p> <ul style="list-style-type: none"><li>• To describe External Morphology, Digestive, Circulatory, Nervous system, Excretory Reproductive system and Sense organs and brain of Rat (<i>Rattus rattus</i>).</li></ul>



	<ul style="list-style-type: none"> <li>• To understand life cycle of insect vectors such as mosquito, Housefly, flea.</li> <li>• To understand the diseases with respect to causative organism and its symptoms and control.</li> </ul>
<b>Genetics</b>	<p>After successfully completing this course, students will be able to:</p> <ul style="list-style-type: none"> <li>• Define the basic terms in genetics.</li> <li>• Discuss Mendel's work on transmission of traits and Laws of Genetics.</li> <li>• Explain the Linkage, Crossing over, Syndrome, chromosomal mutation and gene mutation.</li> <li>• Understand chromosomal theory of sex determination, Genic balance theory, Haploidy - Diploidy Mechanism and environmental theory.</li> </ul>
<b>Animal Diversity II</b>	<p>After successfully completing this course, students will have:</p> <ul style="list-style-type: none"> <li>• Knowledge of classification of protochordates and chordates with examples.</li> <li>• Conceptual knowledge of vertebrate adaptations in relation to their environment.</li> <li>• Understand the venomous and non-venomous snakes and its biting mechanism.</li> <li>• Understand the structure and functions of Digestive, Respiratory, Circulatory system of Aves and Mammals.</li> </ul>
<b>Biochemistry</b>	<p>After successfully completing this course, students will be able to:</p> <ul style="list-style-type: none"> <li>• Describe structure of Nucleic acids.</li> <li>• Describe Metabolism of Carbohydrates, Protein and Lipid.</li> <li>• Explain General properties, Classification, Nomenclature and chemical nature of Enzymes.</li> </ul>
<b>Reproductive Biology</b>	<p>After successfully completing this course, students will be able to:</p> <ul style="list-style-type: none"> <li>• Describe reproductive System and abnormalities of Human Sex Development.</li> <li>• Describe Reproductive Endocrine Disorders in Male and Female.</li> <li>• Describe reproductive cycles in rat and human and their regulation.</li> <li>• Describe mechanism of parturition and its hormonal regulation, Lactation and its regulation.</li> </ul>

	<ul style="list-style-type: none"> <li>• Explain Infertility in male and female and assisted Reproductive Technology.</li> <li>• Understand the modern contraceptive measures and demographic terminology used in family planning.</li> </ul>
<b>Applied Zoology</b>	<p>After successfully completing this course, students:</p> <ul style="list-style-type: none"> <li>• Acquire knowledge of Host parasite relationship.</li> <li>• Know the transmission and Control of diseases such as Tuberculosis, Typhoid, Rickettsia and Spirochetes.</li> <li>• Learn and identify damage caused by crop pests.</li> <li>• Develop knowledge of medical importance and control methods of insect vectors.</li> <li>• Acquire knowledge of Poultry farming.</li> <li>• Learn principles of poultry breeding.</li> <li>• Learn and apply methods of processing and preservation of eggs.</li> <li>• Learn and identify poultry diseases and learned skill for carrier options in poultry farms.</li> </ul>
<b>Comparative Anatomy of Vertebrates</b>	<p>After successfully completing this course, students:</p> <ul style="list-style-type: none"> <li>• Understand comparative account of the different vertebrate systems.</li> <li>• Understand the pattern of vertebrate evolution, organization and functions of various systems.</li> <li>• Learn the comparative account of integument, skeletal components, their functions and modifications in different vertebrates.</li> <li>• Understand the evolution of heart, modification in aortic arches, and structure of respiratory organs used in aquatic, terrestrial and aerial vertebrates, and digestive system.</li> <li>• Learn the evolution of brain, sense organs and excretory organs to a complex, highly evolved form in mammals.</li> </ul>
<b>Molecular Cell Biology and Animal Biotechnology</b>	<p>After successfully completing this course, students:</p> <ul style="list-style-type: none"> <li>• Acquire knowledge of the basic principles, preparations and handling required for animal cell culture.</li> <li>• To get a clear concept of the basic principles and applications of biotechnology.</li> <li>• Know the basic techniques used in genetic manipulation helping them continue with higher studies in this field.</li> </ul>

	<ul style="list-style-type: none"> <li>• Apply knowledge and skills gained in the course to develop new diagnostic kits and to innovate new technologies further in their career.</li> <li>• Enhance their understanding of the various aspects and applications of biotechnology as well as the importance of bio-safety and ethical issues related to it.</li> </ul>
<b>Bio techniques and Biostatistics</b>	<p>After successfully completing this course, students:</p> <ul style="list-style-type: none"> <li>• Learn the working of microtome. Mechanism, Methods of various process micro-technique.</li> <li>• Histo-chemical staining techniques and the procedure of preparing permanent histological slides.</li> <li>• Able to describe education that leads to comprehensive understanding of the principles and practices of bioinformatics.</li> <li>• Learn how to effectively collect data, describe data, and use data to make inferences and conclusions.</li> </ul>
<b>Aquatic Biology</b>	<p>After successfully completing this course, students:</p> <ul style="list-style-type: none"> <li>• Understand Aquatic Biomes such as freshwater ecosystem and Estuaries. This understanding will make you capable of describing and explaining both biological interaction processes and their importance to ecosystems.</li> <li>• Acquire Knowledge of Freshwater Biology.</li> <li>• Understand Physico-Chemical characteristics of lakes and streams.</li> <li>• Understand the structure, functions and abnormalities of endocrine glands.</li> </ul>
<b>Developmental Biology of Vertebrates</b>	<p>After successfully completing this course, students:</p> <ul style="list-style-type: none"> <li>• Understand the development of multi cellular organisms from a single cell zygote.</li> <li>• Learn interesting and unique post embryonic development that happens in other animals.</li> <li>• Identify the developmental stages of animals.</li> <li>• Explain the principles and process of fertilization and cleavage.</li> </ul>
<b>Immunology</b>	<p>After successfully completing this course, students:</p> <ul style="list-style-type: none"> <li>• Describe basic concept of immunology.</li> </ul>

	<ul style="list-style-type: none"> <li>• Explain the importance of phagocytosis and natural killer cells in innate body defense.</li> <li>• Describe the roles of different types of T cells, B cells and APCs.</li> <li>• Discuss the properties of antigens and antibodies.</li> <li>• Understand the hybridoma technology.</li> </ul>
<p align="center"><b>Applied Zoology - II</b></p>	<ul style="list-style-type: none"> <li>• The learner will be able to manage beehives for honey production and pollination.</li> <li>• Knowledge will be useful for providing self-employment to the learner.</li> <li>• The learner will be able to understand the marketing of various bee products.</li> <li>• Students will be able to apply concepts of breeding, physiology, nutrition, health, economics and management into practical and profitable animal production programs.</li> <li>• Understand the artificial production of pearl culture, Prawn culture and aquaculture practices.</li> <li>• Undertake breeding of goats: selection of method- artificial insemination or natural breeding, selection of breeds (exotic/local/crossbreeds) with required characteristics, adherence to good husbandry practices.</li> </ul>
<p><b>Insect Vectors and Histology</b></p>	<p>After successfully completing this course, students:</p> <ul style="list-style-type: none"> <li>• Understand the morphology, life cycle, diseases caused by insect vectors.</li> <li>• Know about symptoms and treatment of diseases caused by insect vectors.</li> <li>• Fundamental understanding of insect pathology.</li> <li>• Understand the Histology of mammalian organs.</li> </ul>

  
**Head,**  
 Department of Zoology  
 Smt. Meenalben Mehta College, Panchgani

  
**H.C. PRINCIPAL**  
 Smt. Meenalben Mehta College, Panchgani  
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 Tal. Mahabaleshwar, Dist. Satara

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Smt. Meenalben Mehta College, Panchgani

(Arts, Commerce & Science)

Department of Zoology



Program Title	Program Outcomes
Zoology	<ul style="list-style-type: none"><li>• Zoology is one of the most fundamental branch of biology to learn and understand animal diversity to appreciate the variability in relation to their morphology, anatomy and behavior among different animals. Students will be equipped to learn and know about different invertebrates and vertebrate systems, their coordination and control.</li><li>• This course will also provide a platform to learn classical genetics to understand distribution of different traits among populations, their inheritance ethnicity and can correlate with contemporary and modern techniques like genomics, metagenomics, genome editing and molecular diagnostic too.</li><li>• Practical and theoretical skills gained in this course will be helpful in designing different public health strategies for social welfare.</li><li>• After completion of graduation with a degree in Zoology, the students have a wide scope in different fields.</li><li>• Apart from pursuing higher studies (master in the subject with specialization in different branches in Zoology), the students can also opt from a variety of related branches of science: Related paramedical fields such as health sciences, Agricultural sciences and Master in Forestry, Master in Food technology and Processing, Wildlife officers Marine Biologist, Professional field such as Poultry, Sericulture, apiculture, Pisciculture, dairy etc.</li></ul>
	<b>Program Specific outcomes</b>
Zoology	After successfully completing this course, students will be able to : <ul style="list-style-type: none"><li>• Understand the nature and basic concepts of Cell Biology, Genetics, Taxonomy, Physiology, Embryology, Ecology and Applied Zoology.</li></ul>

- Gains knowledge about research methodologies, effective communication and skills of problem solving methods.
- Improved the knowledge about animal's special adaptations and evolutionary relationship. Improved information about external morphology and anatomy of animals including human being.
- Take appropriate steps towards conservation of endemic and endangered animal species.
- Develop ability in application of the acquired knowledge to improve applied zoology to make the Nation self-reliant and sufficient.
- Aware about natural resources and their importance in sustainable development. Have ability to engage in independent and life-long learning in the broadest context of technological change.

  
HOD

Department of Zoology,  
Smt. Meenalben Menta College, Panchgani

  
I/C PRINCIPAL

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Tal. Mahabaleshwar, Dist. Satara

## Department of Zoology

<b>Sr. No.</b>	<b>Programme Specific Outcome</b>
PSO 1	Acquisition of knowledge of animal science to the pupils
PSO 2	Acquisition of the knowledge of nutrition, agriculture & live stock in their daily life
PSO 3	Awareness of natural resources and environment
PSO 4	Aptitude for scientific work & ability to pursue studies far beyond graduation
PSO 5	Life science as a career, which is the need now-a-day
PSO 6	Applications of scientific principles for organization of scientific exhibitions and competitions
PSO 7	Presentation skills and confidence in students
PSO 8	Skills in practical work, experiments, laboratory materials & handling of instruments
PSO 9	Interests in the subject
PSO 10	Enhancement of scientific attitude & scientific hobbies
PSO 11	Abilities to apply scientific methods, collection of scientific data, problem solving, Research Paper Writing, etc
PSO 12	Appreciation of the subject, contributions of scientists, scientific methods, scientific programs, etc