Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur

Criterion-II

2.6.1- Programme Outcomes and Course Outcomes

Rayat Shikshan Sanstha's

RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR

Programme Outcomes (POs) and Course Outcomes (Cos)

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Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur

PROGRAMME OUTCOMES (POs), PROGRAMME SPECIFIC OUTCOMES (PSOs) and COURSE OUTCOMES (COs)

PREAMBLE:

Rajarshi Chhatrapati Shahu College, Kolhapur has clear vision about outcome-based education process in accordance with UGC guidelines. Learning Outcomes of the Programs and Courses are highlighted and made aware to the students in the induction ceremony-cum-orientation programme at the beginning of the session. Moreover, it inculcates employability and entrepreneurial skills in the students. The importance of the learning outcomes has been discussed and communicated to the teachers. The curricula under CBCS have been strengthened with the introduction of OBE and the courses have been reinforced with desirable outcomes. Course Outcomes are assessed at the completion of each course and the Programme Outcomes are measured at the time of completion of the programme. OBE enriches the courses offered in each programme, equips the teachers with knowledge and skill, and, empowers the learners with attainable outcomes of the programme. It develops the optimistic attitude in the learners towards vertical development in their future endeavors.

Dr. Khole S.C.D

RAJARSHI CHHATRAPATI SHAHU COLLEGE KOLHAPUR

Principal,
Rajarshi Chh. Shahu Coll.,
Kolhapur.

RAJARSHI CHHATRAPATI SHAHU COLLEGE KOLHAPUR

RAYAT SHIKSHAN SANSTHA'S

RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR

BACHELOR OF ARTS

PROGRAMME OUTCOMES

Students seeking admission for BA programme are expected to imbue with following quality which help them in their future life to achieve the expected goals:-

PO_1: Development of communication and translation skill and understanding of human values, the importance of criticism and the concept and process of literature by studying Marathi, Hindi and English languages.

PO_2: Creating critical approach towards economic and social problems

PO_3: Acquisition of map reading and map filling. They became familiar about the terms and concepts in Physical and human geography.

PO_4: Realization of concept of sustainable resource development at local, regional and global levels.

PO_5: Developing sociological knowledge and skill that will enable them to think critically and analyze the social issues, social structure, social institutions and social inequality.

PO_6: Inculcating values of responsible citizen.

PO_7: Creating innovative sense in their specialized discipline.

PO_8: Analyzing political socialization through political education for the students. Students get information about Democratic values such as Equality, fraternity, Liberty and Justice.

PO_9: Acquiring skills of physical education.

In-charge
Arts Faculty

RAJARSHI CHHATRAPATI SHAHU COLLEGE KOLHAPUR

Principal,
Rajarshi Chh. Shahu College
Kolhapur.

RAYAT SHIKSHAN SANSTHA'S

RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR

PROGRAMME OUTCOMES

Bachelor of Commerce

After completion of the Program, the students will be able to....

PO_1. Became well trained professionals in Industries, Banking Sectors, Insurance Companies, Financing companies, Transport Agencies, Warehousing etc., to meet the industry requirements.

PO_2. Generate skills regarding various aspects like Marketing Manager, Selling Manager, over all Administration abilities of the Company.

PO_3. Increase their capability to make decisions at personal & professional level.

PO_4. Start up their own business independently.

PO_5. Explain thorough knowledge of finance and commerce.

PO_6. Understand various applications in Accounting, costing, banking and finance.

Bachelor of Commerce-Information Technology

After completion of the Program, the students will be able to....

PO_1. Acquiring skills of IT fundamentals.

PO_2. Enhance the practical knowledge of book keeping and accounting with computers.

PO_3. Enable to Work with MS-Office and Tally. On successful completion of this course, the student should be able to work efficiently in Ms-PowerPoint, Ms-Access and Tally.

PO_4. Development of employability skills for the workplace with effective written and oral communication skills.

In-charge
Commerce Faculty

RAJARSHI CHHATRAPATI SHAHU COLLEGE KOLHAPUR

Principal,
Rajarshi Chh. Shahu College
Kolhapur.

RAYAT SHIKSHAN SANSTHA'S

RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR

BACHELOR OF SCIENCE

PROGRAMME OUTCOMES

After successful completion of three year degree program in Science students are able to:

PO 1: Inculcate scientific thinking and awareness and ability to use necessary current techniques, skills, and modern tools.

PO 2: Develop scientific intuition, ability and techniques to tackle problems either theoretical or experimental in nature.

PO 3: Recognize the impact of scientific solutions on societal and environmental contexts and demonstrate knowledge of and need for sustainable development.

PO 4: Develop scientific attitude and make the students open minded, critical, curious.

PO 5: Develop skill in practical work, experiments and laboratory materials and equipment along with the collection and interpretation of scientific data to contribute the science.

PO 6: Provide practical experience to the students as a part of the course to develop scientific ability to work in the field of research and other fields of their own interest and to make them fit for society.

PO 7: Explain natural phenomenon, manipulation of nature and environment in the benefit of human beings.

PO 8: Develop ability for the application of the acquired knowledge to improve agriculture and other related fields to make the country self- reliant and sufficient.

PO 9: Create the interest of the society in the subject and scientific hobbies, exhibitions and other similar activities.

PO 10: Execute social competence including listening, speaking, observational, effective interactive skills and presenting skills to meet global competencies.

In-charge
Science Faculty

RAJARSHI CHHATRAPATI SHAHU COLLEGE KOLHAPUR

Principal,
Rajarshi Chh. Shahu College
Kolhapur.

Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur

Department of English

Name of Program: Bachelor of Arts (BA)

Academic Year 2024-25

Program Outcomes:

After completion of this Program students will be able to:

PO1: Comprehend the basic concepts, fundamental principles and various theories in their relevant subjects.

PO2: Develop scientific temper not only with respect to subjects of study but also in all aspects related to human life.

PO3: Integrate learning skills and knowledge derived from the study of their respective subjects, by acquiring the profound knowledge in the field.

PO4: Articulate and apply values, principles and ideals derived from an individual as well as integrated understanding of their areas of study.

PO5: Communicate interpretations, implications and conclusions clearly, concisely and effectively.

PO6: Sensitize the students regarding gender equality and environmental issues.

PO7: Develop employability skills by enriching linguistic competence and interpersonal skills.

PO8: Analyze critically the literature in relation to social issues and appreciate the strength and suggest the improvements for better results.

PO9: Integrate study of literature and social sciences to make the life more happy and meaningful.

PO10: Imbibe basic skills in language and literature.

Head
Dept. of English

HEAD
Department of English
Rajarshi Chh. Shahu College, Kolhapur

Prof. P. B. Piste
In-Charge (POs, PSOs & Cos)

Principal
I/C PRINCIPAL
R.C. SHAHU COLLEGE
KOLHAPUR

RAJARSHI CHHATRAPATI SHAHU COLLEGE KOLHAPUR

Program Specific Outcomes:

After completion of B. A. English Program the students would be able to:

PSO1: Interpret literary works and explore the scope in the field of research.

PSO2: Enhance employability of the students by developing their linguistic competence and communicative skills.

PSO: Familiarize students with various forms of literature like prose, poetry, drama and fiction

PSO4: Use English effectively in formal and informal situations.

PSO5: Become academicians, critics, creative writers, journalistic and administrators.

Course Outcomes:

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

B.A. Part I Semester I

Ability Enhancement Compulsory Course (AEC-1)

Compulsory English (CBCS)

CO1: Analyze and enrich vocabulary in English.

CO2: Comprehend and apply use of present and past tenses and types of sentences.

B.A. Part I Semester II

Ability Enhancement Compulsory Course (AEC-2)

Compulsory English (CBCS)

CO3: To enable students to describe the objects and things

CO4: Imbibe the human values through the prescribed texts.

CO5: Enhance the reading habit and comprehension skills.

CO6: To assist students to describe daily routine and processes

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B.A. Part I Semester I

DSC-1(Discipline Specific Course-1)

Introduction to English Literature (Short Stories) and Language (Word Classes)-I

CO7: Students will be able to understand the concept, elements and characteristics of short story, as a form of literature.

CO8: Students will be able to comprehend and analyze the prescribed short stories.

CO9: Students will be able to understand and analyze the structure of word classes.

B.A. Part I Semester II

Discipline Specific Course (DSC-2)

Introduction to English Literature (Poetry) and Language (Morphology)-II

CO10: Students will be able to understand various forms of poetry

CO11: Students will be able to appreciate and analyze the prescribed poems

CO12: Students will be able to comprehend and implement Morphological analysis and identify morphological process.

B.A. Part I Semester I

Open Elective Course (OE-1)

Basic English Usage

CO13: To revise the basic knowledge of grammatical components of English language

CO14: To develop accurate usage of English words such as nouns, pronouns, adjectives

CO15: To help students understand and use subject –verb concord with accuracy

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B.A. Part I Semester II

Open Elective (OE-2)

Improving Reading Comprehension in English

CO16: To make the students understand the linguistic and semantic coherence in texts

CO17: To enable students to identify the use of vocabulary and grammatical structure to comprehend texts

CO18: To develop the reading techniques of skimming and scanning among students

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B.A. Part I Semester I

Skill Enhancement Course (SEC-1)

Conversational Skills in English (SEC 01)

CO19: Learn the importance of conversational skills in English

CO20: Providing ample opportunities to the students to practice their conversational skills

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B.A. Part I Semester II

Skill Enhancement Course (SEC-2)

Developing Writing Skills in English- 02

CO21: Introduce various writing tips and techniques

CO22: Providing students ample opportunities to practice their writing skills

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B.A. Part II Semester III (Revised in 2023)

Ability Enhancement Compulsory Course (AECC)

Compulsory English (CBCS)

CO23: Develop communication skills in English, both oral and written

CO24: Students get equipped with the language skills for use in their personal, academic and professional lives

CO25: Students develop essential employability skills

B.A. Part II Semester IV (Revised in 2023)

Ability Enhancement Compulsory Course (AECC)

Compulsory English (CBCS)

CO26: Learn and practice both language and soft skills.

CO27: Students cultivate a broad, human and cultured outlook

CO28: Get actively involved in learning process and Students cultivate a broad, human and cultured outlook.

B.A. Part II Semester III (Revised in 2023)

Discipline Specific Core (DSC-C5) Paper III

Literature and Cinema (CBCS)

CO29: Analyze and interpret films through adaptation concept.

CO30: Compare and contrast the text by interpreting film and the adapted text.

B.A. Part II Semester IV (Revised in 2023)

Discipline Specific Core (DSC-C29) Paper V

Literature and Cinema (CBCS)

CO31: Comprehend the issues and practices of cinematic adaptations.

CO32: To understand and analyze the film review.

CO33: Critically apply the adaptation theories in practice.

B.A. Part II Semester III (Revised in 2023)

Discipline Specific Core (DSC-C6) Paper IV

Partition Literature (CBCS)

CO34: Understand the aftermaths of partition.

CO35: Analyze short stories and novel with reference to partition theory.

CO36: Summarize and contextualize the events and opinions surrounding the Partition of India.

B.A. Part II Semester IV (Revised in 2023)

Discipline Specific Core (DSC-C30) Paper VI

Partition Literature (CBCS)

CO37: Imbibe the values of peace, non-violence, communal harmony and brotherhood.

CO38: Comprehend the selected texts from the historical perspective.

B.A. Part II Semester III (Revised in 2025)

SEC Course

Communicative English – I

CO39: Students will be able to understand personal communicative skills.

CO40: Students will be able to understand professional communicative skills.

B.A. Part II Semester III (Revised in 2025)

SEC Course:

Business Communication and Presentation Skills

CO41: Students will be able to recognize and engage in different types of business communication activities.

CO42: Students will be able to prepare Power-point presentations.

B.A. Part III Semester V

Ability Enhancement Compulsory Course (AECC-5)

Compulsory English (CBCS)

CO43: Demonstrate effective use of oral and written communication skills

CO44: Develop Interview techniques for confident and efficient presentation.

CO45: Enrich soft skills required at workplaces and in real life.

B.A. Part III Semester VI

Ability Enhancement Compulsory Course (AECC-6)

Compulsory English (CBCS)

CO46: Respect others' opinions and views and develop democratic attitude in Group Discussions.

CO47: Develop a fine literary sensibility to analyze prose and poetry.

CO48: Inculcate human values and develop cultured outlook.

B.A. Part III Semester V

Discipline Specific Core (DSC-E136) Paper VII

Introduction to Literary Criticism (CBCS)

CO49: Interpret literary works and develop aptitude for critical analysis.

CO50: Critically interpret representative literary texts in diverse contexts.

CO51: Describe various literary and critical movements and literary terms.

B.A. Part III Semester VI

Discipline Specific Core (DSC-E136) Paper XII

Introduction to Literary Criticism (CBCS)

CO52: Apply critical and theoretical approaches to the poetry of the past and the present.

CO53: Explain contributions of contemporary critics.

B.A. Part III Semester V

Discipline Specific Core (DSC-E137) Paper VIII

English Poetry (CBCS)

CO54: Analyze the poetic expressions of the poets from diverse Socio-cultural contexts.

CO55: Demonstrate comprehensive view of the Western and Eastern poetic tradition as well as various literary movements.

B.A. Part III Semester VI

Discipline Specific Core (DSC-E137) Paper XIII

English Poetry (CBCS)

CO56: Comprehend various forms of poetry.

C057: Critically appreciate and analyze the given poems.

CO58: Analyze various elements of poetry, such as diction, tone, form, genre, imagery, figures of speech. symbolism, theme, etc.

B.A. Part III Semester V

Discipline Specific Core (DSC-E138) Paper IX

English Drama (CBCS)

CO59: Studying different aspects of drama, its development throughout the ages.

CO60: Understand the representative British and Indian English Dramatists from diverse backgrounds and time span

CO61: Interpret the thematic and stylistic elements of the plays

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B.A. Part III Semester VI

Discipline Specific Core (DSC-E138) Paper XIV

English Drama (CBCS)

CO62: Comprehend drama to appreciate the nuances in literature.

CO63: Demonstrating understanding of social and artistic movements shaping Indian theatrical tradition.

B.A. Part III Semester V

Discipline Specific Core (DSC-E139) Paper X

English Novel (CBCS)

CO64: Explain rise and development of novel.

CO65: Critically study the ideological or socio-political contexts.

CO66: Learn historical contexts, psycho-social aspects and discern the various cultural and moral values associated with the prescribed texts.

B.A. Part III Semester VI

Discipline Specific Core (DSC-E139) Paper XV

English Novel (CBCS)

CO67: Explain various aspects of the novel.

CO68: Analyses characters in novel.

B.A. Part III Semester V

Discipline Specific Core (DSC-E140) Paper XI

Language and Linguistics (CBCS)

CO69: Familiarize students with the concepts of phonetic transcriptions, stress and intonation.

CO70: Identify elements and types of clauses and phrases

B.A. Part III Semester VI

Discipline Specific Core (DSC-E140) Paper XVI

Language and Linguistics (CBCS)

CO71: Develop linguistic and grammatical competence.

CO72: Understand and apply various facets of English grammar.

CO73: Compare varieties of the English language.

B.A. Part III Semester VI

Skill Enhancement Course (SEC)

Interview and Personal Presentation Skills

CO74: To prepare and enable students for interview.

CO75: To acquaint the students with the skill of presentation skills.

B.Sc. Part III Semester V

Ability Enhancement Compulsory Course (AECC-C) Compulsory English (CBCS)

English for Communication

CO76: Communicate in English, in oral and written modes.

CO77: Illustrate skills useful to face job interviews confidently and efficiently.

CO78: Demonstrate soft skills required at workplaces and in real life.

B.Sc. Part III Semester VI

Ability Enhancement Compulsory Course (AECC-D) Compulsory English (CBCS)

English for Communication

CO79: Use written communication skills for media writing.

CO80: Analyze poetry and prose passages.

CO81: Imbibe human values.

B.Com. Part I Semester I

Ability Enhancement Compulsory Course (AECC-A) - Compulsory English (CBCS)

English for Business Communication

CO82: Demonstrate effective use of vocabulary.

CO83: To familiarize students with the drafting of creative advertisements for commercial products in a frame using slogans.

CO84: Comprehend human values through the prescribed Prose and poetry.

B.Com. Part I Semester II

Ability Enhancement Compulsory Course (AECC-B) - Compulsory English (CBCS)

English for Business Communication

CO85: Enrich four basic skills of English language (LSRW)

CO86: Become proficient in oral and written communication.

CO87: Develop a fine literary sensibility.

B.Com. Part II Semester III

Ability Enhancement Compulsory Course - Compulsory English (CBCS)

English for Business Communication

CO88: Use oral and written communication skills in English.

CO89: Explain the banking correspondence with usage of English.

B.Com. Part II Semester IV

Ability Enhancement Compulsory Course - Compulsory English (CBCS)

English for Business Communication

CO90: Demonstrate confidence and other soft skills required in job market.

CO91: Analyze prose and poetry.

CO92: Inculcate human values and develop cultured outlook.

RAYAT SHIKSHAN SANSTHA'S

RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR.

2024-25

PROGRAME OUTCOMES (PO)

Department Of Marathi

शिक्षणामुळे विद्यार्थ्यांच्या ज्ञानात भर पडून सर्वांगीण विकास अपेक्षित आहे.

PO 1.विद्यार्थ्यांमध्ये भाषाविषयक मूलभूत कौशल्ये वाढीस लागतील.

PO 2.विद्यार्थ्यांमध्ये सर्जनशील लेखनाची क्षमता विकसित होईल.

PO 3.विद्यार्थ्यांचा शब्दसंग्रह वाढेल.

PO 4.विश्लेषण आणि मूल्यमापणात्मक दृष्टिकोण येईल.

PO 5.समीक्षात्मक व परीक्षणात्मक दृष्टिकोण विकसित होईल.

PO 6.भाषेतील व्याकरणीक संकल्पनांची ओळख होईल.

PO 7.संवाद कौशल्य विकसित होईल.

PO 8.भाषिक कौशल्याच्या अधारे अहवाल लेखन, निबंधलेखन, कार्यालयीन पत्रव्यवहार करता येईल.

PO 9.मुद्रितशोधन, संपादनासारख्या व्यावसायिक कौशल्यांचा विकास साधता येईल.

PO 10.विद्यार्थ्यांच्या व्यक्तिमत्वाचा सर्वांगीण विकास होईल.

H.O.D
Department of Marathi

RAJARSHI CHHATRAPATI SHAHU COLLEGE KOLHAPUR

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Kolhapur.

RAYAT SHIKSHAN SANSTHA'S

RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR

PROGRAMME SPECIFIC OUTCOMES (PSOs)

Department Of Marathi

पदवीनंतर विद्यार्थी विद्यानिष्णात व पारंगत होऊ शकेल.

PSO 1 मराठी भाषा साहित्याभ्यास व संशोधनास प्रोत्साहन मिळेल.

PSO 2 विद्यार्थ्यांच्या साहित्यिक कौशल्यांना चालना मिळेल.

PSO 3 राष्ट्रासाठी संवेदनशील, विद्वान, सुसंस्कृत आणि आदर्श नागरिक निर्माण होईल.

PSO 4 मराठीच्या विविध बोलीभाषेतील शब्दनिधीच्या संकलनास व संशोधनास प्रोत्साहन मिळेल.

PSO 5 सर्जनशील लेखन आणि भाषिक कौशल्यांच्या उपयोजनासाठी तत्पर होईल.

PSO 6 पर्यटन, मुद्रण, संपादन, सूत्रसंचालन आदी व्यावसायिक क्षेत्रात काम करताना आवश्यक भाषिक कौशल्ये आत्मसात होतील.

PSO 7 दैनंदिन व्यवहारात भाषिक ज्ञानाचे मूल्यमापण करणे शक्य होईल.

PSO 8 भाषेचे व्याकरणीक विश्लेषण व मूल्यमापन करण्याची क्षमता विकसित होईल.

PSO 9 साहित्याच्या अभ्यासामुळे आकलन क्षमता वाढते.

PSO 10 वैचारिकतेच्या विकासाबरोबर तौलनिक दृष्टिकोण येईल.

PSO 11 समजूतदारपणा वाढीस लागून विद्यार्थी सक्षम होईल आणि आदर्श निर्माण करेल.

H.O.D
Department of Marathi

RAJARSHI CHHATRAPATI SHAHU COLLEGE KOLHAPUR

Principal,
Rajarshi Chh. Shahu College
Kolhapur.

OPEN Elective (OE-1)

Marathi Course-A Semester-I

Course Name: मराठी भाषेचे अंतरंग

Course Outcom (COs)

CO1 विद्यार्थ्यांच्यामध्ये भाषाविषयक अभिरूची निर्माण होईल.

CO2 भाषेचा इतिहास भूगोल आणि परंपरांचा परिचय होईल.

CO3 विद्यार्थ्यांमध्ये मराठी भाषेतील विविध लेखन प्रकारांचा परिचय होईल.

SKILL ENHANCEMENT (SE-1)

Marathi Course-A Semester-I

Course Name: व्यक्तिमत्त्व विकास आणि भाषिक कौशल्य

Course Outcom (COs)

CO4 व्यक्तिमत्त्वाची संकल्पना, व्याप्ती आणि विकास याचे आकलन होईल.

CO5 व्यक्तिमत्त्व विकासासाठीची कौशल्य विकसित होतील.

CO6 वक्तृत्त्व व वादविवाद कौशल्यावर प्रभुत्त्व संपादन होईल.

Discipline Specific Core (DSC-1)

Marathi Course -1 Semester-I

पाठ्यपुस्तक – रुजुवात भाग -१

Course Outcom (COs) :

CO7 मराठी वाङ्मयीन परंपरा, साहित्यप्रवाह आणि साहित्यकृर्तींचा परिचय होईल.

CO8 मराठी साहित्यातील विविध रचनाबंधांचा परिचय होईल.

CO9 साहित्याचे आकलन, विश्लेषण आणि अभिरुचीची दृष्टी विकसित होईल.

CO10 साहित्याच्या अध्ययनातून जीवनाच्या प्रेरणा कळतील आणि जीवनाचे आकलन समृध्द होईल.

CO11 इतिहास, समाज, संस्कृती आणि पर्यावरण संवर्धनाचे डोळस भान येईल.

CO12 मराठीतील समृध्द काव्यपरंपरेचा परिचय होईल.

OPEN Elective (OE-2)

Marathi Course-B Semester-II

पाठ्यपुस्तक – साहित्याची रूपे

Course Outcom (COs) :

CO13 विद्यार्थी मराठी भाषेतील प्राचीन व आधुनिक मराठी साहित्यरचनांचा परिचय करून घेतील.

CO14 मराठीतील विविध साहित्य प्रकारांचा परिचय होईल.

CO15 विद्यार्थ्यामध्ये वाङ्मयनिर्मिती आणि वाचनविषयक अभिरुची निर्माण होईल.

SKILL ENHANCEMENT (SE-02)

Marathi Course-B Semester-II

Course Name: व्यक्तिमत्त्व विकास आणि भाषिक कौशल्य

Course Outcom (COs)

CO16 वाचन कौशल्यावर प्रभुत्त्व संपादन होईल.

CO17 व्यावहारिक, वैचारिक व सर्जनशील लेखन कौशल्य अवगत होईल.

CO18 भाषिक कौशल्यांचा व भाषिक सर्जनशीलतेचा विकास होईल.

Discipline Specific Core (DSC-2)

Marathi Course -2 Semester-II

साहित्यकृती – रुजुवाती भाग 02

Course Outcom (COs) :

CO19 मराठी वाङमयीन परंपरा, साहित्यप्रवाह आणि साहित्यकृतींचा परिचय होईल.

CO20 मराठी साहित्यातील विविध रचनाबंधांचा परिचय होईल.

CO21 साहित्याचे आकलन, विश्लेषण आणि अभिरुची दृष्टी प्राप्त होईल.

CO22 साहित्याच्या अध्ययनातून जीवन प्रेरणा कळतील आणि जीवनाचे आकलन समृध्द होईल.

CO23 स्थळवर्णने, व्यक्तिचित्रणे यामधून माणूस आणि भवताल यांचे आकलन होईल.

Discipline Specific Core (DSC-C1)

Marathi Course -3 Semester-III

साहित्यकृती : देवबाभळी (नाटक)

प्राजक्त देशमुख, पॉप्युलर प्रकाशन मुंबई, २०१८

Course Outcom (COs) :

CO24 नाटक वाङ्मय प्रकाराचे आकलन करून घेता येईल.

CO25 समकालीन नाटकातून नाटककाराच्या समकालाचे प्रतिबिंब कशा प्रकारे प्रकट होते याचा अभ्यास करता येईल.

CO26 नाट्याभ्यासाद्वारे प्रयोगरूप नाटक व नाट्यक्षेत्रातील ज्ञानसंपादनास चालना मिळेल.

CO27 नाट्याभ्यासातून सभ्यता, संस्कृती, राष्ट्रीय एकात्मता व बंधुता वाढीस लागेल.

CO28 विद्यार्थ्यांना नाटक या वाङमय प्रकारचे ज्ञान होईल.

CO29 विद्यार्थ्यांच्यात संवादलेखन कौशल्ये विकसित होईल.

Discipline Specific Core (DSC-C2)

Marathi Course -4 Semester-III

साहित्यकृती : पक्ष्यांचे लक्ष थवे (ना.धो.महानोर)

पॉप्युलर प्रकाशन, मुंबई.

Course Outcom (COs) :

CO30 मराठी काव्यपरंपरा व प्रवाहांची ओळख पटेल.

CO31 मराठी काव्यातून प्रकट होणारे माणूस आणि समाजातील परस्पर संबंध शोधता येतील.

CO32 कवितेच्या कलात्मक आकृतिबंधाचे मोल अभ्यासता येतील.

CO33 काव्यप्रवाहानुरूप काव्यलेखनाचे विशेष अभ्यासता येतील.

CO34 विद्यार्थ्यांना निसर्गविषयक कविता अभ्यासता येईल.

CO35 प्रात्यक्षिकाद्वारे काव्यलेखन कौशल्ये रुजतील.

Discipline Specific Core (DSC-C25)

Marathi Course -5 Semester-IV

साहित्यकृती : चांदण्यात भिजायचं राहून जाऊ नये म्हणून (ललितगद्य)

आ.ह.साळुंखे, लोकायत प्रकाश, सातारा.

Course Outcom (COs) :

CO36 ललितगद्य या वाङ्मयप्रकाराची ओळख होईल.

CO37 इतर वाङ्मय प्रकार आणि ललितगद्य यातील अभिव्यक्तीरूपांचा अभ्यास होईल.

CO38 ललित लेखकाच्या व्यक्तिमत्त्वाची जडणघडण आणि त्याचा समकाल जाणून घेता येईल.

CO39 वेगवेगळ्या भारतीय प्रांतातील व परदेशातील जीवनदर्शन समजून घेता येईल.

CO40 ललित साहित्याचे स्वरूप लक्ष्यात येईल.

CO41 ललित लेखनकौशल्ये विकसित होतील.

Discipline Specific Core (DSC-C26)

Marathi Course -6 Semester-IV

साहित्यकृती : बनगरवाडी (कादंबरी)

व्यंकटेश माडगूळकर, मौज प्रकाशन, मुंबई.

Course Outcom (COs) :

CO42 कादंबरी या वाङ्मयप्रकाराची ओळख होईल.

CO43 समकालीन कादंबरीतील नव्या अवकाशाचा शोध घेणे व आधुनिकते मधील अंतर्विरोध समजेल.

CO44 मानवी मूल्यांविषयी जाणीव निर्माण होईल.

CO45 कादंबरीतून संस्कृतीवर व समाजजीवनावर प्रकाश पडला आहे काय जाणता येईल.

CO46 कादंबरी लेखनाचे विशेष अभ्यासता येणार.

CO47 ग्रंथास्वादाची कौशल्ये रुजतील.

Discipline Specific Core (DSC-E1)

Marathi Course -7 Semester-V

साहित्यविचार

Course Outcom (COs) :

CO48 पौर्वात्य काव्यशास्त्राची ओळख होईल.

CO49 पाश्चात्य व आधुनिक भारतीय साहित्याचा परिचय होईल

CO50 ललित व ललितेतर साहित्याचे स्वरूप समजू शकेल.

CO51 काव्याची लक्षणे आणि प्रयोजने समजतील.

CO52 साहित्याची निर्मिती प्रक्रिया आणि स्वरूप जाणून घेता येईल.

CO53 भाषेचे 'अलंकार' समजतील.

Discipline Specific Core (DSC-E2)

Marathi Course -8 Semester-V

मराठी भाषा व भाषाविज्ञान

Course Outcom (COs) :

CO54 आधुनिक भाषाविज्ञानाचा परिचय होईल.

CO55 भाषाविज्ञान आणि मराठी भाषा यांचा सहसंबंध उमगेल.

CO56 भाषेची उत्पत्ती, स्वरूप, कार्य समजेल.

CO57 स्वनविचार आणि रुपविचार यांचा परिचय होईल.

CO58 मराठी भाषेची वर्णव्यवस्था समजेल.

CO59 मराठी भाषेबद्दलची विद्यार्थ्यांची आवड विकसित होईल.

Discipline Specific Core (DSC-E3)

Marathi Course -9 Semester-V

मध्ययुगीन मराठी वाङ्मयाचा इतिहास (प्रारंभ ते इ.स.१५००)

Course Outcom (COs) :

CO60 मध्ययुगीन मराठी वाङ्मय परंपरांचा व इतिहासाचा परिचय होईल.

CO61 या कालखंडातील वाङ्मय रचना प्रकारांचा परिचय घडेल.

CO62 या कालखंडातील वाङ्मय निर्मितीच्या प्रेरणांचा परिचय होईल.

CO63 या कालखंडातील वाङ्मयाच्या सांस्कृतिक पार्श्वभूमीचा उलगडा होईल.

CO64 या कालखंडातील प्रमुख संप्रदाय व ग्रंथनिर्मिती यांचा अनुबंध स्पष्ट करता येतील.

CO65 या काळातील मराठी भाषेचे स्वरूप स्पष्ट करणे शक्य होईल.

Discipline Specific Core (DSC-E4)

Marathi Course -10 Semester-V

मराठी भाषा व अर्थार्जनाच्या संधी

Course Outcom (COs) :

CO66 सर्जनशील लेखनप्रक्रिया समजून घेता येईल.

CO67 वैचारिक लेखनाचे स्वरूप लक्षात येईल.

CO68 वैचारिक लेखनाची आणि ललित लेखनाची तुलना करता येईल.

CO69 लेखन, वाचन, भाषण या कौशल्यांचा विकास होईल.

CO70 शोधनिबंध व प्रकल्पलेखन कौशल्य विकसित होईल.

CO71 अंतरजालावरील मराठी लेखन पद्धतीचे आकलन होईल.

Discipline Specific Core (DSC-E5)

Marathi Course -11 Semester-V

वाङ्मय प्रकाराचा अभ्यास : अनुभवकथन

साहित्यकृती :एका लोकलढ्याची यशोगाथा -संपत देसाई, शब्द पब्लिकेशन्स २०१७

Course Outcom (COs) :

CO72 अनुभवकथन या लेखन प्रकाराची माहिती होईल.

CO73 विकास प्रकल्पांची वास्तविकता समजून येईल.

CO74 विकासप्रकल्पांमध्ये विस्थापित होणाऱ्या लोकसमूहांचे प्रश्न समजतील.

CO75 धरणप्रकल्पांमध्ये ऱ्हास होणाऱ्या पर्यावरणीय व नैसर्गिक संसाधनांबद्दल सजगता निर्माण होईल.

CO76 सामाजिक चळवळी, विकास धोरण, विस्थापन आणि वाङ्मय यांच्यातील सहसंबंध लक्षात येतील.

CO77 अनुभवकथन स्वरूपाचे लेखन करता येईल.

Discipline Specific Core (DSC-E126)

Marathi Course -12 Semester-VI

साहित्यविचार

Course Outcom (COs) :

CO78 शब्दशक्तीचे स्वरूप व प्रकार समजतील.

CO79 साहित्यातील रसप्रक्रिया समजेल.

CO80 साहित्याची आस्वाद प्रक्रिया समजून येईल.

CO81 साहित्यनिर्मितीच्या आणि आस्वादाच्या आनंदाची मीमांसा करता येईल.

CO82 विद्यार्थ्यांचा वाङ्मयीन दृष्टिकोण विकसित होईल.

CO83 भाषेतील छंद व वृत्ते यांचा अभ्यास करता येईल.

Discipline Specific Core (DSC-E127)

Marathi Course -13 Semester-VI

मराठी भाषा व भाषाविज्ञान

Course Outcom (COs) :

CO84 मराठी भाषेची वर्णव्यवस्था समजू शकेल.

CO85 ध्वनी व अर्थपरिवर्तनाच्या कारणांची व प्रकारांची माहिती होईल.

CO86 प्रमाण भाषेविषयी माहिती होईल.

CO87 मराठीची शब्दव्यवस्था (शब्दांच्या जाती) समजतील.

CO88 बोलींचे स्वरूप व विशेष समजून येईल.

CO89 विद्यार्थ्यांमध्ये मराठी भाषेबद्दलची आवड विकसित होईल.

Discipline Specific Core (DSC-E128)

Marathi Course -14 Semester-VI

मध्ययुगीन मराठी वाङमयाचा इतिहास (प्रारंभ ते इ.स.१५०० ते इ.स.१८००)

Course Outcom (COs) :

CO90 मध्ययुगीन मराठी वाङ्मयीन परंपरांचा व इतिहाचा परिचय होईल.

CO91 मध्ययुगीन कालखंडातील वाङ्मय रचना प्रकारांचा जाणून घेता येतील.

CO92 मध्ययुगीन कालखंडातील वाङ्मय निर्मितीच्या प्रेरणांचा परिचय होईल.

CO93 मध्ययुगीन कालखंडातील वाङ्मयातील सांस्कृतिक पार्श्वभूमीचा उलगडा होईल.

CO94 मध्ययुगीनकालखंडातील प्रमुख संप्रदाय व ग्रंथनिर्मिती यांचा अनुबंध स्पष्ट करता येईल.

CO95 मध्ययुगीन काळातील मराठी गद्य, पद्य रचनेचे विशेष लक्षात येईल.

Discipline Specific Core (DSC-E129)

Marathi Course -15 Semester-VI

मराठी भाषा व अर्थार्जनाच्या संधी

Course Outcom (COs) :

CO96 प्रसारमाध्यमांतील अर्थाजनाच्या संधी आणि भाषिक कौशल्यांची आवश्यकता ठाऊक होईल.

CO97 औपचारिक आणि अनैपचारिक क्षेत्रानुसार भाषिक व्यवहार करता येईल.

CO98 विविध क्षेत्रातील भाषिक कौशल्ये आणि क्षमता विकसित होतील.

CO99 मुद्रितशेधनाच्या उपयोजनासाठी आवश्यक क्षमता विद्यार्थ्यांमध्ये विकसित होतील.

CO100 उपयोजित व सर्जनशील लेखनास विद्यार्थ्यांचा शब्दसंग्रह समृद्ध होईल.

CO101 मुलाखत,संपादन, परीक्षण, ब्लॉगलेखन, संवादलेखन, अशा भाषिक आकृतिबंधाचा परिचय होईल.

Discipline Specific Core (DSC-E130)

Marathi Course -16 Semester-VI

वाङ्मय प्रवाहाचे अध्ययन : वैचारिक साहित्य

साहित्यकृती : 'स्त्री पुरुष तुलना' (ताराबाई शिंदे)

Course Outcom (COs) :

CO102 वैचारिक साहित्याचे स्वरूप विशेष सांगता येईल.

CO103 स्त्रीवादाची संकल्पना, स्वरूप, विशेष सांगता येईल.

CO104 स्त्रियांच्या वैचारिक वाङ्मयाचा अभ्यास करता येईल.

CO105 'ताराबाई शिंदे' यांच्या जीवनप्रेरणा व लेखनविशेष सांगता येतील.

CO106 'स्त्री-पुरुष तुलना' ग्रंथाचा आशय समजेल.

CO107 'साहित्य समाज आणि संस्कृतीचे' स्त्रीवादी पुनर्वाचन करतील.

Rayat Shikshan Sanstha's

RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR

Department of Hindi

PROGRAMME OUTCOMES

2024-25

❖ **B.A. Hindi Program Outcomes :-**

PO1. सामाजिक विज्ञान, साहित्य और मानविकी के क्षेत्र में ज्ञान प्राप्त करते हैं, जो उन्हें संवेदनशील एवं सम्मान प्राप्त मनुष्य बनने में सहाय्यक हुआ |

PO2. सामाजिक, आर्थिक, ऐतिहासिक, भौगोलिक, राजनीतिक, वैचारिक और दार्शनिक परंपरा और सोच से समाज के समक्ष अभिव्यक्त करने की क्षमता निर्माण हुई |

PO3. विभिन्न प्रतियोगी परीक्षाओं के लिए उपस्थित होने या अपनी पसंद के स्नातकोत्तर कार्यक्रम का चयन करने का अधिकार निर्माण हुआ

PO4. साहस और मानवता के साथ जीवन में विभिन्न समस्याओं से निपटने के लिए आधार तैयार करने वाले मानवीय मूल्यों के अध्ययन और चिंतन से सक्षम बनाता है |

PO5. मानव जीवन में व्याप्त विभिन्न मुद्दों के समाधान के लिए सोचने और कार्य करने के लिए पर्याप्त प्रज्वलित हुआ

PO6. जिम्मेदार नागरिक होने के लिए आवश्यक चिंतनशीलता के लिए सहायक सिद्ध हुआ

❖ **B.A. Hindi Program Specific Outcomes :-**

POS1. हिंदी साहित्य के विविध विधाओं की अभिव्यक्ति करने में सक्षम (कहानी, उपन्यास, नाटक, संस्मरण, काव्य आदि) |

POS2. हिंदी साहित्य के माध्यम से छात्रों में सामाजिक प्रतिबद्धता का निर्माण |

POS3. हिंदी लेखन और संप्रेषण के कौशल्य में बढोतरी |

POS4. भाषिक ज्ञान में वृद्धी |

POS5. प्रभावी संप्रेषण और रोजगार में सहाय्यक |

POS6. हिंदी साहित्य के माध्यम से जीवन तथा मानवी मूल्यों को व्यक्त |

Course Outcomes

- **बी. ए भाग 1 SEC – पत्रकारिता / समाचार लेखन, OE – प्रयोजनमूलक हिंदी और कविताएँ / कहानियाँ**

CO1. पत्रकारिता विधा का परिचय एवं महत्व ज्ञात हुआ |

CO2. छात्रों में पत्रकारिता विधा में कार्य करने की रुचि निर्माण हुई |

CO3. प्रयोजनमूलक हिंदी के प्रति छात्रों में रुचि निर्माण हुई |

CO4. छात्रों में साहित्य के माध्यम से नैतिक मूल्य, राष्ट्रीय मूल्य एवं उत्तरदायित्व के प्रति आस्था निर्माण हुई |

CO5. समाचार लेखन निर्मिती की प्रक्रिया का बोध हुआ |

- **बी. ए भाग 1 पेपर 1 – आधुनिक हिंदी साहित्य - I**

CO6. हिंदी साहित्य आस्वादन तथा मूल्यांकन क्षमता का विकास हुआ |

CO7. मानवी मूल्यों को अभिव्यक्त करने में सहाय्यक सिद्ध हुआ |

CO8. हिंदी भाषा के श्रवण, पठन एवं लेखन कौशल्य निर्माण हुए

CO9. कविता एवं कहानी विधा का आस्वाद एवं तात्विक विवेचन तथा महत्व को समझा

CO10. नैतिक मूल्य, राष्ट्रीय मूल्य एवं उत्तरदायित्व के प्रति आस्था निर्माण हुई |

- बी. ए भाग 1 पेपर 2 _आधुनिक हिंदी साहित्य _ II

CO11. उपन्यास: आस्वाद एवं तात्विक विवेचन क्षमता का विकास हुआ

CO12. छात्रों की विचार क्षमता तथा कल्पनाशीलता का विकास हुआ।

CO13. संप्रेषण कौशल विकसित हुआ

CO14. हिंदी के गद्यकारों एवं कवियों का परिचय हुआ।

बी. ए भाग 2 पेपर 3 _आधुनिक हिंदी गद्य साहित्य - I

CO15. कथा साहित्य के स्वरूप, तत्व एवं प्रकर स्पष्ट हुए

CO16. विविध कहानियों के माध्यम से जीवन के विविध पैलू तथा समस्याओं से जागरूक हुए

CO17. हिंदी साहित्य के कथेतर साहित्य के स्वरूप, तत्व एवं प्रकरों से प्रेरित हुए।

CO18. समीक्षा मानदंड के आधार पर कथा साहित्य का आकलन हुआ ।

- बी. ए भाग 2 पेपर 4 _मध्यकालीन एवं आधुनिक हिंदी काव्य

CO19. मध्यकालीन काव्य के प्रति अभिरुची निर्माण हुई

CO20. राष्ट्र के प्रति प्रेम, राष्ट्रीय ऐक्य स्थापना एवं सामाजिक प्रतिबद्धता जागृत हुई ।

CO21. आधुनिक हिंदी कविता में चित्रित विविध विमर्शों से जागृत हुए

CO22. हिंदी काव्य साहित्य के प्रति रुचि बढी ।

- बी. ए भाग 2 पेपर 5 _आधुनिक हिंदी गद्य साहित्य _ II

CO23. नाटक साहित्य के प्रति रुचि विकसित हुई ।

CO24. नाटक साहित्य के स्वरूप और तत्व का आकलन हुआ।

CO25. नाटक साहित्य के प्रकारों का आकलन हुआ।

CO26. नाटक साहित्य की प्रासंगिकता के कारण वर्तमान युग से परिचित हुए।

- बी. ए भाग 2 पेपर 6 _आधुनिक हिंदी काव्य

CO27. हिंदी साहित्य के विभिन्न विमर्शों को अभिव्यक्त करने की क्षमता निर्माण हुई।

CO28. हिंदी भाषा के श्रवण, पठन एवं लेखन कौशल्य निर्माण हुआ

CO29. हिंदी कविता साहित्य के प्रति रुचि निर्माण हुई

CO30. हिंदी साहित्य के विविध पद्य विधाओं को अभिव्यक्त करने की क्षमता निर्माण हुई

- **बी. ए भाग 3 पेपर क्र. 7 और 12 _ विधा विशेष का अध्ययन**

CO31. लंबी कहानी के तात्विक स्वरूप का आकलन हुआ|

CO32. रचना विशेष का महत्व समझने एवं मूल्यांकन करने की क्षमता निर्माण हुई

CO33. आत्मकथा विधा प्रकार के तात्विक स्वरूप का आकलन हुआ |

CO34. पाठ्यक्रम में निर्धारित लंबी कहानी एवं आत्मकथा की प्रासंगिकता से अवगत हुए

- **बी. ए भाग 3 पेपर क्र. 8 और 13 _ साहित्यशास्त्र और हिंदी आलोचना**

CO35. काव्य के विभिन्न अंगों का आकलन हुआ

CO36. साहित्य की मर्मग्राहिनी क्षमता विकसित हुई

CO37. साहित्य और रस की अवधारणा का आकलन हुआ

CO38. हिंदी आलोचना की विविध प्रणालियों का ज्ञान प्राप्त हुआ |

- **बी. ए भाग 3 पेपर क्र. 9 और 14 _ हिंदी साहित्य का इतिहास**

CO39. हिंदी भाषा साहित्य के इतिहास को जान लिया

CO40. हिंदी साहित्य की विविध विधाएँ तथा उनके विकास की जानकारी प्राप्त हुई

CO41. हिंदी के भक्तिकालीन साहित्य से समाज जागृती की प्रेरणा निर्माण हुई

CO42. हिंदी साहित्य की विकास यात्रा का आकलन हुआ|

- **बी. ए भाग 3 पेपर क्र. 10 और 15 _ प्रयोजनमूलक हिंदी**

CO43. हिंदी भाषा में कार्य करने की रुचि विकसित हुई|

CO44. रोजगारोन्मुख शिक्षा एवं कौशल विकसित हुआ

CO45. प्रिंट मीडिया, इलेक्ट्रॉनिक मीडिया के लिए लेखन की क्षमता का विकास हुआ

CO46. माध्यम लेखन के प्रति आलोचनात्मक दृष्टि का विकास हुआ|

- **बी. ए भाग 3 पेपर क्र. 11 और 16 _ भाषा विज्ञान एवं हिंदी भाषा**

CO47. भाषा के विविध रूपों का आकलन हुआ

CO48. हिंदी व्याकरण से मानक भाषा का आकलन हुआ

CO49. हिंदी भाषा और लिपि के उद्भव और विकास को अभिव्यक्त करने की क्षमता निर्माण हुई

CO50. हिंदी भाषा के शब्द समूह से व्यवहार कौशल में जागृति निर्माण हुई।

CO51. मानक हिंदी वर्तनी के नियमों से लेखन कौशल में जागरूकता निर्माण हुई।

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RAYAT SHIKSHAN SANSTHA'S

RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR

DEPARTMENT OF GEOGRAPHY

PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES:-

(2024-25)

Students seeking admission for BA programme are expected to imbue with following quality which help them in their future life to achieve the expected goals:-

PO_1: Development of communication skill
PO_2: Sense of social awareness and social virtue
PO_3: Creating critical approach towards social problems
PO_4: Realization of human values
PO_5: Inculcating values of responsible citizen
PO_6: Creating innovative sense in their specialized discipline.

PROGRAMME SPECIFIC OUTCOMES

After the completion of their degree students will be able to:

PSO 1: Define the fundamental concepts in geography.
PSO 2: Justify demographic principles and patterns at regional and global scale.
PSO 3: Explain major resources, problems and remedies on it.
PSO 4: Describe physical properties of oceanic water and its importance in hydrological cycle at global level.
PSO 5: Justify the central role and importance of agricultural systems in the world.
PSO 6: Construction of map scale, projections, and map interpretation.
PSO 7: Apply various cartographic, statistical and remote sensing techniques and their application in geographical studies and research activities.
PSO 8: Acquaint skills of surveying, field work and writing a project report.

HUMAN GEOGRAPHY (II)

CO 7: Find out terms and concepts in human geography.
CO 8: Explain population growth, distribution and characteristics of population.
CO 9: Describe Malthus theory and Weber theory
Co 10: Classify Modes of Transportation
CO 11: Analyze Accesibility, Connectivity and HDI
CO 12: Define and analyze Birth rate, Death rate, Density and Transport Network Graph Theory

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COMPONENTS OF TOURISM (SEC-II)

CO-4 (SEC): Demonstrate an in-depth understand the Ecological and Cultural tourism perspectives
CO-5 (SEC): Critically analyze and discuss World Heritage Sites, Infrastructure development, Challenges and Regional Case Studies
CO-6 (SEC): Evaluate the National Tourism Policy of India, identify its strengths, weaknesses and implications for the tourism industry.

SCIENCE, TECHNOLOGY AND DEVELOPMENT (OE-II)

CO-3 (OE): Understand types of disasters and its management

CO-4 (OE): Understand means of communication and space research

SOIL GEOGRAPHY (III)

CO 13: Define and study the scope and significance of soil as a key resource.
CO 14: Correlate the soil geography and pedology.
CO 15: Identify the process and factors of soil formation and properties of soil.
CO 16: Classify, characterize and illustrate soil.
CO 17: Explain the concept of soil degradation, soil conservation and basic of soil management.
CO 18: Calculate soil properties with soil meter, pH, light, moisture and NPK

RESOURCE GEOGRAPHY (IV)

CO 19: Describe the concept of resource, its classification, scope and importance of resource geography.
CO 20: Identify major resources.

DEVELOPMENT AND PLANNING OF TOURISM (2)

CO 43: Evaluate the process of tourism development and planning in India.
CO 44: Assess the role of tourism in national economy of India
CO 45: Describe about natural, religious, cultural and historical tourism centers in India.
CO 46: Elaborate the process of tourism development and planning in Maharashtra.
CO 47: Explain the natural and religious tourism centers in North Maharashtra cultural and historical tourism centers in South Maharashtra
CO 48: Identify the travel documentation in Tourism Geography.

EVOLUTION OF GEOGRAPHICAL THOUGHT (VII)

CO 49: Describe historical evolution of geographic thought.
CO 50: Categorize the German, French, American and British schools in geography.
CO 51: Analyze paradigms of determinism v/s possibilism and systematic V/s regional geography.
CO 52: Analyze paradigms of physical V/s human geography and historical V/s contemporary geography.
CO 53: Criticize the concept of quantitative revolution and model building in geography.
CO 54: Evaluate the contemporary trends in geographical studies.

GEOGRAPHY OF INDIA (VIII)

CO 55: Identify the dimensions and physiography of India.
CO 56: Describe of climatic seasons and drainage pattern in India.
CO 57: Classify soil and natural vegetation in India.
CO 58: Assess the impact of soil degradation and deforestation.
CO 59: Compare conventional and non-conventional power resources in India.
CO 60: Identify major agricultural products and the importance of agriculture and industry in Indian economy.

POPULATION GEOGRAPHY (IX)

CO 61: Define population geography along with relevance of demographic data.
CO 62: Describe distribution and trend of population growth in the developed and less developed countries along with population concepts.

FUNDAMENTALS OF MAP MAKING AND MAP INTERPRETATION XIII PRACTICAL PAPER – I

CO 84: Define and classify maps.
CO 85: Construct scale and projections.
CO 86: Identify relief features and profiles.
CO 87: Interpret SOI Toposheets and IMD maps.
CO 88: Prepare different cartographic techniques.

ADVANCED TOOLS, TECHNIQUES AND FIELD WORK IN GEOGRAPHY XIV PRACTICAL PAPER- II

CO 89: Construct graphs and diagrams with the help of computer.
CO 90: Application of remote sensing technique in geography.
CO 91: Introduce about GIS and GNSS in geography.
CO 92: Solve statistical problems related to geographical data.
CO 93: Prepare a plan with the help of plane table and prismatic compass.
CO 94: Acquaint skill of field work, observation of geographical phenomena and prepare a project report and study tour report.

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Principal,
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RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR.

NAAC REACCREDITED AS 'A++' GRADE CGPA 3.78

Programme Outcomes (PO's) B.A.in Economics 2024-25

After completing the graduation in Economics, the student will be able to

PO's 1.Analysis poverty of employment policies

PO's 2.Interpret monetary policy and fiscalpolicy

PO's 3. Predict economic growth in five year plan

PO's 4.Explain bank structure and operation on bank account

PO's 5. Evaluate international trade Issues

PO's 6. Justify knowledge of Indian economy

for Bonsule
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Programme Specific Outcomes (PSO's) B.A.in Economics 2024-25

After completing the graduation in Economics, the student will be able to:PSO's

PSO's 1.Outline basic concept of economy

PSO's 2.Analysis economic behavior in practice

PSO's 3 Find alternative approaches to economic problem

PSO's 4.Explain economic way of thinking

PSO's 5. Create student ability to suggest solution

PSO's 6. Able to right in an economic point of view

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Course Outcomes (CO's) B.A.in Economics 2024-25

B.A- I Economics Course covers two Papers.

Semester- I & II

Paper –I is IndianEconomy – I and Semester –II, Paper-II is Indian Economy – II

1. Indian Economy – I

After successfully completion of this course the students will be able to

CO's 1: Features of Indian Economy at Independence – Features of Developing Indian Economy and Features as an Emerging Economy

CO's 2: Quantitative and Qualitative analysis of Indian Population – Population Projection in India

CO's 3: Challenges before Indian Economy

CO's 4: Poverty – Causes, Effects and Measures,Unemployment – Causes, Effects and Measures

CO's 5: Challenges before Indian Economy – II

CO's 6: Environmental Pollution – Causes and Measures

2 Indian Economy – II

CO's 7: Agricultural Sector in India

CO's 8 : Nature and Salient Features of Indian Agriculture - Importance of Indian Agriculture

CO's 9: Industrial Sector in India

CO's 10: Industrial sickness : Causes and Remedies

CO's 11: Service Sector in India

CO's 12: Economic Reform

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B.A- II Economics Course covers two Papers for each Semester.

Semester-III & IV

Paper –III is Macro Economics, Paper - IV is Money and Banking. Semester –IV, Paper-V is Macro Economics, Paper – VI, Money and Banking.

3.Macro Economics – I (Sem-III)

CO's13 : Introduction to Macro Economics

CO's14: Difference between Micro and Macro Economics

CO's15: National Income

CO's16 : Money and Value of Money

CO's17 : Output and Employment

CO's18 : Investment Function, Concept of Multiplier

4.Money and Banking –I (Sem-III)

CO's 19: Introduction to Banking

CO's 20: Reserve Bank of India

CO's21: Banking Practices - I

CO's22: Banker's and Customer's Rights and Obligations

CO's23: Banking Practices – II

CO's24: Bank Ombudsman Scheme- Meaning, Power and Duties

5.Macro Economics II (Sem-IV)

CO's 25: Inflation

CO's 27: Trade Cycles

CO's 28: Public Finance – I

CO's 29 : Public Finance-II

CO's 30 : Public Expenditure: Meaning and Causes of growth of Public Expenditure.

6. Bank and Financial Markets (Sem-IV)

CO's 31: Financial System in India

CO's 32: Role and Functions of SEBI

CO's 33: Indian Financial Institutions

CO's 34: Banking Reforms

CO's 35: E-Banking Service (15 Periods)

CO's 36: Cyber Crimes in Banking – Meaning, Types and Precaution

B.A- III Economics Course covers Five Papers for each Semester.

Semester-V

Paper –VII is Principals of Micro Economics, Paper - VIII is Economics of Development,Paper-IX is International Economics, Paper – X is Research Methodology in Economics, Paper – XI is History of Economics thoughts.

7. Principles of Micro Economics

CO's 37: Introduction to Economics and Micro Economics

CO's 38: Consumer's Behavior

CO's 39: Demand and supply Analysis

CO's 40: Theories of Production

CO's 41: Supply – Meaning, Supply Function and Law of Supply

CO's 42 : Theories of Production

8.Economic of Development

CO's 43: Basic concepts of Economic Development

CO's 44: Developing and Developed Countries

CO's 45: Theories of Economic Development

CO's 46: Ragner Nurkse's Theory of Balanced Growth and Hirschman's Theory of Unbalanced Growth

CO's 47: Resources for Economic Development

CO's 48: Human Development Index – Causes of Low Human Development

09. International Economics

CO's 49: Trade and Trade Theories

CO's 50 : Gains from International Trade

CO's 51 : Exchange Rate

CO's 52 : Floating Exchange Rate – Meaning, merits and demerits

CO's 53 : Tariffs and Quotas

CO's 54 : Trade Protection Policy: meaning, arguments for and against.

10. Research Methodology in Economics – I

CO's 55: Introduction to Research in Economics

CO's 56 : Literature Review and Research Design

CO's 57 : Importance of Research Design

CO's 58 : Hypothesis and Concept

CO's 59 : Concept – meaning, conceptualization, formal and operational definition of Concept

CO's 60 : Data Collection

11. History of Economic Thoughts

CO's 61: Origin of Economic Thoughts

CO's 62: Classical Economic Thoughts

CO's 63 : Economic Thoughts of Fredrick List

CO's 64: Theory of Protectionism

CO's 65: Economic Thoughts of Karl Marx

CO's 66: Concept of Falling rate of Profit

Skill Enhancement Course (SEC)-1

Course	BA-III
Semester	V
Course Category	Skill Enhancement Course (SEC)-1
Corse Title	**E- Banking - V**
Number of Credit	02
Marks	50
Semester End: University Exam (25 MCQ) for 50 Marks	

CO's 67. E- Banking – I

Meaning and Features, Types of E-Banking , Credit Card – Features, Merits and Demerits

Debit Card - Features, Merits and Demerits

CO's 68 : E- Banking – II

NEFT – Procedure, Features, Benefits ,RTGS - Procedure, Features, Benefits, CTS – Meaning and Benefits ,Cyber Crime in Banking

Semester-VI

Paper –XII is Principals of Micro Economics, Paper - XIII is Economics of Planning , Paper-XIV is International Economics, Paper – XV is Research Methodology in Economics, Paper – XVI is History of Economics thoughts.

12. Principles of Micro Economics

CO's 69: Perfect Competition

CO's70: Monopoly

CO's71: Difference between Monopoly and Perfect Competition

CO's 72: Imperfect Competition

CO's73: Oligopoly and Duopoly - Meaning and Characteristics

CO's74: Factor Pricing

13. Economics of Planning

CO's 75: Introduction to Economic Planning

CO's 76: Issues in Economic Planning

CO's 77: Project Evaluation

CO's 78: Planning in India - I

CO's 79: NITI Ayog – Need for establishment, Organization, Objectives - Difference between NITI Ayog and Planning Commission

CO 80: Planning in India - II

14. International Economics

CO's 81: Balance of Trade and Balance of Payments

CO's 82: Foreign Trade of India since 2011

CO's 83: Trade Administration of India

CO's 84: Foreign Capital in India

CO's 85: International Institutions / Forum and India

15.Research Methodology In Economics

CO's 86 : Introduction to Sampling

CO's 87: Processing and Representation of Data

CO's 88 : Statistical Techniques and Data Analysis

CO's 89: Correlation – Meaning and Importance, Karl Pearson's coefficient of Correlation

CO's 90 : Interpretation of Data and Report Writing

CO's 91 : Writing a Good Research Proposal

16. History of Economic Thoughts

CO's 92: Neo-Classical Economic Thought

CO's 93: Indian Economic Thought

CO's 94: Mahatma Gandhi

CO's 95 : Economic Thoughts of Modern Indian Economist

CO's 96 : Amartya Sen – Concept of Social Choice, Choice of Techniques, Sen's views on Poverty and Public Action

Skill Enhancement Course (SEC)- II

Course	BA-III
Semester	V
Course Category	Skill Enhancement Course (SEC)-1
Corse Title	**Financial Services - VI**
Number of Credit	02
Marks	50
Semester End: University Exam (25 MCQ) for 50 Marks	

CO's 97: Financial Services I Financial services – Meaning and Importance ,Banking Services, Mutual Funds – Meaning and Types, Mutual Funds – Importance

CO's 98: Module 2. Financial Services II Financial services of Marchant Banking ,Credit Rating Insurance – LIC, GIC etc, Other financial services

ABBRIVATIONS:

1. GNP : Gross National Product
2. NNP : Net National Product
3. GDP : Gross Domestic Product
4. NPA : Non Performing Assets
5. SEBI :Securities and Exchange Board of India
6. FDI : Foreign Direct Investment
7. RBI : Reserve Bank of India
8. NBFCs : Non-Banking Financial Companies
9. NABARD : National Bank for Agriculture and Rural Development
10. SIDBI : Small Industries Development Bank of India
11. NHB : National Housing Bank
12. MSME's : Micro, Small & Medium Enterprises

13. IMF : International Monetary Fund
14. IBRD : International Bank for Reconstruction and Development
15. WTO : World Trade Organization
16. BSE : Bombay Stock Exchange
17. NSE : National Stock Exchange
18. ICCL : Indian Clearing Corporation Limited

"Education through self-help is our motto" – Karmaveer

Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur

DEPARTMENT OF HISTORY (2024-25)

Program Objectives (POs)

The Student will be able to

- **PO1:** Acquaint students with the past and present of India and the World.
- **PO2:** Impart a critical understanding of Indian society, economy, polity, and culture through a historical perspective
- **PO3:** Prepare students for a range of careers
- **PO4:** Stimulate intellectual curiosity and research attitude in the students
- **PO5:** Know the various Indian and foreign traditions of history writing

Program Specific Outcome (PSOs)

- **PSO1:** Explain the basic themes, concepts, chronology and the Scope of Indian History.
- **PSO2:** Acquaint with ranges of issues related to Indian History that span distinct eras.
- **PSO3:** Explain the History of countries other than India with comparative approach.
- **PSO4:** Argue historically and critically in writing and discussion.
- **PSO5:** Prepare for various types of Competitive Examinations.
- **PSO6:** Critically recognize the Social, Political, Economic and Cultural aspects of History.
- **PSO7:** Identify how the Indian culture had been contributed to the world human civilization through the Ages.
- **PSO7:** Explain values of unity in diversity, multiculturalism, multi-religiosity, secularism and humanism which are inherited in Indian Culture and upheld by our Constitution.

Head
Dept. of History
R. C. Shahu College, Kolhapur.

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KOLHAPUR

Course Outcomes (COs)
B. A. Part - I

Semester I

The Student will be able to…

Paper Name: I - Rise and Growth of Maratha Swarajya (1600-1680)

- **CO1-** Know the life and work of Chhatrapati Shivaji Maharaj in the light of fresh evidences that came forth since last two decades.
- **CO2-** Give the importance of Chhatrapati Shivaji Maharaj's vision of Swarajya; not only for the people of Maharashtra but also for the people all over our nation who were in need of self-rule and self-respect.
- **CO3-** Explain how the magnificent coronation ceremony was necessary to assert our independence openly; at the same time inspire other people in the nation which were also seeking to free themselves from the clutches of Mughal or Sultanates.
- **CO4-** Explain how protecting and preserving our language and culture is necessary to the existence of our own identity.
- **CO5-** Explain how the goal based on higher moral values can be achieved through consistent efforts and belief in our goals and our own people.

Paper Name: I - Maratha Forts (OE)

- **CO6-** Various types and basic architectural components of the Maratha forts would be understood.
- **CO7-**The role of forts in the Maratha administration and history would be understood.

Paper Name: I - Historical Tourism (SEC)

- **CO8 -** Receive knowledge about historical tourism.
- **CO9-** Explain various types of historical sites or places; important for historical tourism.
- **CO10 -** Develop the skills of tour management.
- **CO11** – Explain various circuits of historical importance in their neighborhood
- **CO12** - Apply their learning by visiting historical places.

Semester II

Paper Name: II – Legacy of Chhatrapati Shivaji Maharaj (1630-1707)

- **CO13-** Explain powerful legacy of Chhatrapati Shivaji Maharaj reflected through various events after his untimely demise.
- **CO14-** Explain how the vision of Chhatrapati Shivaji Maharaj percolated in the minds and hearts of common people. Hence, after his death, the people were united to fight Mughals almost for 27 years to protect the Swarajya and became successful in their war of independence.
- **CO15-** Describe the work of Maratha warriors and understand how Chhatrapati Shivaji Maharaj inspired common people with the values of independence and self-less valor.
- **CO16-** Know the structure, glory and magnificence of Maratha fort which protected Swarajya during the times of Chhatrapati Shivaji Maharaj as well as afterword's.
- **CO17-** Explain the inception of Maratha Navy and construction of Sea-fort which aptly gave the recognition to Chhatrapati Shivaji Maharaj as the founder of Indian Navy.
- **CO18-** Apply Chhatrapati Shivaji Maharaj's various policies of welfare which reflects his farsighted vision. His innovative policies, directly only to the public welfare has become a model state of Public Welfare.

Paper Name: II - Study of Select Forts (OE)

- **CO19-** Location, major components, nature of some selects forts in Maharashtra and their role in the historical development.
- **CO20-** Architecture and administrative system of the select forts.

Paper Name: II - Management of Historical Tours (SEC)

- **CO21-** Discuss the need and importance of Tour Guide in Historical Tourism
- **CO22-** Know the ethics of Tour-Guide.
- **CO23-** Explain the responsibilities of Tour-Guide.
- **CO24-** Explain acknowledge the importance of hospitality in Tourism industry
- **CO25-** Apply the information regarding Government as well as private tour agencies and their function.

Course Specific Outcome (Co)

B. A. Part - II

Semester III

The Student will be able to…

Paper Name: III - History of Modern Maharashtra (1900 to 1960)

- **CO26-** Know the concept of the beginnings and growth of nationalist consciousness in Maharashtra.
- **CO27-** Explain the contribution of Maharashtra to the national movement.
- **CO28-** Give an account of various movements of the peasants, workers women and backward classes.
- **CO29-** Know the background and events which led to the formation of separate state of Maharashtra.

Paper Name: IV - History of India (1757 to 1857)

- **CO30-** Acquaint himself with significant events leading to establishment of the rule of East India Company.
- **CO31-** Know the colonial policy adopted by the company to consolidate its rule in India.
- **CO32-** Explain the structural changes initiated by colonial rule in Indian economy.
- **CO33-** Explain the various revolts against rule of the East India Company.

Paper Name: IDS Paper No. I - Social Reform India

- **CO33-** Concept of the salient features of prominent socio-religious reform movements.
- **CO34-** Explain the thought and work of Mahatma Phule for radical transformation of Indian society.
- **CO35-** Know the measures taken by Rajashri Shah Maharaj for emancipation of lower classes and women.
- **CO36-** Explain the thoughts of Ambedkar on the annihilation of the caste system and untouchability in India.
- **CO37-** Know how the Indian constitution embodies the values of social justice and equality.

Semester IV

Paper Name: V - History of Modern Maharashtra (1960 to 2000)

- **CO38-** Acquaint himself with the contribution of eminent leaders of Maharashtra.
- **CO39-** Know about the economic transformation of Maharashtra.
- **CO40-** Explain the salient features of changes in society.
- **CO41-** Explain the growth of education.

Paper Name: VI - History of Freedom Struggle (1858 – 1947)

- **CO42-** Explain the events which lead to the growth of nationalism in India.
- **CO43-** Acquaint himself with major events of the freedom struggle under the leadership of Mahatma Gandhi.
- **CO44-** Explain the contribution of Revolutionaries, Left Movement and Indian National Army.
- **CO45-** Know the concept of Communalism and the causes and effects of the partition of India.

Paper Name: IDS Paper No. II - Social Reform Maharashtra

- **CO46-** Know about the beginnings of social reforms in Maharashtra by the Paramhansa Mandali and Prarthana Samaj.
- **CO47-** Know the contribution of women reformers.
- **CO48-** Explain the contribution of Social reformers in the fight for social justice.
- **CO49-** Explain the role played by educational reforms in transformation of society.

Course Specific Outcome (Co's)

B. A. Part - III

Semester V

The Student will be able to…

Paper Name: VII - History of Ancient India (from beginning to 4th c. BC)

- **CO50-** Know the development of people from hunters to the builders of civilization.
- **CO51-** Explain the transition from Early to Later Vedic period.
- **CO52-** Give an account of the teachings of Gautama Buddha and Vardhamana Mahavira
- **CO53-** Describe the rise and growth of the Mauryan Empire

Paper Name: VIII - Medieval Indian History (1206-1526 AD)

- **CO54-** Explain the contributions of rulers and administrator to the shaping of India in Medieval period.
- **CO55-** Know the administrative structure of this period.
- **CO56-** Explain experiments and reforms by Sultans in the area of economy.
- **CO57-** Know the religious atmosphere of the country, as also, development of architecture during this period.

Paper Name: IX - History of Modern World (18th to 19th Century)

- **CO58-** Give an account of the American Revolution and its consequences
- **CO59-** Explain the causes, effects and major events of French Revolution
- **CO60-** Explain the main events in unification of Italy
- **CO61-** Describe the main events in unification of Germany

Paper Name: X - Rise and Consolidation of Maratha Empire

- **CO62-** Demonstrate understanding of the historical events and figures shaping the Maratha Empire.
- **CO63-** Analyze the political, military, and social dynamics during crucial periods, such as the Civil War and Third Battle of Panipat.
- **CO64-** Evaluate the contributions of key figures to Maratha power.
- **CO65-** Apply historical knowledge to comprehend the consequences of battles and civil unrest, fostering a comprehensive grasp of the Maratha Empire's significance in Indian history.

Paper Name: XI - History: Theory and Recent Trends

- **CO66**- Concept of various meanings, scope and types of history.
- **CO67-** Explain recent trends in history.
- **CO68-** Apply the nature of historical data and its critical examination.
- **CO69-** Know the importance of the Museum as a source to write history.

Paper Name: History and Tourism-V (SEC)

- **CO70-** Know the correlation of tourism to historical study.
- **CO71-** Explain historical development of tourism in Indian history.
- **CO72**- Apply the Government's policy regarding tourism and development of Tourism Industry in India

Semester VI

Paper Name: XII - History of Ancient India (From 4th c. BC to 7th c. AD)

- **CO73-** Know the political, economic and religious developments which took place in early historic India.
- **CO74-** Explain the role played by Major Satvahana, Kushana, Gupta and Vakataka Kings.
- **CO75-** Give an account of the developments in the post-Gupta period
- **CO76-** Have an informed opinion about the society and culture of Ancient India

Paper Name: XIII - Medieval Indian History (1526-1707 AD)

- **CO77-** Explain the policies of representative rulers in Medieval India.
- **CO78-** Know developments and changes in the area of administration and economy during this period.
- **CO79-** Know religious atmosphere in Medieval India.
- **CO80-** Know the cultural legacy, left by these rulers and people during medieval period.

Paper Name: XIV - History of Modern World (20th Century)

- **CO81-** Know the causes and effects of the First World War.
- **CO82-** Give an account of Russian Revolution 1917.

- **CO83-** Explain the causes, main events and effects of the Second World War.
- **CO84-** Describe the formation of UNO and its work.

Paper Name: XV - Expansion and Decline of Maratha Empire

- **CO85-** Develop a nuanced understanding of critical historical periods within the Maratha Empire, discerning the sociopolitical intricacies that shaped its evolution.
- **CO86-** Evaluate the roles and contributions of key historical figures, fostering a comprehensive appreciation of their impact on Maratha history.
- **CO87-** Analyze the dynamics of Maratha Confederacies, enhancing the ability to discern the interconnected forces influencing the empire's governance.
- **CO88-** Demonstrate a critical awareness of the factors contributing to the decline of Maratha power, linking historical events to broader socio-political contexts.

Paper Name: XVI - Techniques of History Writing

- **CO89-** Knows concept of the process of writing a research proposal.
- **CO90-** Know the importance and types of archival sources.
- **CO91-** Know various types of field strategies.
- **CO92-** Apply various tools of research.
- **CO93-** Acquire the important steps of presenting research.

Paper Name: History and Tourism-VI (SEC)

- **CO94-** Know the work of organizations in the world and India working towards the development of tourism.
- **CO95-** Explain became aware of the Laws related to tourism as well as the issue of ethics involved in it.
- **CO96-** Explain various employment opportunities in tourism industry.
- **CO97-** Apply knowledge to various tourist companies working in the tourism sector.

Rayat Shikshan Sanstha's
Rajarshi Chhatrapati Shahu College, Kolhapur
Department of sociology
2024-25 (NEP 2.0)

PROGRAMME LEARNING OUTCOMES (PO)

After completion program student will be able to:

PO 1 : Understand of basic Sociological concepts such as society,community, socialization, culture, social group, religion, caste and class, social structure etc.

PO 2: After doing the programme the students will develop in-depth understanding of sociological concepts, thoughts.

PO 3: They will have knowledge about the Traditional Social Institutions of Indian Society in context of continuity and change..

PO 4: Their sociological knowledge and analytical skills that would enable them to think critically about Indian society and emerging social problems and issues

PO 5 : They will have the knowledge and skill to conduct social research.

PO 6 : Critically evaluate explanations of human behaviors, social phenomena and social processes locally and globally.

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CO 63: Understanding emerging and as well as enduring issues in concern with Indian rural society.

CO 64: To be ready for a range of academic and professional roles that may require knowledge of rural society.

Semester – VI, DSE – E195 Paper– XVI

Urban sociology

CO 65: 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.

CO 66: To understand the urban in the historical as well as modern contexts the idea of Urbanism and urban space and the intersections in these of institutions, processes and Identities. This is to be achieved by exposing students to critical theoretical debates which help them to gain a deeper understanding of city life and urban environment which can also help them understand their own social environment better.

CO 67: To learn about key urban processes such as migration, displacement and urban slums, as Well as critical contemporary issues such as resettlement and rehabilitation and also engage in issues of public policy, urban transformation and change. Knowledge of such Themes will help students pursue further studies in academic areas such as development and also engage in research on public policy, urban transformation and change.

CO 68: 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.

knowledge of elementary statistics is also provided to the students to acquaint them with quantification of data.

CO 55: The thrust of the course is on empirical reasoning, understanding and analysis of socialreality, 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.

CO 56: Through the competing theoretical perspectives and methodologies, students are able to understand that social reality is multi-faceted, heterogeneous and dynamic in nature.

CO 57: By imparting the knowledge of theory and praxis of research, students are prepared to arrive at a critical understanding of the course. It also equips them with necessary skills for employment in any social research organization.

CO 58: Periodic tests/mid-semester examination of the covered syllabus is also undertaken by the students during the academic session. End-semester examination is conducted by the University of Shivaji.

Semester – VI, DSE – E193 Paper– XIV
Social Anthropology

CO 59: To provide the conceptual understanding about anthropology

CO 60: To understand the social aspects of tribal's in India.

Semester – VI, DSE – E194 Paper– XV

Rural sociology

CO 61: An ability to engage with the rural community as a living society and understand the condition of rural society.

CO 62: An appreciation of rural world and familiarity with the trajectory of theoretical conversation on rural issues and their social, political and policy implications.

Semester – V, DSE – E69 Paper– XI

Sociology of Religion

CO 48: 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 also use terms specific to the field in specific context.

CO 49: 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.

CO 50: By encompassing contemporary developments the course enables students to think about linkages between religion and society at various levels.

Semester – VI, DSE – E191 Paper– XII
Indian Sociological Thinkers

CO 51: Understanding the characteristics and dynamics of the social world, and how postclassical sociologists attempt to understand the social world.

CO 52: Appreciating the relevance and limits of the contemporary theories or theoretical approaches to make sense of social reality.

CO 53: Understanding the basic methodological approaches of the thinkers, through some original texts and their role in building Sociological knowledge

Semester – VI, DSE – E192 Paper– XIII
Methods of Social Research

CO 54: Students are introduced to the concept of conducting research, which is inclusive of formulating research designs, methods and analysis of data. Some

Semester – V, DSE – E68 Paper– IX

Political Sociology

CO 39: 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

CO 40: 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.

CO 41: Be able to understand the relationship between state and society in shaping politics in India both historically and analytically.

CO 42: Be able to generate hypotheses and research questions within the theoretical perspectives and ethnographic contexts in political sociology.

Semester – V, DSE – E69 Paper– X

Paper - X Human Rights

CO 43: Conceptual understanding about the Human Rights

Co 44: Identify issues and problems relating to the realization of human rights

CO 45: Understand the nature & role of human rights in India Contribute to the resolution of human rights issues and problems

CO 46: Conceptual understanding about the human rights

CO 47: Educate the society about the human rights and duties in order to create

B.A.III NEP 1.0 Semester – V, DSE – E66 Paper – VII
Western Sociological Thinkers

CO 32: Understanding the grand foundational themes of sociology.

CO 33: Application of theories and concepts from classical sociological theories to develop intellectual openness and curiosity.

CO 34: Appreciation of the classical concepts and theories to develop awareness of the limits of current knowledge.

Semester – V, DSE – E67 Paper– VIII
Methods of Social Research (Part-I)

CO 35: Students are introduced to the concept of conducting research, which is inclusive of formulating research designs, methods and analysis of data. Some knowledge of elementary statistics is also provided to the students to acquaint them with quantification of data.

CO 36: 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.

CO 37: Through the competing theoretical perspectives and methodologies, students are able to understand that social reality is multi-faceted, heterogeneous and dynamic in nature.

CO 38: By imparting the knowledge of theory and praxis of research, students are prepared to arrive at a critical understanding of the course. It also equips them with necessary skills for employment in any social research organization.

BA. II NEP DSC- III (Sem-III) Paper -III
Social issues in India

CO 20: Students get well acquainted with social issues.

CO 21: The students learn how to identify the causes of the social issues.

CO 22: The students learn to understand the remedies for socio, cultural, economic and legal issues.

BA. II DSC- IV (Sem-III) Paper -IV
Social Movement

CO 23: Students will get the outline of the social movement.

Co 24: Students get well acquainted with the problems of social movement.

CO 25: The students get aware with engagement of socio-political forces and ideologies.

BA. II DSC- V (Sem-IV) Paper -V
Gender and Violence

CO 26: The students get well acquainted with the variety of violence against women.

CO 27: The students will come to know causes and remedies for the violence.

CO 28: The students learn diverse types of women's harassment at workplace.

BA. II DSC- VI (Sem-IV) Paper -VI
Sociology of Health

CO 29: Students get understood the sociology of health and major diseases in India.

CO 30: Students learn health remedies, modern life style impacted on human health.

Co 31: Students get aware with public health policies in India.

Course Outcomes

B.A.I (Sem-I) DSC I Mandatory Paper I

Introduction to sociology

2024-25 (NEP 2.0)

After successful this semester students will be able to:

CO 1: Students will demonstrate a grasp of key sociological concepts by successfully applying them to real-world examples in assignments and discussions

CO 2: Students will engage in thoughtful analysis of social issues, demonstrating the ability to recognize and explain the underlying sociological factors.

CO 3: Students will showcase effective communication skills through written assignments, oral presentations, and class discussions, fostering the ability to articulate sociological ideas clearly and persuasively.

CO 4: This Paper will introduce students to new concept of Sociological discipline. These Concepts will enhance the conceptual learning and understanding of the basic concepts used in Sociology

B.A.I (Sem-I) DSC I Mandatory Paper II

Changing Nature of Social Institutions

CO 5: Students will demonstrate a comprehensive understanding of the historical development of social institutions by identifying key shifts and milestones.

CO 6: Students will critically assess the influence of contemporary factors on social institutions, showcasing an ability to connect theoretical frameworks with real-world examples

CO 7: Students will articulate the societal implications of changing social institutions, presenting well-reasoned arguments and insights into the evolving dynamics of human interaction and organization.

B.A.I Introduction To Social Audit – I (SEC)

CO 8: Demonstrate a thorough knowledge of the historical evolution and fundamental concepts of social audit.

CO 9: Apply the principles of social audit effectively in analyzing and addressing issues related to governance and accountability.

CO 10: Justify and prioritize social audit objectives based on a contextual understanding of their significance.

CO 11: Evaluate and propose strategies for implementing social audit to enhance transparency, accountability and participative democracy in diverse settings.

B.A.I Introduction To Social Audit – II (SEC)

CO 12: Demonstrate nuanced understanding of Gender and Labor Audit, Environmental Audit, Governance Audit, and Community Social Audits and their societal impact.

CO 13: Apply various methods for collecting primary and secondary data in social audits, choosing approaches based on audit objectives.

CO 14: Critically analyze social audit data to identify issues and evaluate the effectiveness of different audits in addressing societal concerns.

CO 15 : Communicate social audit findings clearly and concisely through proficient report writing to diverse audiences. B) Course Content

B.A.I Sociology of Youth-I (OE)

CO 16: Students aware about the concept of youth and youth culture through scientific theories.

CO 17: Students understand the influence of Globalization, media and technology.

B.A.I Sociology of Youth-II (OE)

CO 18: Students learn various issues related to youth

CO 19: Students aware about the role of National Youth Policy in the development of youth.

Rayat Shikshan Sanstha's

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B. A. Part-I (Sem -1) PAPER-I

SUBJECT: PHILOSOPHY

COURSE OUTCOMES 2024-25

Introduction to Indian Philosophy

After successfully completion of this course student will be able to,

Module: 1
Nature of Indian philosophy

CO1: Explain the nature of Indian philosophy concept of philosophy -philosophy Darshana, Anvishiki nvikshiki.
CO2: Discuss the branches of philosophy
CO3: Discuss common characteristics of Indian philosophy
CO4: Explain the classification of Darshanas and importance of philosophy in human life

Module: 2
Charvak Darshana

CO5: Describe philosophy of Charvak's
CO6: Discuss Charvakas theory of knowledge
CO7: Explain the theory of materialism
CO8: Discuss the ethical view of Charvaka

Module: 3
Jaina Darshan

CO9: Explain the nature Jain philosophy and principal of Ahinsa
CO10: Discuss the concept of Anekantvada
CO11: Explain the Nayawada & Syadwada
CO12: Describe the Jain metaphysics,Jiva & Ajiva

Module: 4
Bouddha Darshan

CO13: Explain the nature of Buddhism and discuss Four Nobel Truths.
CO14: Discuss Arya Ashtang Marga
CO15: discuss the doctrine of Pratitya Samutpada

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B. A. Part-I (Sem -II) PAPER-II

Introduction to Western Philosophy

After successfully completion of this course student will be able to,

Module: 1
Ionian philosophy

CO16: Explain the philosophy of Thales
CO17: Explain the philosophy of Anaximander
CO18: Explain the philosophy of an Axemens

Module: 2
Eleatics and other philosophy

CO19: Explain the philosophy of Parmenides
CO20: Explain the philosophy of Zeno
CO21: Explain the Philosophy of Heraclitus

Module: 3
Socrates and Plato's philosophy

CO22: Explain the Socratic method
CO23: Discuss ethical ideas of Socrates
CO24: Describe plateaus theory of knowledge and ideas

Module: 4
Aristotle's philosophy

CO25: Explain the concept of Causation
CO26: Describe doctrine of form and matter
CO27: Discuss the concept of God

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B. A. Part-I (Sem -I)

Foundation of Scientific Method (OE)

After successfully completion of this course student will be able to,

Module: 1
Nature of Science

CO28: Explain definition and characteristics of science
CO29: Discuss common sense and science
CO30: Describe natural and social sciences
CO31: Explain positive and normative science

Module: 2
Formal grounds of science

CO32: Discuss nature and postulates
CO33: Discuss uniformity of nature
CO34: Discuss principle of causality
CO35: Describe the principle of Objectivity

Model: 3
Material grounds of science

CO36: Discuss stages of scientific investigation
CO37: Describe nature and characteristics of scientific observation
CO38: Explain the fallacies of observation
CO39: Discuss merits and demerits of observation and experiment

Module: 4
Techniques of social research

CO40: Explain the nature of social research statical method statical
CO41: Describe the case study
CO42: Discuss questionnaire method
CO43: Discuss interview method

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B. A. Part-I (Sem -II)

Application of scientific method (OE)

After successfully completion of this course student will be able to,

Module: 1
Nature of definition and hypothesis

CO44: Discuss nature and laws of valid definition
CO45: Discuss definition and conditions of valid hypothesis
CO46: Describe the verification
CO47: Explain the proof of hypothesis

Module: 2
Laws and scientific explanation

CO48: Explain meaning of law and kinds of laws
CO49: Discuss kinds of laws of nature
CO50: Explain the nature of scientific explanation
CO51: Discuss definition and kinds of explanation

Module: 3
Scientific Attitude

CO52: Explain the nature and importance of scientific attitude
CO53: Describe the ecological balance
CO54: Discuss awareness of mental health and social media
CO55: Describe scientific attitude towards water consumption

Module: 4
Computer Education

CO56: Discuss definition and nature of computer
CO57: Explain the concept hardware and software
CO58: Discuss the parts of computer
CO59: Describe the uses of computer in day-to-day life

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B. A. Part-I (Sem -I)

Process of reasoning (SEC) (Credit :2)

After successfully completion of this course student will be able to,

Module: 1

What is reasoning

CO60: Discuss the process of reasoning
CO61: Explain the difference between reasoning and thinking
CO62: Discuss use of reasoning day today life
CO63: Explain the introduction to Categorical proposition

Module: 2

Skills of reasoning

CO64: Discuss the nature and types of reasoning
CO65: Explain the Opposition of proposition
CO66: Explain the mediate and immediate inference
CO67: Describe Venn diagram

B. A. Part-I (Sem -II)

Skill of Reasoning (SEC)

After successfully completion of this course student will be able to,

Module: 1

Types of reasoning enhancement

CO68: Discuss analogy
CO69: Discuss enumeration
CO70: Explain the scientific induction
CO71: Describe inductive leaf

Module: 2

Scientific research process

CO72: Explain the nature and kinds of hypothesis
CO73: Discuss the condition of valid hypothesis
CO74: Describe the nature and kinds of explanation
CO75: Discuss the definition and kinds of laws

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B. A. Part-II (Sem -III)

Traditional Logic (IDS)

After successfully completion of this course student will be able to,

Module: 1
Introduction to logic

CO76: Discuss logic as a source of knowledge
CO77: Explain nature scope and definition of logic
CO78: Describe recent applications of logic Fuzzy logic computer logic
CO79: Explain discuss introduction to traditional and modern logic

Module: 2
Preposition and sentence

CO80: Explain difference between preposition and sentence
CO81: Explain the structure of preposition (subject term predicate term Copula)
CO82: Discuss the classification of preposition
CO83: Discuss the categorical propositions
CO84: Explain conditional preposition
CO85: Describe contrary and contradictory preposition

Module: 3
Kinds of Inference

CO86: Explain the immediate and mediate inference
CO87: Discuss type of immediate inference (observation conservation)
CO88: Explain the concept of nyaay anumana

Module 4
Mediate Inference

CO89: Explain the definition nature and rules of categorical syllogism
CO90: Discuss the figure and moods of syllogism
CO91: Discuss the definition nature and rules of mixed hypotheticalism
CO92: Explain the kinds of fallacies of mediate inference

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B. A. Part-II (Sem -IV) (Paper - II)

Traditional Logic (IDS)

After successfully completion of this course student will be able to,

Module 1
Kinds of inference

CO93: Discuss the simple enumeration
CO94: Explain analogy
CO95: Explain the scientific induction
CO96: Explain the difference between induction and deduction

Module 2
Observation and Experiment

CO97: Explain the definition and characteristics of observation
CO98: Explain the definition and characteristics of experiment
CO99: Discuss merit and demerits of observation
CO100: Discuss merit and demerit of experiment

Module 3
Hypothesis

CO101: Explanation the definition nature and importance of hypothesis
CO102: Discuss the valid hypothesis.
CO103: Discuss verification and proof of hypothesis
CO104: Discuss the importance of hypothesis in research

Module 4
Set Theory

CO105: Discuss the nature and definition of set theory
CO106: Discuss the types of set (equal non equal and null)
CO107: Explain the Operation set (union, intersection)
CO108: Explain the rules of set

B. A. Part-II (Sem -III) (Paper - III)

Philosophy of Religion

After successfully completion of this course student will be able to,

Module 1
Nature of philosophy of Religion

CO109: Explain the definition, nature and scope of philosophy of religion.
CO110: Explain the philosophy of religion and religion.
CO111: Discuss the philosophy of religion and God

Module 2
Nature of Religion

CO112: Discuss definition and meaning of religion
CO113: Discuss the classification tribal National and universal religion
CO114: Discuss the Dharm and present situation

Module 3
Theories of Religion

CO115: Explain and discuss Animism, super naturalism
CO116: Discuss collectivism primitive monotheism
CO117: Describe an Ansetor cult Anachronis

Module 4
Aspects of Religion

CO118: Explain morality and science
CO119: Discuss prayer and worship
CO120: Explain customs and traditions

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B. A. Part-II (Sem -IV) (Paper - V)

Philosophy of Religion (Part II)

After successfully completion of this course student will be able to,

Module 1
Philosophical thoughts

CO121: Discuss the Hinduism and Buddhism
CO122: Discuss Jainism and Sikhism
CO123: Discuss Islam and Christianity

Module 2
God nature and Man

CO124: Explain attributes of God
CO125: Explain the problem of criterion
CO126: Discuss God and man

Module 3
Existence of God

CO127: Discuss the concept of God
CO128: Discuss the existence of God Indian view
CO129: Discuss the existence of God Western view

Model 4
Immorality of soul

CO130: Discuss the meaning and possibility of immorality
CO131: Explain the concept of immorality survival Renumeration, Transmigration
CO132: Discuss the doctrine of Karma

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B. A. Part-II (Sem -III) (Paper - IV)

Social and Political Philosophy (Part I)

After successfully completion of this course student will be able to,

Module 1
The nature and scope

CO133: Explain the nature and scope of social philosophy
CO134: Explain the nature and scope of political philosophy
CO135: Explain the relation between sociology Political science and ethics

Module 2
The nature of relation

CO136: Discuss the individual and society
CO137: Discuss the state and nation
CO138: Discuss the family and human being

Module 3
Political Ideologies

CO139: Discuss Marxism
CO140: Discuss democracy
CO141: Discuss Sarvodaya

Module 4
Methods of political actions

CO142: Discuss constitutionalism
CO143: Discuss terrorism
CO144: Discuss pacifism

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B. A. Part-II (Sem -IV) (Paper - IV)

Social and Political Philosophy (Part II)

After successfully completion of this course student will be able to,

Module 1
Indian constitution

CO145: Discuss fundamental rights and duties
CO146: Discuss Liberty equality and Justic
CO147: Explain directive principle of State policy

Module 2
Social institutions

CO148: Discuss joint family and clear family
CO149: Discuss religion's role in social life
CO150: Discuss the marriage system and leave in relationship

Module 3
Social change and progress

CO151: Explain the concept of social change
CO152: Explain the concept of social
CO153: Describe the criteria of social change and progress

Module 4
Social problems

CO154: Discuss casteism
CO155: Discuss gender equality
CO156: Discuss current issue of media (print media and electronic media)

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B.A.Part-I (SEM-I) DSC (01) PAPER-I

SUBJECT: POLITICAL SCIENCE

COURSE OUTCOMES 2024-25

Course Credits: 04 **Course Code :BAU0325DSL216A01**

Indian Constitution

After completion of course, students will be able to:

CO1: Acquire the knowledge constitutional values in their day to Day life

CO2: Students will be able to get familiar with background of Indian Constitution

CO3: Apply constitutional values in the functioning of governmental Institutions.

CO4: Acquaint with fundamental rights and awareness of Fundamental duties

CO5: Awareness about election commission of India

CO6: Students will be able to understand some major provisions of the Constitution

CO7: Students will be able to understand the context of the constitution related issues.

CO8: Acquire the knowledge about Centre – state relation

B.A.Part-I (SEM-II) DSC (01) PAPER-II

Indian Government- II

CO9: Acquire the knowledge about of Indian Government.

CO10: Students will be get information about Structure of Government.

CO11: Students will know the correlation between different organs of Government.

CO12: Students will get knowledge about Indian Judiciary System.

CO13: Student will be able to know political party system in India

B.A. Part – II (Sem III)

DSC (D7) Paper III Political Process in India

CO14: Comparison between social and economic relation and Political process in India.

CO15: Define and explain the challenges arising due to caste, class, Gender and religious Diversities and changing nature of Regional issues.

CO16: Make sense of the specificities of the political process in India In the light of changes of the state practices, electoral system, Representational forms and electoral behavior.

CO17: Compare before political economy.

CO18: Develop the ability to predict Pre exit Poll

CO19: Discuss the regionalism politics of communalism

B.A.Part – II (Sem III)

DSC (D7) Paper IV Indian Political Thought Part – I

CO20: Develop principle based thinking about socio-political Reforms.

CO21: Define Kantilla's major theory about state.

CO22: Explain Mahatma Phule views on state, Religion and Styashodhak Samaj

CO23: Describe Rajarshi Shahu Chhatrapati Thoughts on Political Reforms, Social Justice and women empowerment

CO24: Interpret B.G. Tilak of Cultural Nationalism.

CO25: Explain B.G. Tilak concepts on Swarajya (Fore fold program) And Right to Resist

B.A.Part – II (Sem IV)

DSC (D35) Paper – V Local Self-government in Maharashtra

CO26 : Discuss Historical Background of Loca lself-government.
CO27 :Analyze Reforms for local self govt, Committee work.
CO28 : Describe Gram Panchayat, PanchayatSamiti and ZilaParishad.
CO29 :Compare Municipal Council and Municipal Corporation.
CO30 :Discuss the 73rd Constitutional Amendment Importance and Feature.
CO31 :Describe 74th Constitutional Amendment Importance and Feature.

B.A. Part – II (Sem IV)

DSC (D36) Paper – VI Indian Political Thought Part – II

CO32: Demonstrate knowledge and understanding of concepts of Indian Political Thoughts.
CO33: Discuss concept of Swaraj referwith to M.K. Gandhi.
CO34: Describe Thought of Jawaharlal Nehru on democratic socialism.
CO35: Criticize concept of B.R. Amabedkar's Cast System.
CO36: Analyze the radical Democracy and its views in Marxism with reference to M .N. Roy.
CO37: Discuss M .N. Roy's concept of New Humanism.

Head

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B. A. Part – I SEM.-I

Course Category: SKILL ENHANCEMENT COURSE (SEC)-1

Course Name: Rural Local Self Government

COURSE OUTCOMES 2024-25

Course Credits: 02 Course Code :BAU0325SEL216A01

CO1: Students will be familiar with the institution of Rural Local Self Government

CO2 :Students will come to know the methods of voting in Rural Local Self Government

CO3 : Students will come to know the role of Rural Local Self Government

CO4: Students will be familiar with some Government Schemes

B. A. Part – I SEM.-II

Course Category: SKILL ENHANCEMENT COURSE (SEC) -02

Course Name : Urban Local Self Government

Course Credits: 02 Course Code :BAU0325SEL216B01

CO5: Students will be familiar with the institution of Municipality and Municipal Corporation.

CO6 : Students will be familiar with role of Urban Local Self Government.

CO7: Students will come to know the methods of voting in Urban Local Self Government.

CO8: Students will come to know the role Municipality and Municipal Corporation in Urban Development.

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B.Sc Part – I SEM.-I

Open Elective Course (OE)-1

Course Name: Introduction to Public Administration

COURSE OUTCOMES 2024-25

Course Credits: 02 Course Code :BAU0325OEL216A01

Introduction to Public Administration

CO1: Students will be familiar with the basics of Public Administration

CO2 : Students will be able to know the Principles of Administration

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B.Sc Part – I SEM.-II

Course Category: Open Elective Course (OE)-02

Course Name : Personnel Administration

Course Credits: 02 Course Code :BAU0325OEL216B01

CO3: Students will be familiar with the Personnel Administration

CO4: Students will come to know the Principles of Administration in Practice

CO5: Students will come to know the role of Public Service Commissions in India

CO6: Students will be aware about citizen charter

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Rajarshi Chhatrapati Shahu College, Kolhapur

SUBJECT: PSYCHOLOGY

COURSE OUTCOMES

Academic Year 2024-25

B.A.Part-I (SEM-I) PAPER-I

Psychology for Friendship and Love

The students will be able to----------

CO 1 Understand Relationship Development

CO 2 Explore Friendship

CO 3 Study Theories of Romantic Love

CO 4 Examine the Course of Romantic Love

CO 5 Explore Marriage and Family Dynamics

CO 6 Address Vulnerable Areas in Marital Adjustment

CO 7 Study Gender Behavior and Sexual Expression

Paper-II (Sem-II)

Health Psychology

The students will be able ----------

CO 8 To know the concept and state of health.

CO 9 To regulate physical and mental process.

CO 10 To aware the need and challenges before health psychology.

CO 11 To develop the health habits and promote health behavior among students.

CO 12 To apply the concept of stress, sources of stress and stressful events.

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B.A. Part – II (Sem III) Paper-III

Psychology for Living

The students will be able --------

CO13 To acquaint knowledge about processes of Psychology for Living.

CO14 To know the concept of Stress.

CO15 To explain Understanding mental Disorder.

CO16 To apply the various Psychotherapies and their uses.

B.A.Part – II (Sem III) Paper-IV

Social Psychology

The students will be able ----------

CO17 To acquaint the knowledge about processes of Social Psychology.

CO18 To known one concept of Social Perception.

CO19 To aware about the self and self-esteem.

CO20 To apply the concept of attitude formation, persuasion and cognitive Dissonance.

B.A.Part – II (Sem IV) Paper-V

Modern Social Psychology

The students will be able ------

CO21 To acquaint the students with processes of liking (attraction) and sources of liking.

CO22 To introduce students the concept of social influence, Conformity and Compliance.

CO23 To acquaint the students with Understanding Prosocial Behavior.

CO24 To introduce students the concept of Aggression, its causes and control

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B.A. Part – II (Sem IV) Paper -VI

Applied Psychology

The students will be able--------

CO25 To acquaint the students with processes of Personal control, Decision Making and Personal growth.

CO26 To introduce students the work, career, play and using leisure positively.

CO27 To acquaint the students with Making and keeping friends

CO28 To introduce students the concept of Love and Commitment.

Subject Teacher

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SUBJECT: PSYCHOLOGY

COURSE OUTCOMES 2024-25

B. A. Part – I Sem –I SEC –I

Interpersonal Skills

The students will be able to--------

CO1 Demonstrate active listening skills and respond appropriately to others' messages.

CO2 Express their ideas clearly and concisely, both verbally and in writing.

CO3 Exhibit empathy in their interactions, considering others' feelings and experiences.

CO3 Practice negotiation and mediation skills to resolve conflicts in various contexts.

CO4 Apply interpersonal skills in professional contexts such as interviews; and presentations

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B. A. Part – I SEM.-II SEC –II

Emotional Intelligence Skills

The students will be able to--------

CO5 Comprehend the psychological and physiological aspects of emotions.

CO6 Analyse the evolutionary purposes of emotions in human survival and social interactions.

CO7 Iidentify their own emotions accurately and learn techniques to manage and regulate their own emotions.

CO8 Apply emotional intelligence skills in personal relationships, workplace scenarios, leadership roles, and community interactions.

CO9 Develop personalized strategies to enhance their emotional intelligence skills, setting goals for continuous growth.

Subject Teacher

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SUBJECT: PSYCHOLOGY

COURSE OUTCOMES

Academic Year 2024-25

B. A. Part – I SEM.-I OE - I

Psychological First Aid (Psychology)

The students will be able to--------

CO1 Understand the physical, mental, emotional and social crises

CO2 Identify those in crises who need care (The needy).

CO3 Help the needy to handle their crises through PFA.

CO4 Handle their own stress and burnout while providing PFA.

B. A. Part – I SEM.-II OE – II

Build Good and Break Bad Habits (Psychology)

The students will be able to--------

CO5 Identify and analysis keystone habits in personal and Profession contexts.

CO6 Understand the personalized habit-stacking plans for specific behavioral changes.

CO7 Develop SMART goals aligned with desired habit.

CO8 Execute the four laws of behavior change as atomic habits.

CO9 Engage in reflective practices to assess personal growth and development.

Subject Teacher

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R.C. SHAHU COLLEGE
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Program Specific Outcomes (PO's) and Course Outcomes (CO's)

DEPARTMENT OF PHYSICAL EDUCATION

Academic Year 2024-25

Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur

Department of Physical Education

Program Specific Outcomes (PSO's)

After successfully completing B. A. (Physical Education) programme students will be able to:

PSO1 : Understand the meaning of physical education for personal development.

PSO2 : Experience to perform basic skills of team games, gymnastics, yogasanas and pranayamas.

PSO3 : Inculcate healthy habit and adopt physically active lifestyle

PSO4 : Apply knowledge of physical education and health education for the wellbeing of society.

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Department of Physical Education

Course Outcomes (Academic Year 2024-25)

B. A. Part- I (NEP), Semester- I

Course: DSC I **Course Code: BAU0325MML226A01**

Course Name: Introduction and Promotion of Physical Education and Sports

After successfully completion of this course students will be able to,

CO1 : Explain concept of physical education.

CO2 : Explain nature and scope of physical education.

CO3 : Analyze the misconceptions about Physical Education.

CO4 : Illustrate aims and objectives of Physical Education.

Course: SEC-I **Course Code: BAU0325SETP226A01**

Course Name: Health, Wellness and Yoga

CO5: Define and explain importance of Health and wellness.

CO6: Illustrate dimensions of Health and Wellness.

CO7: Explain factors influencing health and wellness.

CO8: Explain meaning of sports, games, yoga, recreation and leisure time and respective activities.

CO9: Identify causes of stress and stress relieving exercises and yogic techniques.

B. Sc. Part- I (NEP), Semester- I

Course: OE-I **Course Code: BAU0325OETP226A01**

Course Name: Yoga and its applications

After successfully completion of this course students will be able to,

CO10 : Define and explain meaning of yoga

CO11 : Explain history and development of Yoga in India.

CO12 : Illustrate *Ashtang* Yoga

CO13 : Illustrate preventive measures to be taken before, during and after practicing yoga.

CO14 : Describe effect of *Asanas* on various systems of human body.

B. A. Part- I (NEP), Semester- II

Course: DSC-II **Course Code: BAU0325MMTP226B02**

Course Name: Foundation of Physical Education and Sports

After successfully completion of this course students will be able to,

CO15: Define and explain growth and development. Explain stages of development.

CO16: Differentiate Gender Characteristics of male and female.

CO17: Explain and analyze body somatotypes

CO18: Define and explain attitude, interest, social acceptance and recognition

CO19: Define and illustrate leadership in physical education.

CO20: Explain different philosophies of Education applied to physical education.

CO21: Illustrate the theories of play with examples.

Course: SEC- II **Course Code: BAU0325SETP326B02**

Course Name: Measurement and Evaluation in Physical Education

CO22: Define and explain meaning of test, measurement and evaluation in Physical Education.

CO23: Explain need and importance of test, measurement and evaluation in Physical Education.

CO24: Illustrate principals of evaluation and criteria of Good Test.

B. Sc. Part- I (NEP), Semester- I

Course: OE- II **Course Code: BAU0325OETP226B02**

Course Name: Sports Event Management

After successfully completion of this course students will be able to,

CO25 : Define and explain meaning of sports management.

CO26 : Explain importance and scope of event management.

CO27 : Illustrate principals of sports event management.

CO28 : Explain the terms major and minor sports events.

CO29 : Explain the steps of managing major and minor sports events.

CO30 : Describe traditional games management.

B. A. Part- II, Semester- III

Course: DSC –D27 **Course Code: 73396/77696**

Course Name: History of Physical Education

After successfully completion of this course students will be able to,

CO31: Describe elements of Physical Education in Primitive Societies and nature of physical education in ancient India.

CO32 : Describe and analyze development of physical education in India from early period to post-independence period.

CO33: Describe and analyze development of physical education in Maharashtra from 1920.

CO34: Explain aim, nature and legendary origin of Ancient Olympic Games and analyze the reasons for declining the ancient Olympics.

CO35: Explain significance of the games and eligibility for participation, process of conduct of event and awards.

CO36: Illustrate revival of Modern Olympic Games and describe controlling body of Olympics and execution of Olympic Games

CO37: Explain eligibility criteria; enlist venues, events and award; describe opening and closing ceremony of Olympics.

Course: DSC –D28 **Course Code: 73397/77697**

Course Name: Organization and Administration of Physical Education and Sports

After successfully completion of this course students will be able to-

CO38: Explain concept of organization and administration.

CO39: Explain need and importance of organization and administration.

CO40: Illustrate principals of organization and administration in physical education and sports.

CO41: Illustrate need and importance of sports equipment.

CO42: Explain the policies of purchase of sports equipment, care and maintenance procedure of sports equipment.

CO43: Explain standards & facilities of gymnasium and describe the procedure of maintenance of gymnasium.

B. A. Part- II, Semester- III (Yoga Studies-IDS)

Course: DSC –D56 **Course Code: 90820**

Course Name: Introduction of Yoga

After successfully completion of this course students will be able to,

CO44 : Explain concept of Yoga.

CO45 : Define Yoga.

CO46 : Illustrate aims and objectives of Yoga.

CO47 : Describe Ashtang Yoga.

B. A. Part- II, Semester- IV

Course: DSC –D55 **Course Code: 93524**

Course Name: Development of Physical Education and Sports

After successfully completion of this course students will be able to,

CO48: Explain nature and functioning of different institutions for training in physical education of in India.

CO49: Describe Directorate of Sports and youth services of Maharashtra State.

CO50: Identity and describe different state level and national level Sports Awards as well as state their eligibility and nature.

CO51: Identify sports personalities in India and describe their contribution in Indian Sports.

Course: DSC –D56 **Course Code: 93525**

Course Name: Organization and Administration of Meets and Tournaments

After successfully completion of this course students will be able to,

CO52 : Explain importance of sports meets and tournaments.

CO53: Differentiate various types of tournaments and explain their merits and demerits.

CO54: Apply the formula of making draws and draw the lots for various kinds of tournaments.

CO55: Describe the administration and management of Shivaji university and Inter-university sports competitions.

CO56: Enlist various committees and state their responsibilities for organization and administration of competitions. Explain roles of officials and various committees of athletic meet.

CO57: Elaborate the procedure of preparation and process of maintenance of playgrounds.

CO58: Draw the playfields of Kabaddi. Kho-kho, Volleyball, Handball, Cricket and Basketball

B. A. Part- II, Semester- IV (Yoga Studies-IDS)

Course: DSC –D56 **Course Code: 73430**

Course Name: Yoga for Human Life

After successfully completion of this course students will be able to,

CO59 : Explain and differentiate different schools of Yoga

CO60 : Describe yogic diet.

CO61 : Describe effect of yogic exercises on various systems of human body.

CO62: Identify various benefits of yoga in Modern life.

B. A. Part- III Semester- V

Course: DSE –E41 **Course Code: 75601**

Course Name: Health Education

After successfully completion of this course students will be able to,

CO63: Explain concept, nature and scope of health education.

CO64: Analyze factors influencing on health.

CO65: Identify communicable diseases and explain causes and prevention of communicable diseases.

CO66: Identify and describe health problems in family, community, school and colleges.

Course: DSE –E42 **Course Code: 75602**

Course Name: Recreation in Physical Education

After successfully completion of this course students will be able to,

CO67 : Explain concept and objectives of rhythm and rhythmic exercises.

CO68 : Analyze need and importance of rhythmic exercises.

CO69: Explain concept of recreation and characteristics of recreation.

CO70: Describe recent trends in rhythm and recreation.

Course: DSE –E43 **Course Code: 75603**

Course Name: Yoga

After successfully completion of this course students will be able to,

CO71: Explain aims and objectives of yoga in human life

CO72: Describe promotive, preventive and curative aspects of physical health tackled through yogic practices.

CO73: Explain nature of mental health problems.

CO74: Describe promotive, preventive and curative aspects of mental health tackled through yogic practices.

Course: DSE –E44 **Course Code: 75604**

Course Name: Anatomy and Physiology

After successfully completion of this course students will be able to,

CO75 : Explain meaning and importance of anatomy and physiology.

CO76: Identify types of bones and joints in the human body.

CO77: Explain major movements around joints.

CO78: Describe structure and functions of respiratory system and muscular system

CO79: Define and explain the terms Vital capacity and Second wind.

Course: DSE –E45 **Course Code: 75605**

Course Name: Dietetics and Nutrition

After successfully completion of this course students will be able to,

CO80 : Describe the components of diet and their functions.

CO81: Define balanced diet and illustrate sources of balanced nutrients.

CO82: Explain causes, signs and symptoms of underweight and obesity.

B. A. Part- III Semester- VI

Course: DSE –E166 **Course Code: 75801**

Course Name: Health Education Program

After successfully completion of this course students will be able to,

CO83: Explain importance of exercise in health and fitness.

CO84: Describe adverse effects of drugs, alcohol and tobacco on sports performance.

CO85: Explain concept, scope, need, importance and role of population education.

CO86: Illustrate aims and objectives, programs and projects of World Health Organization..

CO87: Describe causes, symptoms and preventive measures of AIDS/HIV.

Course: DSE –E167 **Course Code: 75802**

Course Name: Research in Physical Education

After successfully completion of this course students will be able to,

CO88 : Define research and explain concept and meaning of research.

CO89 : Explain types of research.

CO90 : Describe qualitative and quantitative research.

CO91 : Describe various stages in research process.

Course: DSE –E168 **Course Code: 75803**

Course Name: Yoga and Health

After successfully completion of this course students will be able to,

CO92 : Explain concept of emotional health.

CO93: Illustrate relationship of yoga with emotional health.

CO94: Describe effects of yogic exercises on respiratory and nervous system.

CO95: Analyze psychological basis of promoting sports career.

CO96 : Analyze contribution of yogic practices for the development of sports performances.

Course: DSE –E169 **Course Code: 75804**

Course Name: Anatomy and Physiology of Exercise

After successfully completion of this course students will be able to,

CO97 : Explain constituents of blood and its functions

CO98 : Define and explain blood groups, blood pressure and oxygen debt.

CO99 : Describe structure and function of digestive system.

CO100 : Describe structure and function of excretory system.

CO101 : Describe structure and function of brain and spinal cord.

CO102 : Define the term reflex action and explain mechanism of reflex action.

Course: DSE –E170 **Course Code: 75805**

Course Name: Dietetics and Hygiene

After successfully completion of this course students will be able to,

CO103 : Explain different types of foods and its sources. effects on health.

CO104 : Explain effects of different types of foods on health.

CO105 : Describe need, importance and composition of athletic diet.

CO106 : Describe desirable hygienic habits.

CO107: Illustrate school health programs and its supervision.

OUTCOMES OF PRACTICALS

B. A. Part- I (NEP)
DSC (Physical Education)

After successfully completion of this course students will be able to,

- Explain rules and regulations of Kabaddi.
- Demonstrate fundamental skills of Kabaddi, Volleyball; techniques of shot put, long jump,100 m run start and 200 m run.
- Perform Suryanamaskars in proper technique/postures.
- Demonstrate Asanas in proper techniques/postures.

B. A. Part- I (NEP) Semester- I
SEC-I (Health, Wellness and Yoga)

After successfully completion of this course students will be able to,

- Demonstrate general and specific exercises for warm up and cool down.
- Performs physical fitness activities.
- Demonstrate and skillfully perform stretching exercises, strengthening exercises, cardiovascular exercises, flexibility & agility exercises, and relaxation techniques.
- Demonstrate and perform Suryanamaskar, basic sets of yoga and meditation.

B. A. Part- I (NEP) Semester- II
SEC-II (Measurement and Evaluation in Physical Education)

After successfully completion of this course students will be able to,

- Demonstrate physical fitness tests and conduct the tests on others.
- Demonstrate AAHPER youth fitness tests and conduct the tests on others.
- Demonstrate Cooper's 12 min run and walk test, Harward Step test and conduct the tests on others.
- Demonstrate basketball, soccer and volleyball tests and conduct the tests on others.

B. Sc. Part- I (NEP) Semester- I
OE-I (Yoga and it's Applications)

After successfully completion of this course students will be able to,

- Demonstrate and perform Suryanamaskar.
- Demonstrate and perform Yogasanas.
- Demonstrate and perform Pranayamas.
- Perform *Omkar sadhana* and recite prayer.

B. Sc. Part- I (NEP) Semester- II
OE-II (Sports Event Management)

After successfully completion of this course students will be able to,

- Organize indoor games and outdoor games.
- Organize intramurals and sports fests.
- Prepare the report of the organized event and maintain the record.

B. A. Part- II
(Physical Education)

After successfully completion of this course students will be able to,

- Explain rules and regulations of Kho-Kho and Basketball.
- Demonstrate fundamental skills of Kho-Kho and basketball; demonstrate techniques of 1500 m running, discus throw and high jump.
- Demonstrate Yogasanas using proper techniques/postures.
- Demonstrate techniques of gymnastics such as front roll, back roll and cartwheel
- Mark layout of Kho-kho, Handball and Basket-ball playfield.

B. A. Part- II
(Yoga Studies-IDS)

After successfully completion of this course students will be able to,

- Demonstrate Yogasanas, Shitali, Shitakari, Bhramari and Kapalbhati Pranayama; Udiyan Bandh and Sinh Mudra effectively
- Perform Omkarsadhana and recite prayer.

B. A. Part- III
(Physical Education)

After successfully completion of this course students will be able to,

- Explain objectives and rules of first aid.
- Demonstrate fundamental skills of Badminton, foot ball and cricket techniques and styles of weight lifting, Judo, wrestling, triple jump and Javelin throw, 110 m. Hurdles, baton exchange.
- Demonstrate techniques of gymnastics-front role, back role, cartwheel, dive and role, and hand stand.
- Demonstrate Asanas and Pranayamas.
- Identify materials in first aid box.
- Identify types of fractures, its signs and symptoms
- Use sling and splint
- Identify types, signs and symptoms of bleeding
- Explain artificial respiration and its methods.
- Apply bandage, slings and do simple dressing.
- Present recreational game.
- Mark the 400 m track.

Head
Department of Physical Education
Rajarshi Chhatrapati Shahu College, Kolhapur.

RAJARSHI CHHATRAPATI SHAHU COLLEGE KOLHAPUR

Principal,
Rajarshi Chh. Shahu College
Kolhapur.

Rayat Shikshan Sanstha's
Rajarshi Chhatrapati Shahu College, Kolhapur
Department of Commerce

Programme Specific Outcomes (PSOs) of B. Com.

PSO 1 Bachelor's Degree in Commerce results in giving comprehensive knowledge of Marketing, Human Resource Management, Business and Corporate Law, Economics, Finance, Accounting, Management, Tax and several other branches of Commerce that includes Investment, Insurance, and Banking. Thus, this programme helps students in building a concrete footing for advanced studies in Commerce and to stand with the requirement of business sector, insurance, banking seeking youth fit for employment.

PSO 2 Students undergoing this programme will be equipped to the world of work, particularly, work of the future. The student will get a first-hand exposure of working in the real world.

PSO 3 Students completing this programme will be able to develop managerial knowledge and tactical dexterity, with a broader skill set and encourages them to seek out audacious, innovative solutions for today's business.

PSO 4 Completion of this programme will also enable the students to formulate business problems and provide innovative solutions thus, moulding them into future visionaries, management leaders that are compassionate yet efficient.

PSO 5 This course provides an extreme and rigorous base for teaching, research, and allied business administration.

H.O.D.
Department of Commerce
Rajarshi Chhatrapati Shahu College
Kolhapur

RAJARSHI CHHATRAPATI SHAHU COLLEGE KOLHAPUR

Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur

Department of Commerce

B.Com. (Regular)

PO/PSO/CO

Program Outcome

After completion of the Program, the students will be able to....

PO 1 Demonstrate extensive and coherent knowledge of commerce and its applications in real business world

PO 2 Understanding of various concepts and theories providing strong academic foundation

PO 3 Demonstrate educational skills in areas of Marketing, Finance, Accounting, HR, Tax, Economics, and several other branches of Commerce

PO 4 Acquire various soft skills (like communication, organizing, and analytical) required to manage complete business situation as well as life situations

PO 5 Apply knowledge, understanding, and skills to identify the difficult/unsolved problems in rapidly changing environment and to collect the required information from possible range of sources and try to analyse and assess these problems using appropriate methodologies

PO 6 Fulfil one's learning requirements to provide an insight of research in Commerce and interdisciplinary areas while seeking research pursuits

PO 7 Apply one's disciplinary knowledge and transferable skills to new/unfamiliar contexts, rather than replicate curriculum content knowledge, to identify and analyse problems and issues and solve complex problems with well-defined solutions

PO 8 Good value systems leading to high ethical and moral conduct in society at large

PO 9 Competencies and attitudes

PO 10 Values.

RAJARSHI CHHATRAPATI SHAHU COLLEGE KOLHAPUR

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Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur

Department of Commerce

Course Outcomes

B.Com.-I Level 4.5 (Introduced from June 2024)

Course Code: DSC (A)- I Accountancy Paper-I (Accounts of Partnership Firms)

CO-1 Complete accounting procedure in the case of amalgamation of partnership firms.

CO-2 Understand accounting procedure in the case of conversion of partnership firms into a company.

CO-3 Make accounting process for distribution of cash when a partnership firm is dissolved.

CO-4 Make accounting of joint life policy of partners.

DSC (A)-Accountancy Paper-II
(Single Entry, Accounts of Professionals and Non-Profit Organisations)

CO-5 Understand preparation of Statement of Affairs and calculation of profit or loss from incomplete records.

CO-6 Convert single entry into double entry system

CO-7 Prepare accounts of professionals

CO-8 Maintain accounts of Non-Profit Organisations

SEC-I Marketing Skills Paper-I (Basic Marketing)

CO-9 Develop understanding of basic concepts of marketing, marketing philosophies and environmental conditions effecting marketing decisions of a firm.

CO-10 Analyse the process of marketing decisions involving product development and its role in value creation.

SEC-II Marketing Skills Paper-II (Digital Marketing)

CO-11 Identify and assess the impact of digital technology in transforming the business environment and also the customer journey

CO-12 Explain the way marketers think, conceptualize, test continuously to optimize their product search on digital platforms

CO-13 Illustrate the measurement of effectiveness of a digital marketing campaign

CO-14 Demonstrate their skills in digital marketing tools such as SEO, Social media, and Blogging for engaging the digital generation

SEC-I Insurance Skills Paper-I

CO-15 Understand the basic concepts of Life Insurance and Insurance contract.

CO-16 Demonstrate documentation associated with taking life insurance policies

SEC-II Insurance Skills Paper-II

CO-17 Understand the basic concepts of General Insurance and Insurance contract.

CO-18 Demonstrate documentation associated with taking non-life insurance policies

IKS- Generic: Indian Business Management

CO-19 Understand the key ideas of Indian management

CO-20 Explain how to develop Indian thoughts in management

CO-21 Application of values in Management

CO-22 Demonstrate various examples of Indian thinkers and Indian business models before the students

DSC (B)-1 Business Administration Paper I (Principles of Management)

CO-23 Understand the contributions towards the management

CO-24 Explain in detail types of change in management

CO-25 Apply Principles of Management in various fields of business

CO-26 Demonstrate the plan of crisis management

DSC (B)-1 Business Administration Paper II (Functions of Management)

CO-27 Understand the varous Functionsof Management

CO-28 Explain in detail Planning & decision making process

CO-29 Apply theories of motivation in various fields of business

CO-30 Demonstrate the process of controlling

B.Com.-II (NEP) (Introduced from June 2023-24)

Fundamentals of Entrepreneurship Paper I

CO-31 To impart theoretical knowledge of Entrepreneurship

CO-32 To develop Entrepreneurship qualities and skills

CO-33 To acquaint students with Steps involved in the formation of Small Enterprises

CO-34 To enlighten students with Recent Trends and Concepts in Entrepreneurship

Fundamentals of Entrepreneurship Paper II

CO-35 To acquaint students with family business in India

CO-36 To impart conceptual knowledge of Service and Agro Entrepreneurship

CO-37 To aware students about Business Plan and Project Report

CO-38 To inspire the students through successful stories of Entrepreneurs

Corporate Accounting Paper I

CO-39 Demonstrate accounting for issue of bonus shares, rights shares and sweat equity.

CO-40 Demonstrate accounting for issue of debentures and redemption of debentures.

CO-41 Explain the accounting of profit/loss prior to and after incorporation.

CO-42 Practice the fundamental accounting process on Tally ERP.

Corporate Accounting Paper II

CO-43 Demonstrate accounting for redemption of Preference Shares.

CO-44 Compute the value of shares as per distinct methods and differentiate between them.

CO-45 Simulate practice of preparing financial statements as per the provisions of Indian Companies Act, 2013.

CO-46 Practice the store accounting through Tally ERP.

Money and Financial System (Paper I) (DSC 09)

CO- 47 Students explain the concept of money, its new incarnations and flow in to the economy

CO- 48 Students understood the financial system and its operation

CO- 49 Students explain functions of bank & types of banks

CO- 50 Students understand the nature of banking business and practices

Money and Financial System (Paper II) (DSC 09)

CO-51 Students equipped explain and make use of the E- Banking services

CO-52 Students understand the changing nature of financial system

CO-53 Students enable to analyse the stance of RBI's monetary policy

CO-54 Students understood All India Financial Institutes and Issues in Indian Banking

B.Com.-III

Modern Management Practice- Paper-I

CO-55 To impart knowledge of modern management.

CO-56 To explain the concepts of emotional and social intelligence.

CO-57 To apply concepts of CRM. 4. To demonstrate the process of talent management

CO-58 To demonstrate the process of talent management.

Modern Management Practice- Paper-II

CO-59 To impart knowledge of total quality management.

CO-60 To understand the Japanese and Chinese Management Practices.

CO-61 To know the concept of Event and Performance Management.

CO-62 To understand the concept of time and stress management.

Business Regulatory Framework Paper- I

CO-63 Understand various laws related to business.

CO-64 Explain Contract, labour laws. Sale of Goods Act, GST and Partnership acts.

CO-65 Apply legal knowledge and framework for various business transactions.

CO-66 Demonstrate making contracts, maintaining records under labour laws, GST mechanism etc

Business Regulatory Framework Paper- II

CO-67 Understand various laws related to business, e commerce, consumers, SEBI and Negotiable instruments etc.

CO-68 Explain Detail formation and management of company, consumer rights, cyber laws and crimes and various negotiable instrument.

CO-69 Apply Consumer rights, e commerce transactions, share holders rights etc.

CO-70 Demonstrate process of company formation, trading of securities, IPR and Digital Signature.

Paper-I CC-C5:Cooperative Development

CO-71 Study the meaning and principles of Co-operation.

CO-72 Study the agricultural and Non-agricultural Credit Co-operative institutions.

CO-73 Study the Co-operative credit system

CO-74 Study the important cooperative organizations

Paper-II:CC-C6:Cooperative Development

CO-75 Equip with the cooperative elegislations and fund management

CO-76 Under stand the institutional arrangement for cooperative education and training

CO-77 Under stand the nature, registration, legislation and auditofhousing cooperatives

CO-78 Under stand the cooperative audit system and provisions

DSE-A 1 Advanced Accountancy Paper – I

CO-79 Practice the Preparation of Financial Statements of Banks.

CO-80 Demonstrate accounting for hire purchase system.

CO-81 Simulate accounting situations regarding computation of insurance claim.

CO-82 Explain the accounting process on Tally with GST.

DSE-A2 Advanced Accountancy Paper –II (Auditing)

CO-83 To understand the concept and types of audit

CO-84 To identify the residential status and its implication on tax liability

CO-85 To understand the concept of exemption from income

CO-86 To know the computation of income from various sources as well as total income

DSE-A3 Advanced Accountancy Paper – III

CO-87 Practice the preparation of financial statements of banks.

CO-88 Demonstrate accounting for farms and hire purchase system.

CO-89 Simulate accounting situations of insurance claim.

CO-90 Explain the accounting process on Tally with GST.

DSE-A4 Advanced Accountancy(Taxation) Paper– IV

CO-91 To understand the basic concepts of income tax and basis of charge

CO-92 To identify the residential status and its implication on tax liability

CO-93 To understand the manner of computation of income under each head

CO-94 To understand the manner of computation of total income and Tax

Skill Enhancement Course Modern Office Management

CO-95 To Understand the concept of Modern Office Management.

CO-96 To Understand and apply the Automated office and Paperless Office concept

CO-97 To Apply the gained knowledge to design Virtual Office Management.

H.O.D.
Department of Commerce
Rajarshi Chhatrapati Shahu College
Kolhapur

RAJARSHI CHHATRAPATI SHAHU COLLEGE KOLHAPUR

Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur

Department of Commerce IT

B.Com. (Information Technology)

PO/PSO/CO:

Program Outcome / Program Specific Outcome:

After completing the B.Com Information Technology program the students would beable to:

PO1: Acquire the managerial professional attributes and be capable to understandFinancial Accounting, Corporate Accounting and Cost Accounting.

PO2: To impart the basic knowledge of Information Technology and applicationsoftware.

PO3: Design, implement and evaluate a computer-based system, or process component, to meet the desired needs of business applications.

PO4: Apply the knowledge of Commerce and Information Technology principles to manage business processes effectively in diverse environments as a member or a leader in the team.

PO5: Develop effective and oral communication and technical writing especially inbusiness applications, with the use of information technology.

PO6: Students can do their carrier in software development, Networking, software testing.

B.Com IT I
Sem I

After Completion of course, Students will be able to

►Programming in c Part I (DSC1)

CO1. Write, compile and debug C Programs
CO 2. Design programs involving decision structures, loops and functions

►Fundamentals of Information Technology (DSC2)

CO 3. Understand basic concepts of Information Technology and Computers
CO 4. Understand Number systems and logic gates

►Lab Course based on DSC2 and DSC3 (Fundamentals of Information Technology and Office Automation) (AECC1)

CO 5: Design and implement programs on C programming concepts
CO 6: Implement the Document creation and Presentation

►OE1- Micro Economics

CO 7. Understand the basic concepts and scope of business economics
CO 8. Understand theories and their Managerial applications

► OE2-Mathematics-I

CO 9. Introduced to fundamental concepts mathematics
CO 10. Getting thorough knowledge of Determinants
CO 11. Demonstrates the ability to solve problem

►Office Automation (VSC1)

CO 12. Understand the office automation and formatting tools in Office automation.
CO 13. Prepare presentation using Power point application.

►Computer Assembly & Troubleshooting-I (SEC1)

CO 14. Understand the assembly of Personal Computers.
CO 15. Identify the basic techniques of troubleshooting of Personal Computers.

►English for Business Communication (AEC1)

CO 16. Enhance their Managerial Communication at work skills set for career.
CO 17. Familiarized with the current expectedrequirement of the industry.
CO 18. Empower with professional as well as remedial of the industry.

►Ancient Indian Management (IKS1)

CO 19. Understand the key ideas of Indian Management.

CO 20. Explain how to develop Indian thoughts in management.
CO 21. Application values in management
CO 22. Demonstrate various examples of Indian thinkers and Indian business models before the students.

Sem II

►Programming in C- II (DSC4)

CO 23:Understand the use of pointers and functions.
CO 24. Design and develop different data structures and create/update basic data files.

►Operating System (DSC5)

CO 25:Understand the fundamental concepts and functions of operating systems.
CO 26. Implement and manage file systems, understand security principles, and perform system maintenance tasks.

►Lab Course based on DSC4 and VSC2 (DSC 6)

CO 27: Design and implement programs on arrays and functions.
CO 28. Implement MS-Excel worksheets and MS-Access database concepts.

►Insurance (DSM 1)

CO 29: Know about concept of Insurance.
CO 30:Aware about importance of Insurance in society.
CO 31:Able to understand various types of insurance.

►OE-III Micro Economics

CO 32:Understand the concepts of national income and demand of supply of money.
CO 33. Understand the concepts of public finance.

►OE-IV Mathematics II

CO 34: Introduced to fundamental concepts of mathematics.
CO 35: Getting thorough knowledge of Determinants.
CO 36: Demonstrates the ability to solve problem

►Office Automation - II (VSC 2)

CO 37: Understand the MS-Excel and working with Spreadsheet.
CO 38: Understand the MS-Access and working with tables and forms.

►Computer Assembly & Troubleshooting II (SEC 2)

CO 39: Understand the Hard disk set-up and Installation process.

CO 40. Identify the configuration and troubleshooting of external devices.

►English for Business Communication (AEC II)

CO 41: Enhance their Managerial Communication at work skills set for career.
CO 42: Familiarized with the current expected requirement of the industry.
CO 43: Empower with professional as well as remedial of the industry.

► Environment Studies (VEC II)

CO 44: Understand different types of natural resources and their conservation.
CO 45: Aware the importance of environmental Audit with its procedure.

B.Com IT- II
Sem III

►Income Tax & GST

CO 46: To understand the basic concepts of income tax and basis of charge
CO 47: To identify the residential status and its implication on tax liability
CO 48: To understand the manner of computation of total income
CO 49: To know the basic concepts about GST

►Corporate Accounting

CO 50: Demonstrate accounting for issue of bonus shares, rightsshares and sweat equity.
CO 51: Demonstrate accounting for issue of debentures andredemption of debentures.
CO 52: Demonstrate accounting for redemption of Preference Share Capital.
CO 53: Prepare Final Accounts of Limited Company.

►Object Oriented Programming Using C++

CO 54:UnderstandC++conceptandobject-orientedprogramming concepts.
CO 55:Applytheconceptsofobject,classesandconstructor.
CO 56:DesignC++ProgramsusingInheritance.
CO 57: Implementconceptofpolymorphisminprogram.

►Database Management System (DBMS)

CO 58: UnderstandtheconceptsofDatabaseManagementSystem.
CO 59: DrawEntity-Relationshipdiagramstorepresent simpledatabaseapplication.
CO 60: WriteSQLqueries for agivencontext in relational database.
CO 61: Implement DMLandDCLstatements.

►Business Statistics

Sem IV

►Business Law

CO 62: Haveafairideaaboutaspectsof differentbusinesslawsinIndia
CO 63:Understandthesalientfeaturesandimportanceofdifferentbusinesslaws.
CO 64: Getacquaintedwithdifferentprovisionsofbusinesslaws.

►Cost Accounting

CO 65: Understandthebasicconceptsofcostaccounting
CO 66: Classifythecostsandapplythesameforcostdetermination
CO 67: Applythecostaccountingprinciplesincostaccountingofmaterials
CO 68: Knowtheapplicationofcostaccountingincalculationoflabourcostandoverheads

►Web Technology

CO 69: Understandbasicsofinternetandwebdevelopmentlifecycle.
CO 70: Design websiteusingHTMLandCSS.
CO 71: Implement client-sidescriptingforwebsitedevelopment usingJavaScript.
CO 72: UnderstandimportanceandworkingofHTML5.

►Relational Database Management System (RDBMS)

CO 73: Understand the fundamental elements of relational database managementsystems.
CO 74: DesignRelationalmodelstorepresentsimpledatabaseapplication.
CO 75: Improvethedatabase designbynormalization.
CO 76: UnderstandthemultipleMySQLtables,subqueriesandfunctions.

►Stock Exchange and Share Marketing

CO 77: To have comprehensive understanding about the stock market operations.
CO 78: To know structure and trading process in the stock exchange and share market.
CO 79: To get knowledge about settlement procedures, processes and regulations
CO 80: To recognise emerging challenges in the Indian Stock market

►Foundations of Financial Audit

CO 81:Understand thebasicconceptsandobjectivesofaudit
CO 82:Gainworkingknowledgeofgenerallyacceptedauditingprocedures
CO 83:Identifytheskillsandtechniquesofconductingauditofvariousentities
CO 84: Know how the audit report is prepared

B.Com IT- III

Sem V

►Advanced Cost Accounting (DSC 15)

CO 85:To know the applications of marginal costing technique in decision making.
CO 86: To understand the concept of standard costing and variance analysis.
CO 87: To know the concept of budgets as well as budgetary control.
CO 88: To understand application of cost accounting standards.

►Computer Networking (DSC 16)

CO 89: Understand the basics of Computer Network and Data Communication
CO 90: Identify different components used in Computer Network
CO 91: Understand Layered communication through Network models.
CO 92: Identify different layers and their services in Computer Network.

►Java Programming (DSC 17)

CO 93: Understand the basics of Java Programing.
CO 94: Identify the Object Oriented Structure of Java Programing.
CO 95: Implement the built in collections for data manipulation in Java programing.
CO 96: Analyze the error handling and multithreading mechanism of Java programing

►Bank Management (DSE 1)

CO 97: Understand bank management system and practices
CO 98: Understand the nature of Bank Management
CO 99: Aware about recent technologies required for efficient Banking and Marketing.
CO 100: Analyse legal provisions for customer services and banking frauds

►Management of Insurance Services (DSE 1)

CO 101: Understand the Insurance services with different product.
CO 102: learn about different types of insurances and their procedures.
CO 103: know about the risk management under different types of insurance services like-Life, General etc.
CO 104: Analyse the Claim settlement procedure in life and General insurance services.

►Python Programming (DSE 2)

CO 105: Acquire programming skills in core Python.
CO 106: Develop Python programs with conditionals and loops.
CO 107: Understand advance datatypes in Python Programming.
CO 108: Develop problem solving skills and their implementation through Python.

Sem VI

►Entrepreneurship Development(DSC19)

CO 109: Understand the theoretical knowledge of Entrepreneurship.
CO 110: To develop Entrepreneurship qualities and skills.
CO 111: To analyze the process and problems of Entrepreneurship development.
CO112: To learn about the project management in case of new entrepreneur.

►R Programming (DSC20)

CO 115:Understand the fundamental syntax of R through practice exercises.
CO 116: Understand the control statements and functions in R.
CO117:Analyze a data set in R and represent findings using the appropriate R packages.
CO118:Learn R programming skills for effective data analysis and visualization.

►Software Engineering (DSC21)

CO119:Understand life cycle models, requirement elicitation techniques, understand the concept of analysis and design of software.
CO120:Develop SRS document.
CO121:Use of analysis and design tools for system development.
CO122:Apply software engineering concepts in software development to develop quality software.

►ORGANISATION BEHAVIOUR (DSE 3)

CO 129: Describe theoretical concepts of organizational Behaviour.
CO130: Classify types of personalities Summarize types of conflicts.
CO131: Summarize adoption of organizational culture.
CO132: Understand the Organizational culture and quality of work life.

►Management Accounting - (DSE 3)

CO 133: Understand the fundamentals of Management Accounting.
CO134: Explain the analysis and interpretation of financial statements.
CO135: Demonstrate the estimation of working capital requirements.
CO136: Practice to analyze the changes in financial position.

►Strategic IT Management - (DSE4)

CO137: Understand business strategy and IT alignment.
CO138: Develop plan for IT strategy for any organization.
CO139: Understand IT sourcing strategy for the organization.
CO140: Understand and develop IT Governance framework for IT enabled organizations.

►E-Commerce - (DSE4)

CO141: Understand Concept of E-commerce

CO142: Implement the technical Infrastructure for E-commerce.
CO143: Understand the concept of E-security.
CO145: Understand the concepts of Legal, ethical and Societal Issues of E-commerce.

►Lab Course Based on DSC20 (DSC23)

CO146:After completion of this course students will be able to –
CO147:Upon completion of the practical assignments, students will demonstrate proficiency in installing and utilizing R and R Studio, effectively employing fundamental programming concepts, and will acquire the skills to visualize data through various plots and charts.

Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur

Department of Physics (Academic Year 24-25)

Program Outcomes (POs)

PO-1	After the successful completion of programme students will be able to Interpret physical information in verbal, mathematical and graphical manner.
PO-2	Explain methodology related to Physics.
PO-3	Use of skills required to gather information from resources and use them.
PO-4	Give need based education in physics of the highest quality at the undergraduate level.
PO-5	Design the experiments and interpret the results of observation.
PO-6	Produce an intellectually stimulating environment to develop skills and enthusiasms of students to the best of their potential.
PO-7	Use Information Communication Technology to gather knowledge.

Program Specific Outcomes (PSOs): B.Sc. - (Physics)

Programme Specific Outcomes	Students seeking admission to B.Sc. programme gets equipped with following outcomes:
PSO-1	Describe physical systems with their meaning and professional Knowledge.
PSO-2	Provide knowledge of general physics like sound, wave, friction, forces and laws of motion and use of mathematics.
PSO-3	Apply the knowledge about the light and its importance in life, its characteristics, properties and application in various instruments.
PSO-4	Use knowledge of classical mechanics, quantum mechanics, statistical mechanics and thermodynamics.
PSO-5	Explain the concept of waves and optics, material science and solid state physics.
PSO-6	Describe the concepts of nuclear physics and nuclear energies and Importance of their use for mankind.

RAJARSHI CHHATRAPATI SHAHU COLLEGE ★ KOLHAPUR

Course Outcomes (COs)

B. Sc. I Semester I (with effective from June 2024)

Physics Paper I : DSC I MECHANICS I

course outcomes (CO)	By the end of this Course students will be able to:
CO-1	Recognize scalar and vector physical quantities.
CO-2	Apply the gravitational laws to a physical problem.
CO-3	Describe the conservation of momentum and energy and related physical phenomenon.
CO-4	Define the rotational motion, moment of inertia and able to determine the M. I. of various systems in rotational motion.

Physics paper II : DSC II ELECTRICITY AND MAGNETISM I

course outcomes (CO)	By the end of this Course students are able to:
CO-5	Analyze physical significance of gradient, divergence and curl.
CO-6	State, prove and apply Gauss, Stokes and Greens theorems to various physical problems.
CO-7	Explain the concept of the electrostatic field, potential and determine the same for different physical bodies.
CO-8	Define the terms concept dielectrics, polarization.
CO-9	Analyze the concept of Biot Savart's law, Amperes law in Magnetostatics and their applications.

B. Sc. I Semester II

Physics Paper III : DSC III MECHANICS II

course outcomes (CO)	By the end of this Course students are able to:
CO-10	Explain the concept of elasticity and apply this knowledge to physical problem.
CO-11	Analyze the concept of surface tension and apply this knowledge to physical problem.
CO-12	Explain the relationship between pressure and velocity i.e Bernoulli's Theorem
CO-13	Explain concept of viscosity.

Physics Paper IV : DSC IV ELECTRICITY AND MAGNETISM II

course outcomes (CO)	By the end of this Course students are able to:
CO-14	Explain the concepts of A. C. circuits.
CO-15	Apply the concept of Energy in electrostatic field.
CO-16	Understand basic working principle of Ballistic galvanometer
CO-17	explain the phenomenon of hysteresis in magnetism
CO-18	Discriminate different magnetic materials based on their characteristic properties

B.Sc-II (CBCS) Semester- III (with effective from June 2023)

PAPER-V: DSC C1 THERMAL PHYSICS AND STATISTICAL MECHANICS - I

Course outcomes (CO)	By the end of this Course students are able to:
CO-19	Describe thermo-dynamical state, thermodynamic equilibrium, various thermodynamic processes and first law of thermodynamics.
CO-20	Discuss second and third laws of thermodynamics, Carnot's theorem, working of Carnot's engine, Otto engine and diesel engine and concept of entropy.
CO-21	Interpretation of temperature and different types of thermometers.
CO-22	Describe the transport phenomenon viz. viscosity, thermal conductivity and diffusion in gases.

PAPER-VI: DSC C2 WAVES AND OPTICS - I

course outcomes (CO)	By the end of this Course students are able to:
CO-23	Determine SHM and its solution, superposition principle and Lissajous figures and their uses.
CO-24	Discuss types of waves, types of oscillators.
CO-25	Analyze types of transducers, concept of acoustics of buildings
CO-26	Explain concept of viscosity.

Paper VII: DSC D1 THERMAL PHYSICS AND STATISTICAL MECHANICS - II

Course outcomes (CO)	By the end of this Course students are able to:
CO-27	Explain the concept of thermodynamics potentials and relations among them.
CO-28	Apply the theory of radiation to Plank's law, Wein's displacement law.
CO-29	Explain the concept of classical statistics such as macro and microstate, probability distribution.
CO-30	Differentiate between statistics viz. quantum statistics such as MB, FD and BE statistics.

Paper VIII: DSC – D2 WAVES AND OPTICS – II

Course outcomes (CO)	By the end of this Course students are able to:
CO-31	Explain the concept of cardinal points and formation of image in optical system.
CO-32	Apply the knowledge of resolving power of an optical system to determine R.P. of prism and grating.
CO-33	Justify the concept of interference and diffraction and its applications.
CO-34	Determine the use of polarization of light and its characteristics and application.

B. Sc. III (with effective from June 2024)

Semester V

PAPER IX: DSC E1 MATHEMATICAL PHYSICS AND CLASSICAL ELECTRODYNAMICS

Course outcomes (CO)	By the end of this Course students are able to:
CO-35	Explain the concept of Orthogonal Curvilinear coordinate system.
CO-36	Discuss different types of differential equations and their solutions.
CO-37	Explain the basic concepts about Electrodynamics and Electromagnetic waves.
CO-38	Analyze and apply Maxwell's equations to various physical systems.

PAPER X: DSC E2 QUANTUM MECHANICS

Course outcomes (CO)	By the end of this Course students are able to:
CO-39	Discuss the idea of wave function &uncertainty relations.
CO-40	Explain the Schrodinger's equations.
CO-41	Use of different operators in quantum mechanics.
CO-42	Solve the problems on barrier potential well, one and three dimensional potential well.

PAPER XI: DSC E3 CLASSICAL MECHANICS

Course outcomes (CO)	By the end of this Course students are able to:
CO-43	Define the meaning of force, constraints and Newton's laws of motions.
CO-44	Create about formulation of Lagrangian equation of motion and solution of problems.
CO-45	Formulate the Hamilton's equation of motion and solution of problems.
CO-46	Explain concept of Special theory of relativity.
CO-47	Explain the concept of rigid body.

PAPER XII: DSC E4 DIGITAL AND ANALOG CIRCUITS AND INSTRUMENTATION

Course outcomes (CO)	By the end of this Course students are able to:
CO-48	Explain the basic concepts of digital circuits, Boolean algebra and digital arithmetic circuits.
CO-49	Design and working of transistor amplifier and oscillators.
CO-50	Explain Construction and working of CRO and its applications.
CO-51	Design and working of Operational amplifier and Timer 555.

B. SC. III SEM VI

PAPER XIII: DSC F1 NUCLEAR AND PARTICLE PHYSICS

Course outcomes (CO)	By the end of this Course students are able to:
CO-52	Explain the size of nucleus and all its properties.
CO-53	Apply various method of accelerating various types of particles.
CO-54	Discuss the construction and working of Nuclear Detectors.
CO-55	Classify the elementary particles.

PAPER XIV: DSC F2 SOLID STATE PHYSICS

Course Outcomes (CO)	By the end of this Course students are able to:
CO-56	Develop clear concept of the crystal classes and symmetries.
CO-57	Explain the relationship between the real and reciprocal space.
CO-58	Acquire ability of Calculating the Braggs conditions for X-ray diffraction in crystals.
CO-59	Discuss electronic and vibrational properties of solid state systems.
CO-60	Apply Band theory of solids and uses it in different physical phenomenon.

PAPER XV: DSC F3 ATOMIC, MOLECULAR SPECTRA & ASTRONOMY AND ASTROPHYSICS

Course Outcomes (CO)	By the end of this Course students are able to:
CO-61	Develop basic understanding of physics of atoms and molecules: definitions, units, laws and rules.
CO-62	Identify atomic effect such as Zeeman effect, Paschen-Back effect and Raman effect.
CO-63	Explain basic concepts of Astronomy &Astrophysics
CO-64	Analyze the spectra of diatomic molecules such as electronic, rotational, Vibrational spectra.

PAPER XVI: DSC F4 ENERGY STUDIES AND MATERIAL SCIENCE

Course Outcomes (CO)	By the end of this Course students are able to:
CO-65	Explain basics of renewable energy sources viz. solar energy, wind energy and biomass energy.
CO-66	Design and working of wind turbine generator unit, solar panel, biogas plant.
CO-67	Describe conversion of solar energy into electric energy using photovoltaic cell, solar PV system and solar panels.
CO-68	Synthesize the materials and their properties in the form of superconductor.
CO-69	Produce the materials in nano-forms and their synthesization methods.

(Dr.) A. R. Patil
HoD Physics

Prof. (Dr.) Piste P. B.
Chairman

Principal,
Rajarshi Chh. Shahu Colleg
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RAJARSHI CHHATRAPATI SHAHU COLLEGE ★ KOLHAPUR

Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur

DEPARTMENT OF CHEMISTRY

POs, PSOs and COs

2024-25

PROGRAMME OUTCOMES (POs)

PO-1:- Students will gain fundamental knowledge of chemistry which will help them with PG Studies and Research

PO-2:- Students will be able to know good laboratory practices and lab safety.

PO-3:- To make the learner proficient in analyzing the various observations and chemical phenomena presented to him during the course.

PO-4:- Students will be able to apply the fundamental knowledge to address cross-cutting issues such as sustainable development

PO-5:- Students will be able to solve various problems by identifying the essential parts of a problem, formulating a strategy for solving the problem, applying appropriate techniques to arrive at a solution, testing the precision and accuracy of the solution and interpreting the results.

PO-6:- Students will be able to communicate effectively, i.e., articulate, comprehend and write effective reports, make effective presentations and documentation and express the subject through technical writing and oral presentation.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO-1:- Students will be able to explain fundamental concepts of inorganic, physical, organic, industrial and analytical chemistry.

PSO-2. Identify chemical formulae and solve numerical problems.

PSO-3. Students can use modern chemical tools, Models, Charts and Equipment.

PSO-4. Students will be able to prepare and qualify for competitive examinations.

PSO-5. Students will understand good laboratory practices and safety.

PSO-6. Students will develop research-oriented skills.

COURSE OUTCOME (COs)

After successfully completion Chemistry course, the students will be able to;

B.Sc. I Semester I

Chemistry paper-I (Inorganic Chemistry)

CO-1. Explain the Bohr's theory of hydrogen atom and its limitations, Wave particle quality, Heisenberg uncertainty principle,

CO-2. Explain Quantum numbers and their significance, Shapes of s, p and d atomic orbitals.

CO-3. To learn and understand the properties and uses of the compounds of Boron, Carbon and Nitrogen from p-block elements

CO-4.. To learn different types of bonds and nature of bonding in inorganic compounds.

CO-5. Calculations of different energies associated with ionic bonding.

CO-6. To understand the role of acids and bases in chemistry. The study is useful in all chemical areas.

Chemistry paper-II (Organic Chemistry)

CO-7. The students are expected to understand the fundamentals and basic principles involved in organic chemistry.

CO-8. Explain Reactive Intermediates: Generation, Structure, Stability and Reactions of Carbocations, Carbanions and carbon free radicals.

CO-9. Predict the Nomenclature of stereoisomers: D and L, erythro and threo, R and S, E and Z.

CO-10. Discuss the Aromaticity concept and predict the Aromatic, Non aromatic, Antiaromatic, Pseudoaromatic compounds.

CO-11. To understand the basic knowledge of heterocyclic compounds.

CO-12. To get knowledge of methods to preparation, physical and chemical properties of some heterocyclic compounds with five and six membered heterocycles containing N as the hetero atom (Pyrrole and Pyridine).

B.Sc. I Semester II

Chemistry Paper-III (Physical Chemistry)

CO-19. Learning and coherent understanding of basic concepts and rules of logarithms, graphs, derivative and integrations.

CO-20. Explain the First law of thermodynamics, Statements of second law of thermodynamics, Carnot's cycle and its efficiency, Statement of Third Law of thermodynamics. Solve the Problem based on thermodynamics

CO-21. Discuss the Concept of standard state and standard enthalpies of formations, integral and differential enthalpies of solution and dilution.

CO-22. Learning and understanding the knowledge about basic concepts in kinetics and first order, second order reactions with characteristics and suitable examples.

CO-23. Learning and coherent understanding of surface tension, viscosity and refractive index with suitable examples.

CO-24. Learning and coherent understanding of basic concepts in electrochemistry, conductors and conductivity cells, measurement of conductance with suitable examples.

CO-25. Solve the Problem based on electrochemistry.

Chemistry Paper-IV (Analytical Chemistry)

CO-13. Explain Analytical processes (Qualitative and Quantitative) and Methods of analysis.

CO-14. Sampling of solids, liquids and gases, Errors, types of errors.

CO-15. Distinguish between classical and industrial chemistry

CO-16. Learning and Understanding basic concepts and concentration terms c. Knowledge of IPR

CO-17. Knowledge of chromatographic separation technique and terms involved in it. Learning paper chromatography and thin layer chromatography

CO-18. Knowledge of various type of titrations, neutralization curves, indicators used in various titrations

B.Sc. Part II Sem. III

Chemistry paper-V (Physical Chemistry)

CO-26. Discuss Types of conductors, Conductivity, Equivalent and Molar conductivity and their variation with dilution for weak and strong electrolytes in aqueous solution

CO-27. Illustrate the conductance by using Wheatstone bridge. Kolharausch law of independent migration of ions and its applications,

CO-28. Describe Physical Properties of Liquids

CO-29. Explain the surface phenomenon, Types and Factors affecting adsorption, Compare between physical and chemical adsorption, Adsorption isotherms: Freundlich adsorption isotherm, Langmuir adsorption isotherm.

CO-30. Explain third order reactions, Derivation of rate constant and Theories of reaction rates.

CO-31. Outline of Types of Nuclear radiation, properties of α, β and γ radiations, Detection and measurement of nuclear radiations by Scintillation and Geiger muller counter methods.

Chemistry paper-VI (Industrial Chemistry)

CO-32. Explain the Basic Concepts in Industrial Chemistry

CO-33. Compare between classical chemistry and industrial chemistry.

CO-34. Define the Normality, Equivalent weight, Molality, Molecular weight, Molarity, Molarity of mixed solution.

CO-35. Describe the method of Size reduction- Principle, Jaw crusher, ball mill, Size Enlargement –Principle, Pellet mill, tumbling agglomerators.

CO-36. Discuss the Theory of Corrosion and Electroplating.

CO-37. Use and Manufacturing Paper Industry and Soaps and Detergent.

B.Sc. Part II Sem. IV

Chemistry paper-VII (Industrial Chemistry)

CO-38. Describe the concept in Co-ordination chemistry

CO-39. Compare between double salt and complex salt

CO-40. Find the IUPAC nomenclature of coordination compounds

CO-41. Explain the Chelation, classification and its applications.

CO-42. Outline of P- Block elements and its characteristics.

CO-43. Discuss the Characteristics of d-block elements with special reference to i) Electronic structure ii) Oxidation states iii) Magnetic character iv) Colored ions v) Complex formation.

CO-44. Find the Application of complex formation

Chemistry paper-VIII (Organic Chemistry)

CO-45. Explain the reaction and methods of Preparation of Carboxylic acids and their derivatives.

CO-46. Describe the Classification, Nomenclature, structure, Methods of preparation and reactions of Amines and Diazonium Salts.

CO-47. Compare the reducing and non-reducing sugars.

CO-48. Discuss the Classification of carbohydrates.

CO-49. Relate the Reactivity of Carbonyl group and categorize its reactions.

CO-50. Outline of Representation of conformations of ethane and n-butane by Newman's Projection formula, Energy profile diagram.

B.Sc. III Semester-V

Chemistry Paper-IX (Inorganic Chemistry)

CO-57. Find the meaning of various terms involved in Acids and Bases.

CO-58. Describes the shapes of d-orbitals.

CO-59. Discuss the Applications of Semiconductor and Superconductors.

CO-60. Explain the mechanism involved in Organomettallic Compounds.

CO-61. Explain the homogenous catalysis and heterogeneous catalysis.

CO-62. Identify the high spin and low spin complexes.

Chemistry Paper-X (Organic Chemistry)

CO-63. Describe the Introduction and applications of Spectroscopy and its different type.

CO-64. Identify the vibrational frequencies of fundamental group region in IR Spectrum.

CO-65. Define Chemical shift and Coupling constant.

CO-66. Explain the principle and splitting pattern of organic compounds in NMR spectrum

CO-67. Explain the principle, Types and applications of mass spectroscopy.

CO -68. Solve the problem based on UV, NMR and IR.

Chemistry Paper-XI (Physical Chemistry)

CO-51. Describe Heisenberg Uncertainty Principle, concept of energy operator, particle in one dimensional box.

CO-52. Define Quantum theory, explain Schrodinger wave equation, emf measurement and its application.

CO-53. Analyze electromagnetic spectrum, Raman Spectra compare and contrast rotational spectra, vibrational spectra, vibrational Raman spectra and rotational Raman spectra of diatomic molecule.

CO-54. Explain Photochemical Law's, reactions and various Photochemical Phenomena.

CO-55. Explain the ideal and non ideal solutions. Vapour pressure and Temperature diagrams of immiscible liquids.

CO-56. Represent the electrodes and cells.

Chemistry Paper-XII (Analytical Chemistry)

CO-69. Explain the different types of Precipitation Techniques.

CO-70. Discuss the applications of organic precipitants.

CO-71. Explain the Principle of flame photometry.

CO-72. Design the experimental set up for flame photometry.

CO-73. Compare the Colorimetry and spectrophotometry.

CO-74. Explain the concept of Quality control.

CO-75. Describe the principle and instrumentation of different Chromatographic techniques

B.Sc. III Semester-VI

Chemistry Paper-XIII (Inorganic Chemistry)

CO-75. Explain SN^1 and SN^2 reactions for inert and labile complexes.

CO-76. Describe the Thermodynamic and Kinetic aspects of metal complexes.

CO-77. Discuss the Nuclear reactions and energetic of nuclear reactions.

CO-78. Use of Thorium, Uranium and Plutonium in atomic energy.

CO-79. Compare between lanthanide and actinides.

CO-80. Predict Biological role of alkali and alkaline earth metal ions with special reference to Na^+, K^+ and Ca^{2+}.

Chemistry Paper-XIV (Organic Chemistry)

CO-81. Use and application Lithium aluminium hydride, Raney Nickel,Osmium tetraoxide, Selenium dioxide ,Dicyclohexyl Carbodiimide , Diazomethane.

CO-82. Explain the Diels-Alder reaction, Meerwein-Pondorff-Verley reduction, Hofmann reaction, Wittig reaction, Wagner-Meerwein rearrangement, Baeyer Villiger oxidation.

CO-83. Discuss the Retrosynthesis of different Molecules.

CO-84. Describe Electrophilic addition to >C=C< and −C≡C− bonds.

CO-85. Explain Synthetic route and uses of ethambutal, phenobarbitone, isoniazide, benzocaine, Chloramphenicol, paludrine.

CO-86. Describe the synthetic and analytical evidence of Alkaloids, Terpenoids.

Chemistry Paper-XV (Physical Chemistry)

CO-87. Discuss Gibbs phase rule, Phase diagram, true and metastable equilibria.

CO-88. Compare one component systems and two component systems.

CO-89. Describe the concept of Thermodynamics and its applications

CO-90. Explain the different State of solid, Laws of crystallography, Weiss indices and Miller indices.

CO-91. Solve the Numerical problems based on Derivation of Bragg's equation.

CO-92. Predict the Simultaneous reactions such as Opposing reaction, Side reaction, Consecutive reactions, Chain reaction, Explosive reaction.

Chemistry Paper-XVI (Industrial Chemistry)

CO-93. Discuss Manufacture of cane sugar in India and other by products.

CO-94. Explain the physico-chemical principle in Manufacture of Industrial Heavy Chemicals.

CO-95. Describe the Classification and applications of Synthetic Polymers.

CO-96. Synthesis and characterization techniques of Nanomaterials.

CO-97. Explain the role of Petroleum industry and eco-friendly fuels.

CO-98. Define the concept of Nanotechnology

RAJARSHI CHHATRAPATI SHAHU COLLEGE KOLHAPUR

Head
Department of Chemistry
Rajarshi Chh. Shahu College, Kolhapur

Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur

Department of Mathematics

Programme Outcomes

2024-25

Sr.No.	Programme Outcomes
	Upon successful completion of programme, the students will be able to:
PO-1	Explain fundamental principles and concepts of Mathematics and computing with their applications related to Industrial, Engineering, Biological and Ecological problems.
PO-2	Exhibit in depth the analytical and critical thinking to identify, formulate and solve real world problems of science and engineering.
PO-3	Analyze mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.
PO-4	Expose a global and local concerns that explore them many aspects of Mathematical Sciences.
PO-5	Apply their skills and knowledge,that is, translate information presented verbally into mathematical form, select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion.
PO-6	Solve the real-life problem and would arrive at valid conclusions based on appropriate interpretations of data and experimental results.
PO-7	Develop written and oral communications skills in order to effectively communicate design, analysis and research results.
PO-8	Demonstrate appropriate inter-personal skills to function effectively as an individual, as a member or as a leader of a team and in a multi-disciplinary setting.
PO-9	Acquire competent positions in industry and academia as well.

Head
Department of Mathematics
Rajarshi Chh. Shahu College
Kolhapur.

RAJARSHI CHHATRAPATI SHAHU COLLEGE ★ KOLHAPUR

Principal
I/c PRINCIPAL
R.C. SHAHU COLLEGE
KOLHAPUR

Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur

Department of Mathematics

Programme Specific Outcomes

2024-25

Sr.No.	Programme Specific Outcomes
	Upon successful completion of specific programme, the students will be able to:
PSO-1	Explain fundamental principles, methods and a clear perception of innumerous power of mathematical ideas and tools and know how to use them by modeling,solving and interpreting.
PSO-2	Equip the students sufficiently in both analytical and computational skills in
PSO-3	Develop a competitive attitude for building a strong academic - industrial collaboration, with focus on continuous learning skills.
PSO-4	Enhance overall development and to equip them with mathematical modeling abilities, problem solving skills, creative talent and power of communication necessary for various kinds of employment.
PSO-5	Develop a positive attitude towards mathematics as an interesting and valuable subject of study.
PSO-6	Gauge the hypothesis, theories, techniques and proofs provisionally.

Head,
Department of Mathematics

Head
Department of Mathematics
Rajarshi Chh. Shahu Colleg.
Kolhapur.

RAJARSHI CHHATRAPATI SHAHU COLLEGE ★ KOLHAPUR

Principal

I/C PRINCIPAL
R.C. SHAHU COLLEGE
KOLHAPUR

Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur

Department of Mathematics

Course Outcomes

2024-25

Sr.No.	Course Outcomes
	Upon successful completion of course, the students will be able to:
	DSC-I : Basic Algebra
CO-1	apply De-Moivre's theorem.
CO-2	find rank, eigen values, eigen vectors of the matrix.
CO-3	solve system of linear homogeneous and non-homogeneous equations.
CO-4	understand Hermitian and Skew Hermitian matrices.
	DSC – II: Calculus
CO-5	find higher derivatives of product two differentiable functions using Leibnitz theorem.
CO-6	learn conceptual variations while advancing from one variable to several variables in calculus.
CO-7	understand the consequences of mean value theorems for differentiable functions.
CO-8	apply L' Hôpital's rule to various indeterminate forms.
	DSC – III: Differential Equations - I
CO-9	classify differential equations.
CO-10	solve different types of differential equations
CO-11	find orthogonal trajectories.
CO-12	apply the knowledge of differential equations to tackle problems occurring in physics and engineering.
	DSC – IV: Discrete Mathematics
CO-13	analyze the logical structure of statements symbolically, including the proper use of logical connectives, predicates, and quantifiers.
CO-14	construct truth tables, prove or disprove a hypothesis, and evaluate the truth of a statement using the principles of logic.
CO-15	understand and apply the fundamental concepts in graph theory.
CO-16	acquire the basic knowledge of graphs namely vertex, edge, special types of graph, isomorphic graphs, matrix representation of graphs.
	DSC 5C : Elements of Differential Equations
CO-17	Identify types of higher order ordinary differential equations.
CO-18	Solve different types of higher order ordinary differential equations.
CO-19	Understand geometrical interpretation of simultaneous and total differential equations
CO-20	Apply ordinary differential equations in daily life problems
	DSC 6C:Numerical Methods
CO-21	Find numerical solutions of algebraic, transcendental and system of linear equations.
CO-22	Learn about various interpolating methods to find numerical solutions.

CO-23	Find numerical solutions of integration and ODE by using various methods.
CO-24	Find a volume of square & sphere.
CO-25	apply various numerical methods in real life problems.
	DSC 5D:Vector Calculus
CO-26	Evaluate the concepts of gradient
CO-27	Evaluate the concepts of divergence and curl
CO-28	Evaluate different types of line, surface & volume integrals
CO-29	Evaluate e two integral transformation theorems of Gauss and Stokes.
CO-30	Analyze solenoidal and irrotational vectors
	DSC 6D:Integral Calculus
CO-31	Understand types of multiple integrals.
CO-32	Understand special functions.
CO-33	Apply special functions in applications.
CO-34	Apply multiple integrals in real life problems.
CO-35	Apply multiple integrals to find volume of Sphere.
	DSE E9:Real Analysis
CO-36	understand the basic facts about functions and countability of sets.
CO-37	recognize bounded, convergent, divergent, Cauchy and monotonic sequences.
CO-38	calculate limit superior, limit inferior, and the limit (when exists) of a sequence.
CO-39	use different tests for convergence and absolute convergence of an infinite series of real numbers.
	DSE E10:Modern Algebra
CO-40	learn Group structure and its properties
CO-41	learn Ring structure and its properties.
CO-42	describe the difference between concepts Group and Ring.
CO-43	understand fundamental theorem of homomorphism, isomorphism for Group and Ring.
	DSE E11: Partial Differential Equations
CO-44	understand the basic concepts of partial differential equations (PDEs) and their classification
CO-45	analyze and solve linear and some nonlinear partial differential equations using analytical methods.
CO-46	apply critical thinking skills to select appropriate solution methods for different types of PDEs.
CO-47	apply various solution techniques to solve linear partial differential equations of both first and second orders
	DSE E12: Integral Transforms
CO-48	understand meaning of Laplace Transform
CO-49	apply properties of LT to solve differential equations.
CO-50	understand relation between Laplace and Fourier Transform.
CO-51	understand infinite and finite Fourier Transform.
	DSE E13: Metric Spaces
CO-52	acquire the knowledge of notion of metric space, open sets and closed sets.
CO-53	demonstrate the properties of continuous functions on metric spaces,

CO-54	apply the notion of metric space to continuous functions on metric spaces.
CO-55	understand the basic concepts of connectedness, completeness and compactness of metric spaces,
	DSE E14: Linear Algebra
CO-56	understand the fundamental concepts in linear algebra, enabling them to analyze and manipulate vector spaces, linear transformations.
CO-57	relate matrices and linear transformations
CO-58	acquire skills to perform computations related to inner product and orthogonalization techniques.
CO-59	compute Eigen values and Eigen vectors of a linear transformations.
	DSE E15: Complex Analysis
CO-60	understand the fundamental concepts in linear algebra, enabling them to analyze and manipulate vector spaces, linear transformations.
CO-61	relate matrices and linear transformations
CO-62	acquire skills to perform computations related to inner product and orthogonalization techniques.
CO-63	compute Eigen values and Eigen vectors of a linear transformations.
	DSE E16: Operations Research
CO-64	define and explain the fundamental concepts of Operations Research.
CO-65	identify and develop operations research model describing a real-life problem.
CO-66	understand the mathematical tools that are needed to solve various optimization problems.
CO-67	solve various linear programming, transportation, assignment problems related to real life.

Head
Department of Mathematics
Rajarshi Chh. Shahu College
Kolhapur.

Chairman
CO-PSO-PO Committee

RAJARSHI CHHATRAPATI SHAHU COLLEGE ★ KOLHAPUR

Principal
VC PRINCIPAL
R.C. SHAHU COLLEGE
KOLHAPUR

Rayat Shikshan Sanstha's

RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR

DEPARTMENT OF BOTANY

PROGRAMME OUTCOMES (POs)

PROGRAMME SPECIFIC OUTCOMES (PSOs)

&

COURSE OUTCOMES (COs)

2024-25

DEPARTMENT OF BOTANY

PROGRAMME OUTCOMES (POs)

1) To impart knowledge of Science is the basic objective of education.

2) To develop scientific attitude is the major objective to make the students open minded, critical, curious.

3) To develop skill in practical work, experiments and laboratory materials and equipments along with the collection and interpretation of scientific data to contribute the science.

4) To understand scientific terms, concepts, facts, phenomenon and their relationships.

5) To make the students aware of natural resources and environment.

6) To provide practical experience to the students as a part of the course to develop scientific ability to work in the field of research and other fields of their own interest and to make them fit for society.

7) The students are expected to acquire knowledge of plant and related subjects so as to understand natural phenomenon, manipulation of nature and environment in the benefit of human beings.

8) To develop ability for the application of the acquired knowledge to improve agriculture and other related fields to make the country self-reliant and sufficient.

9) To create the interest of the society in the subject and scientific hobbies, exhibitions and other similar activities.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

- **POS-1:** Understand the environment and basic concept of taxonomy, cell biology, genetics, ecology, Physiology and Medicinal Botany

- **POS-2:** Determine economic & medicinal plant in agriculture and medicine.
- **POS-3:** Anlysise the relationship between plants and microbes.
- **POS-4:** Understand the biology of diversity of seed plants or phanerogames
- **POS-5:** Understand the behaviors of fossils and gymnospermic plants.
- **POS-6:** Understand the plant disease, chemical properties and evolutionary relationship among taxonomic groups.
- **POS-7:** Instrumentation in the syllabus helpful to understand different tools and techniques essential for viewing the microscopic structures, separation of compounds.
- **POS-8:** Plant tissue culture and molecular biology topics in the syllabus will able to make students skilfull to perform the breeding procedures in plants.

COURSE OUTCOMES (COs)

FY BSc

CO1. Students will able to recognize the structure , types and multiplication of viruses. **CO2**. Students will able to understand the bacterial types, structure and mode reproduction

CO3. Students will able to identify the different types of algae and their importance in day today life.

CO4. Students will able develop the skills for the production of different type of Bio fertilizers ,

CO5. Students will able to distinguish the prokaryotic and eukaryotic organisms and acquire the knowledge of different plant cell organelles and its role in the plant body.

CO6. Students will able to understand the different types of cell division and it's phases.

CO7. Students will able to handle all types of microscope.

CO8. Students will able to develop a skill in the chromatography techniques.

CO9. Students will able to identify and classify the different fungi and also realize the economic importance of fungi.

CO10. Students will able to identify the lichens on the basis of morphology and to know the medicinal value of the lichens.

CO11. Students will be able to recognize the different plant diseases and their management.

CO12. Students will able to develops the soft skill technique in the Mushroom Cultivation and realize the commercial status of the mushrooms.

CO13. Students will able to identify the bryophytes their importance.

SY BSc

Paper V:

After successful completion of the course, the students will be able

CO 1. To know the scope and importance of the plant systematics.

CO 2. To understand plant morphology, nomenclature and classification

CO 3. To prepare and demonstrate herbarium and to understand importance of Botanical gardens.

CO 4. To examine internal organization of plant organs.

CO 5. To differentiate and understand plant tissue systems.

CO 6. To analyze the composition of different parts of plant.

Paper VI:

After successful completion of the course, the students will be able

CO 1. To understand the principles of Mendelian inheritance and gene interaction.

CO 2. To differentiate between structural and numerical variations in chromosomes.

CO 3. To analyze and solve genetic problems on linkage and crossing over.

CO 4. To know the composition and significance of nucleic acids.

CO 5. To summarize concept of central dogma and genetic code.

Paper VII:

After successful completion of the course, the students will be able

CO 1. To understand core concepts of biotic and abiotic components.

CO 2. To gain and insight in to the diverse ecosystem, related food web and ecological pyramids.

CO 3. To prepare map of Phytogeographical regions of India.

CO 4. Know importance of plants and plant products and their utility.

CO 5. To know the centre of origins of different crop plants.

CO 6. To understand importance and conservation of Germplasm.

Paper VIII:

After successful completion of the course, the students will be able

CO 1. To understand various physiological processes in plants.

CO 2. To understand significance and mechanism of photosynthesis.

CO 3. To know the process of respiration in higher plants.

CO 4. To design outlines of landscaping and home gardening.

CO 5. To propagate plants by seed and vegetative propagation.

CO 6. To prepare different types of gardens and to know garden equipments.

TY BSc.

CO1. Students will able to Recognize morphology of reproductive organs and development in the reproduction of angiosperms.

CO2. Students will able to identify the plants

CO3. Students will be able to understand the methods to present a scientific research paper.

CO4. Students will be able to identify the natural resources in the Western Ghats, India. Also, student will understand the recent biotechnological advances in the biology.

CO5. Students will be able to explain the various stress factors in the plants and also to effects of stress factors on the plant and to overcome these factors.

CO6. Students will be able to explain the skills of bio-fertilizer production, herbal preparations, breeding techniques and different analytical techniques used in the plant science.

Chairman
POs, PSOs, Cos Committee

Head
Dept. of Botany
Head
Department of Botany
Rajarshi Chh. Shahu College, Kolhapur.

Principal
RCSC, Kolhapur
I/C Principal,
Rajarshi Chh. Shahu College
Kolhapur.

RAJARSHI CHH. SHAHU KOLH

Rayat Shikshan Sanstha's

RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR.

DEPARTMENT OF ZOOLOGY

24-25

PROGRAMME SPECIFIC OUTCOME

After successful completion of UG syllabus of Zoology student should able to:

- **PO1:** The students will learn about the basic concepts of Zoology and a platform for the entry of students in post-graduation studies, competitive examinations, paramedical fields, and agricultural business will be prepared.
- **PO2:** Students will understand the concepts in zoology and be able to understand, classify, describe, and discuss different aspects of zoology like animal Phyla, conservation of animals, animal physiology, etc.
- **PO3:** Students can apply their knowledge to solve problems related to genetics, and ecology and become competent to apply their knowledge of physiology, ethology, and entomology in their day-to-day life.
- **PO4:** The students acquire various practical skills and dissection skills.
- **PO5:** The students will be able to diagnose problems related to environmental issues, health and hygiene, agriculture and pest management, conservation of natural resources, etc., and try to solve them with scientific aptitude.
- **PO6:** The students will apply their knowledge of zoology for the development of entrepreneurship and also practice it in their day-to-day lives.

COURSE OUTCOMES OF B.Sc. ZOOLOGY

COURSE OUTCOMES: ANIMAL DIVERSITY After completion of this course, Students will be able to:	
CO1	Understand the concept and importance of biodiversity
CO2	Enable the students to identify the similarities and differences among the animals in different Phyla and classes
CO3	Develop sensitivity for the conservation of biodiversity in their day-to-day life
CO4	Analyze complex interactions among the various animals of different phyla, their distribution and their relationship with the environment
CO5	Equip the students with the skills of dissection.
COURSE OUTCOMES: CELL BIOLOGY Students will be able to:	
CO6	Understand the general organization of cell organelles and their functions
CO7	Apply their knowledge to study the functioning of a cell and cell divisions and its regulation
CO8	Analyze the role of cell organelles and cell cycle checkpoints with examples of

	anemia, diabetic wounds, and cancer.
CO9	Equip the students with skills like handling the microscope, micrometry, staining techniques, etc
COURSE OUTCOMES: GENETICS Students will be able to:	
CO10	Understand heredity and variation
CO11	Apply their knowledge to draw the genetic crosses based on patterns of heredity
CO12	Culture the Drosophila and handling skills among the students
CO13	Enable the students to develop a. a gene map using data of crossing over and linkage study, draw, and analyze pedigree, analyze karyotypes.
COURSE OUTCOMES: ECOLOGY, ETHOLOGY,EVOLUTION & ENTOMOLOGY Students will be able to:	
CO14	Understand the basic concepts
CO15	Enable the students to identify the amazing features of the insect world
CO16	Train students to arrange the animals on a geological time scale.
CO17	Mold the student to apply their knowledge to construct food chains, food webs, and ecological pyramids.
COURSE OUTCOMES: ANIMAL DIVERSITY II Students will be able to:	
CO18	Recognize the diversity from proto chordates to Mammals.
CO19	Explain general characters and different systems of Amphibians with respect to Frog
CO20	Explain the salient features and different aspects of animals with respect to geographical distribution and economic importance.
CO21	Analyze complex interactions among the various animals of different classes, their distribution and their relationship with the environment
COURSE OUTCOMES: BIOCHEMISTRY The Students will be able to:	
CO22	Interpret the basic metabolism of carbohydrates, proteins, lipids in the diet
CO23	Describe Interactions and interdependence of physiological and biochemical processes
CO24	Explain biochemistry to health
CO25	Demonstrate the role of enzymes, enzyme reaction and influence of temperature,pH on enzyme action.
COURSE OUTCOMES: REPRODUCTIVE BIOLOGY Students will be able to:	
CO26	Explain the biological processes of reproduction
CO27	Explore how reproductive biology impacts other aspects of health
CO28	Recognize modern reproductive technology
CO29	Describe about reproductive health

COURSE OUTCOMES: APPLIED ZOOLOGY-I Students will be able to:	
CO30	Explain the basic concepts regarding host and parasites
CO31	Acquaint the knowledge about various diseases caused by insect pests and their control measures
CO32	Earn from entrepreneurship opportunities
CO33	Describe about various bacterial diseases
COURSE OUTCOMES: COMPARATIVE ANATOMY OF VERTEBRATES Students will be able to:	
CO34	Describe functional anatomy of vertebrates from fishes to mammals
CO35	Demonstrate the evolutionary history and relationships among different groups of vertebrates
CO36	Describe various systems of different classes of vertebrates
CO37	Demonstrate anatomical structures of vertebrates
COURSE OUTCOMES: MOLECULAR CELL BIOLOGY & BIOTECHNOLOGY Students will be able to:	
CO38	Acquaint about regulation of genes
CO39	Describe the gene manipulation techniques such as transformation, PCR etc
CO40	Recognize the importance of molecular techniques in health sector
CO41	Demonstrate process of DNA replication, Transcription, Traslation & gene regulation
COURSE OUTCOMES: BIOTECHNIQUES AND BIOSTATISTICS Students will be able to:	
CO42	Describe about animal cell culture techniques
CO43	Describe about genetically modified organisms
CO44	Recognize importance of stem cells and their use in medical field
CO45	Demonstrate biological quantitative data using statistical operations
COURSE OUTCOMES: AQUATIC BIOLOGY Students will be able to:	
CO46	Describe the discipline of aquatic biology & it's applications
CO47	Demonstrate different fresh water ecosystem, different coastal zones, Coral reefs
CO48	Interpret the types & secretions of endocrine glands and their functions
CO49	Describe various hormones and their roles
COURSE OUTCOMES: DEVELOPMENTAL BIOLOGY Students will be able to:	
CO50	Describe different types of eggs, cleavage, blastulae in different animals
CO51	Develop skills related to developmental biology
CO52	Interrelate different animals with their developmental process
CO53	Recognize late embryonic development

COURSE OUTCOMES: IMMUNOLOGY Students will be able to:	
CO54	Explain the basics about immunity, working of immune system
CO55	Demonstrate working of defence mechanism against Antigen
CO56	Acquaint about antigens, different types of antibodies & therapeuticapplications of antibodies
CO57	Demonstrate recent advances in immunology
COURSE OUTCOMES: APPLIED ZOOLOGY Students will be able to:	
CO58	Demonstrate the basic concepts regarding Prawn culture, Pearl culture,Apiculture
CO59	Equip with modern techniques in animal husbandry and knowledge aboutvarious byproducts
CO60	Explain the basic concepts regarding Animal husbandry and Goat farming
CO61	Describe genetic improvements in aquaculture
COURSE OUTCOMES: ANIMAL PHYSIOLOGY Students will be able to:	
CO62	Gain fundamental knowledge of animal physiology
CO63	Explain the mechanisms that work to keep the animal body alive and functioning
CO64	Compare Interactions and interdependence of physiological and biochemical processes
CO65	Explain the basic concepts of digestion, respiration, excretion, the functioning of nerves and muscles, cardiovascular system, endocrine system and reproductive system.

Head,
Dept. of Zoology

RAJARSHI CHHATRAPATI SHAHU COLLEGE ★ KOLHAPUR

Prof.(Dr.)P. B. Piste
In Charge(POs,PSOs,COs)

Principal
R. C. Shahu College, Kolhapur

I/C PRINCIPAL
R.C. SHAHU COLLEGE
KOLHAPUR

RAYAT SHIKSHAN SANSTHA'S

RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR

DEPARTMENT OF STATISTICS

Programme Outcomes, Programme Specific Outcome and Course Outcomes

2024-25

B.Sc. Statistics

Program Outcomes (POs)

After completion of B.Sc. programme, the students will be able to

PO1: Understand the core fundamentals of basic sciences.

PO2: Understand the diverse day to day applications of various fields.

PO 3: Demonstrate, solve and an understanding of major concepts in all disciplines of science.

PO 4: Analyze any data in a scientific manner, interpret the data and come to a logical conclusion.

PO 5: Apply the acquired knowledge and the applications of basic sciences to community.

PO 6: Apply ethical principles and commit to professional ethics and responsibilities and norms of the Scientific practice.

PO 7: Have sustainable development.

PO 8; Develop skills in handling scientific instruments, planning and performing in laboratory experiments.

PO 9; Go for higher studies i.e. M. Sc and then do some research for the welfare of mankind.

PO 10: Look for professional job-oriented courses, Indian Army, Indian Navy, Indian Air Force as Officers, Indian Civil Services

PO11: Evolve to a committed and compassionate human being respecting the dignity of every individual

PO12: Communicate effectively and possess scientific temper and modern outlook of the world

PO13: Develop ecological consciousness and imbibe the principles of Swachh Bharat in deeds and actions

PO14: Engage in life-long learning to acclimatize themselves in an ever changing world

PO15: Work effectively as an individual, and as a team member

PO16: Apply the scientific knowledge acquired in classrooms and labs in real-life situations and be motivated and ready to pursue higher education

PO17: Become worthy global citizens who will emerge as future leaders, entrepreneurs and efficient administrators

PO18: Bachelor of Science offers theoretical as well as practical¬ knowledge about different subject areas.

PO19: This course forms the basis of science for coherent¬ understanding of the academic field to pursue multi and interdisciplinary science careers in future. These subject areas include Physics, Chemistry, Mathematics, Computer Science and Botany and Zoology.

PO20: Able to plan and execute experiments or investigations,¬ analyze and interpret data information collected using appropriate methods

PO21: It helps to develop scientific temper and thus can prove to be¬ more beneficial for the society as the scientific developments can make a nation or society to grow at a rapid pace through research.

PO22: Think critically, follow innovations and developments in¬ science and technology,

PO23: The students will graduate with proficiency in the subject of their choice.

PO24: The students will be eligible to continue higher studies in their subject.

PO25: The students will be eligible to pursue higher studies abroad.

PO26: The students will be eligible to appear for the examinations for their jobs in government organizations.

PO27: The students will be eligible to apply for jobs with a minimum requirement of B. Sc. Programme

RAJARSHI CHHATRAPATI SHAHU COLLEGE KOLHAPUR

Head ,
Department of Statistics

Prof.Dr.P.B. Piste
Incharge(POs,PSOs,Cos)

Principal,
R.C.Shahu College,Kolhapur

Programme Specific Outcome (PSOs)

Program Specific Objectives: At the end of the Programme the student will be able to

Students taking admission to this program of B.Sc.Statistics are expected to get equipped with following outcomes:

PSO1: Application of statistics in various walks of life.

PSO1: Ability to apply various statistical tools to research problem.

PSO2: Understanding how to collect, present, analyze and interpret the data.

PSO3: Ability to analyze the data by using MS-Excel, Open Source Software

PSO4: Knowing the statistical organization in India and Abroad.

PSO5: Ability to build statistical knowledge.

PSO6: Application of various distributions to real life situation.

PSO7: To understand the basic concepts of data and scale of measurement of data.

PSO8: To enable comparison data by using measures of central tendency and dispersion.

PSO9: To establish relationship between two or more variables and predict the value by regression analysis

PSO10: To calculate probability and measures of probability for discrete and continuous distributions.

PSO11: To make inferences about population from sample data.

PSO12: To design the process and extend the sampling.

PSO13: To enable use of statistical techniques in time series, industry, demography, etc.

PSO14: To understand and develop the necessary computer skill in practical by using MS-Excel, R- Software

PSO15: Knowledge of descriptive statistics and inferential statistics, sampling techniques.

PSO16: Knowledge about the univariate, bivariate, multivariate data analysis.

PSO17: Knowledge about the correlation and regression analysis.

PSO18: Knowledge of probability, discrete and continuous probability distribution and various measures of these distributions.

PSO19: Knowledge of different methods of estimation about inference of parameters of standard discrete and continuous probability distributions.

PSO20: Knowledge of applied statistics such as 'index number' ,'time series', 'demography', 'reliability theory', 'industrial statistics', 'operation research'.

PSO21: Graduates will acquire a comprehensive knowledge and sound understanding of fundamentals of Mathematics, computer and statistics and develop practical, analytical and mathematical skills.

PSO22: Graduates will be prepared to acquire a range of general skills, to solve problems, to evaluate information, to use computers productively, to communicate with society effectively and learn independently.

PSO23: Graduates will acquire a job efficiently in diverse fields such as Science, Education, Banking, Public Services, and Business etc.

PSO24: Interpret the principles, classifications, concepts, theories and mechanisms.

PSO25: Analyse hypothesis, procedures, properties, experimental facts and draw conclusions.

PSO26: Apply techniques in solving problems, results, sample analysis and production.

PSO27: Discuss the latest trends and applications pertinent to higher studies and employability.

PSO28: Exhibit communicative competence and apply skills in computers.

Course Outcomes (COs)

Paper I DESCRIPTIVE STATISTICS - I

CO 1. Describe the meaning and scope of Statistics and various statistical organizations.

CO 2. Explain the concept of population, sample and various methods of sampling.

CO 3. Compute various measures of central tendencies and dispersion.

CO 4. Define the concept of Moments, Skewness and Kurtosis and its computation.

Paper II ELEMENTARY PROBABILITY THEORY

CO 5. Distinguish between random and non-random experiments

CO 6. Explain how to acquire knowledge of concepts of probability

CO 7. Describe in detail how to use the basic probability rules, including additive and multiplicative laws

CO 8. Explain how to understand concept of conditional probability and independence of events

CO 9. Explain how to understand concept of univariate random variable and its probability distributions

CO 10. Describe the concept of mathematical expectation of univariate random variable.

Paper III DESCRIPTIVE STATISTICS - II

CO 11. Explain the concept of correlation coefficient and interpret its value.

CO 12. Define the regression coefficients, interpret its value and use in regression analysis.

CO 13. Describe the qualitative data including concept of independence and association between two attributes

CO 14. Explain in detail vital statistics and concept of mortality and fertility and growth rates

Paper IV DISCRETE PROBABILITY DISTRIBUTIONS

CO 13. Explain the concept of bivariate discrete distributions, independence of bivariate r.vs., Mathematical expectation of bivariate discrete random variable.

CO 14. Describe the concept of one point distribution, two point distribution, Bernoulli distribution,

CO 15. Define and explain the concept of Uniform distribution, Binomial distribution, ypergeometric distribution

CO 16. Explain in detail Poisson distribution, Geometric distribution and Negative binomial distribution.

Paper V PROBABILITY DISTRIBUTIONS – I

CO 17. Describe the Bivariate discrete distributions with real life situations.

CO 18. Explain the Continuous random variable and find the various measures, probabilities using its probability distribution.

CO 19. Define and describe the concept of Transformation of univariate continuous random variable.

CO 20. Explain the some standard continuous probability distributions with real life situations.

CO 21. Describe the relations among the different distributions.

Paper VI STATISTICAL METHODS–I

CO 22. Derive the multiple linear regression equations and their applications.

CO 23. Explain the concept of multiple correlations, partial correlation and their computations.

CO 24. Describe the Need, construction and utility of various index numbers.

CO 25. Define the concepts related to national income and different methods of estimation of national income.

Paper VII PROBABILITY DISTRIBUTIONS – II

CO 26. Explain the concept of some standard continuous probability distributions with real life situations.

CO 27.Compute the various measures of continuous random variable and probabilities by using its probability distributions.

CO 28. Describe the relationships among different distributions.

CO 29. Define the continuous bivariate r.vs. and probability distributions of their transformations.

CO 30. Explain the concept of sampling distribution of a statistic.

CO 31. Describe some sampling distributions of a statistic : Normal, Chi-Square, t and F distributions with their applications and interrelations.

Paper VIII STATISTICAL METHODS – II

CO 32. Explain the concept and use of time series analysis.

CO 33. Describe the meaning, purpose and use of Statistical Quality Control, construction and working of control charts for variables and attributes.

CO 34. Explain how to applying the appropriate small sample tests and large sample tests in various situations.

Paper IX PROBABILITY DISTRIBUTIONS

CO 35. Explain in detail important univariate distributions such as Laplace, Cauchy, Lognormal, Weibull, Logistic, Pareto, Power Series Distribution.

CO 36. Describe in detail Multinomial and Bivariate Normal Distribution.

CO 37. Explain the concept of of Truncated Distributions.

CO 38. Explain the information of various measures of these probability distributions.

CO 39. Describe the applications of standard continuous probability distributions to different situations.

Paper X STATISTICAL INFERENCE-I

CO 40. Explain in detail important inferential aspect of point estimation.

CO 41.Describe the concept of random sample from a distribution, sampling distribution of a statistic, standard error of important estimates such as mean and proportions.

CO 42. Explain the various important properties of estimator,

CO 43. Explain in details inference of parameters of standard discrete and continuous distributions.

CO 44. Define the concept of Fisher information and CR inequality.

CO 45. Describe different methods of estimation.

Paper XV DESIGN OF EXPERIMENTS

CO 46. Explain the concept of basic terms used in design of experiments.

CO 47. Describe the concept of one-way and two-way analysis of variance.

CO 48. Explain in detail the various designs of experiments such as CRD, RBD, LSD and factorial experiments.

CO 49. Explain in detail how to use an appropriate experimental design to analyze the experimental data.

Paper XII R-PROGRAMMING AND QUALITY MANAGEMENT

CO 50. Explain the Importance of R- programming

CO 51. Describe the identifiers and operators used in R.

CO 52. Explain in detail conditional statements and Loops used in R.

CO 53. Explain quality tools used in Quality management.

CO 54. Describe the process and product control used in Quality management.

Paper XIII PROBABILITY THEORY AND APPLICATIONS

CO 55. Describe the concept of order statistics and associated distributions

CO 56. Define and explain the concept of convergence and Chebychev's inequality and its uses

CO 57. Explain the concept of law large numbers and central limit theorem and its uses.

CO 58. Define the terms involved in reliability theory as well as concepts and measures.

Paper XIV STATISTICAL INFERENCE-II

CO 59. Explain the concept of interval estimation.

CO 60. Describe the interval estimation of mean, variance and population proportion.

CO 61. Explain in detail the important aspect of test of hypothesis and associated concept.

CO 62. Describe the concept about parametric and non-parametric methods.

CO 63. Define of some important parametric as well as non–parametric tests.

Paper XI SAMPLING THEORY

CO 64. Explain in detail concept of complete enumeration and sample, sampling frame sampling distribution, sampling and non-sampling errors, principle steps in sample surveys, sample size determination, limitations of sampling etc.

CO 65. Describe the concept of various sampling methods such as simple random sampling, stratified random sampling, systematic sampling and cluster sampling.

CO 66. Explain in detail idea of conducting sample surveys and selecting appropriate sampling techniques.

CO 67. Distinguish between various sampling techniques.

CO 68. Describe the concept of ratio and regression estimators.

Paper XVI OPERATIONS RESEARCH AND DECISION THEORY

CO 69. Describe the concept of Linear programming problem.

CO 70. Explain in detail how to solving LPP by graphical and simplex method.

CO 71. Describe the concept of Transportation, Assignment and Sequencing problems.

CO 72. Explain the concept of queuing and decision theory.

CO 73. Define and describe the simulation technique and Monte Carlo technique of simulation.

RAYAT SHIKSHAN SANSTHA'S

RAJARSHI CHHATRAPATI SHAHU, KOLHAPUR

Department of Computer Science

(B.Sc Computer Science) 2024-25

Program Outcomes (PO)/ Program Specific Outcomes (PSO)

Program Outcomes (PO)

After successfully completion of Program, the students should be able to:

PO1. Apply computer science theory and software development fundamentals to produce computin based solution.

PO2. Create the computer & related technologies to solve practical problems

PO3. Apply the soft skills to function as an effective professional.

PO4. Recognize professional responsibilities and make informed judgments in computing practicebase on legal and ethical principles.

PO5. Prepare an information technology oriented business orindustry.

PO6. Discuss of professional, ethical, legal, security, and social issues and responsibilities for the computing profession.

PO7. Analyze impacts of computing on individuals, organizations, and society.

Program Specific Outcomes (PSO)

PSO1. Apply fundamental principles and methods of computer science to a wide range of applications

PSO2. Design correctly implement and document solution to significant computational problems

PSO3. Explain the basic of Computer Science

PSO4. Prepare for continued professional development

PSO5. Develop proficiency in the practice of computing

Head	Prof. Dr. P. B. Piste	Principal,
Department Computer Science	In Charge (Pos,PSOs,Cos)	Rajarshi Chh. Shahu College R.C.Shahu College, Kolhapur Kolhapur.

RAJARSHI CHHATRAPATI SHAHU COLLEGE KOLHAPUR

Semester-I (Computer Science)

DSC-11A : Basics of C Programming

Theory: 30 hrs. (38 lectures of 48 minutes)

Course outcomes:

At the end of the course student should be in a position to

CO1: Demonstrate a familiarity of computer programming language concepts.
CO2:Understand to develop C programs on Linux platform.
CO3:Use basics of C language syntax as identifiers, keywords, variables, data types and operators
CO4:Apply the concept of branching, looping, decision-making statements and Array for problem solving.

DSC-12A:Course title: - Database Concepts

Theory - 30 hours (38 lectures of 48 minutes)

Course Outcomes:-

CO5:Describe the basic concepts of DBMS and various databases used in real applications.
CO6:Demonstrate the principles behind systematic database design approaches.
CO7:Describe the fundamental elements of Relational Database Management Systems.
CO8:Use various commands in data languages with example.

Semester-II (Computer Science)

B.Sc-I Semester-II (Computer Science)

DSC-11B : Advanced C Programming

Theory: 30 hrs. (38 lectures of 48 minutes)

Course outcomes:

CO9:Understand the concept and importance of pointers in C language.
CO10:Demonstrate an understanding of functions in problem solving.
CO11:Understand working of structure and dynamic memory allocation.
CO12:Apply file handling techniques using C language

B.Sc. Computer Science (Optional) part-ICourse

Code:- DSC-12B

course title: - Advanced Database

Total hours: - 30 hours (38 lectures of 48 minutes)

Course Outcomes:-

CO13:Understand various functions and subqueries.
CO14:Understand various joins and views.
CO15:Use the control statements and stored procedures.
CO16:Use the cursors and triggers.

B.Sc. Computer Science (Optional) part-II Semester III
Course code:- DSC-11C Course
Title: - Web Technology
Total contact hours: - 36 hours (45 lectures of 48 minutes)
Course Outcomes:-

CO17. Understand the principles of web design.
CO18. construct basic websites using HTML and Cascading Style Sheets.
CO19. build dynamic web pages with validation using JavaScript.
CO20. develop a modern web application that meets the current industry requirement.

B.Sc. Computer Science (Optional) Part IISemester-III
Course code:- DSC-12C
Title: - Object Oriented Programming using C++
Total contact hours: - 36 Hrs (45 Lectures of 48 Min.)
Course Outcomes:

CO21. understand the principles of web design
CO22. understand how C++ improves C with object oriented features.
CO23. learn syntax and semantics of C++ programming language
CO24. learn how to write inline functions for efficiency and performance.
CO25. . learn how to overload functions and operators in C++.
CO26. learn how to design C++ classes for code reuse.
CO27. learn how inheritance promotes code reuse in C++.
CO28. learn how inheritance and virtual functions implement dynamic binding with polymorphism.

B.Sc. Computer Science (Optional) part-II Semester-IV
Course code:- DSC-11D
Course title: - Cyber Security Essentials -I
Total contact hours: - 36 hours (45 lectures of 48 minutes)
Course Outcomes:-

CO29. Discuss an importance of Cyber Security and management.
CO30. Explain the concept of information security management.
CO31.Describe different access controls method.
CO32. Describe wireless network security.
CO33. Explain cyber security law and important of security audit.

B.Sc. Computer Science (Optional) part-II Semester- IV
Course code:- DSC-12D
Course title: - Data Structure using C++
Total contact hours: - 36 Hrs (45 Lectures of 48 Min.)
Course Outcomes:

CO34. Describe the basic concepts such as Abstract Data Types, Linear and Non Linear Data structures.
CO35. Choose appropriate data structures to represent data items in real world problems.
CO36. Analyze the time and space complexities of algorithms.
CO37. Design programs using a variety of data structures such as array, stacks, queues, linkedlist
CO38. Analyze and implement various kinds of searching and sorting techniques.

B.Sc. Part –III Computer Science Optional (Semester– V)

Course Code: DSE-21E Paper IX

Course Title: Core Java

Total Contact Hours: 36 Hrs. (45 Lectures of 48 Min.)

Course Outcomes: At the end of the course student should be in a position to

CO39. Explain Object oriented programming concepts using Java.
CO40. Describe input, its processing and getting suitable output.
CO41. Explain design, implement and evaluate classes and applets
CO42. Discuss concept of Multiprogramming and Exception Handling

B.Sc. Part –III Computer Science Optional (Semester– V)

Course Code: DSE-22E Computer Paper X

Course Title: C# Programming

Total Contact Hours: 36 Hrs. (45 Lectures of 48 Min.)

Course Outcomes: At the end of the course students should be in a position to

CO43. Apply the practical aspects C#.NET framework to the related industry.
CO44. Apply the basics of OOPs and windows application program.

B.Sc. Part –III Computer Science Optional (Semester– V)

Course code:-DSE-23E : computer science paper XI

Course title: - Linux Part I

Total contact hours: - 36 hours(45 lectures of 48 minutes)

Course Outcomes:-

CO45. Describe the History and Architecture of Linux, use of basic command , knowing the concept ofshell and kernel, basics of File systems.
CO46. Explain the different General Purpose Utilities.
CO47. Predict the directory commands, file and Directory Manipulation commands.
CO48. Describe the changing file permission and directory permission.
CO49. Discuss how to create process and waiting process termination
CO50. Explain VI editor basics, types of editors and special variables.

B.Sc. Part –III Computer Science Optional (Semester– V)

Course Code: DSE-24E Paper XII

Course Title: Python part -I

Total Contact Hours: 36 Hrs. (45 Lectures of 48 Min.)

Course Outcomes: At the end of the course student should be in a position to

CO51. Describe why Python is useful scripting language for developing.
CO52. Discuss how to write loop and decision statement.
CO53. Use of list and tuple in python

B.Sc. Part –III Computer Science Optional (Semester– VI)

Course Code: DSE-21F Paper XIII

Course Title: Advanced Java

Course Outcomes: At the end of the course student should be in a position to

CO54. Develop distributed business applications, develop web pages using advanced server-side programming through servlets and Java server pages.

CO55. Demonstrate approaches for performance and effective coding.

CO56. Describe database programming using Java.

CO57. Describe web development concept using Servlet and JSP.

B.Sc. Part –III Computer Science Optional (Semester– VI)

Course Code: DSE-22F Computer Paper XIV

Course Title- ASP .NET

Course Outcomes:

CO58. Apply the practical aspects of multi-tier web based application development using the .NET framework.

CO59. Explain the basics of distributed Web applicationdevelopment.

B.Sc. Part –III Computer Science Optional (Semester– VI)

Course code:-DSE-23F : Computer science paper XV

Course title: -Linux Part II

Course Outcomes:-

CO60. Describe the Memory management and advanced vi , knowing the mode in vi ,Use of swapping and demand paging

CO61. Discuss advanced shell programming .

CO62. Describe shell basics, connecting commands and Basics, the grep and grep options andexporting shell variables.

CO63. Explain the Networking Tools.

CO64. Describe the Network Management Tools and Firewall .

B.Sc. Part –III Computer Science Optional (Semester– VI)

Course Code: DSE-24F Paper XVI

Course Title: Python part-II

Course Outcomes: At the end of the course student should be in a position to

CO65. Describe how to write functions and pass arguments.

CO66. Explain build package in Python.

CO67. Discuss exception handling in Python.

CO68. Discuss web development concept using Servlet and JSP.

Rayat Shikshan Sanstha's

RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR.

DEPARTMENT OF MICROBIOLOGY

Academic Year 2024-2025

PROGRAMME SPECIFIC OUTCOME

A candidate who wish to graduate in B.Sc. (Microbiology Course) needs to have acquired/developed following competencies:

- **PSO1**: Acquired knowledge and understanding of the microbiology concepts as applicable to diverse areas such as medical, industrial, environment, genetics, agriculture, food and others.
- **PSO2:** Demonstrate key practical skills/competencies in working with microbes for study and use in the laboratory as well as outside, including the use of good microbiological practices.
- **PSO3:** Competent enough to use microbiology knowledge and skills to analyze problems Involving microbes, articulate these with peers/ team members/ other stake holders, and undertake remedial measures/studies etc.
- **PSO4:** Developed a broader perspective of the discipline of Microbiology to enable him to identify challenging societal problems and plan his professional career to develop innovative solutions for such problems.

PROGRAME OBJECTIVES (POs)

- **PO1:** To create a Centre of academic excellence in field of education in microbiology.
- **PO2:** To provide a sound academic background for overall development of personality for a successful career in microbiology.
- **PO3:** To provide an environment that foster continuous improvement and innovation in subject.
- **PO4:** To in still in student the essential skills oriented towards self-development
- **PO5:** To inoculate in students the need for value of dignity of labor , the positive attitude and proper community orientation and civic responsibilities in their outlook
- **PO6:** To cultivate a sense of social responsibility in student, encouraging them to be active citizen through an excellent academic program and participation in daily management tasks.

RAJARSHI CHHATRAPATI SHAHU COLLEGE KOLHAPUR

COURSE OUTCOMES OF B.Sc. MICROBIOLOGY (2023-2024)

COURSE OUTCOMES: DSC- I : INTRODUCTION TO MICROBIOLOGY After completion of this course, Students will be able to:	
CO1	Develop a good knowledge of the development of the discipline of Microbiology and the contributions made by prominent scientists in this field.
CO2	Develop a very good understanding of the characteristics of different types of microorganisms, methods to organize/classify these into and basic tools to study these in the laboratory.
CO3	Explain the useful and harmful activities of the microorganisms and scope of different branches of Microbiology.
CO4	Describe characteristics of bacterial cells, cell organelles and various appendages like capsules, flagella or pili
COURSE OUTCOMES: DSC- II : BASIC TECHNIQUES IN MICROBIOLOGY Students will be able to:	
CO5	Study the staining techniques for the observation of bacteria and bacterial cell components
CO6	Study the working principle, handling and use of microscopes for the study of microbes
CO7	Understand the principles of sterilization and disinfection of culture media,glassware and plastic ware and other objects to be used for microbiological work.
COURSE OUTCOMES: DSC- III: BACTERIOLOGY Students will be able to:	
CO08	Capable of design the nutritional media of bacteria and other microbes which grow under extreme environments.
CO09	Able to isolate, cultivate and differentiate bacteria
CO10	Able to preserve of bacteria in the laboratory
COURSE OUTCOMES: DSC-IV: APPLIED MICROBIOLOGY Students will be able to:	
CO11	Develop a very good understanding of applied branches of Microbiology.
CO12	Develop the knowledge of how the microorganisms play role in Water microbiology
CO13	Make well conversant about food preservation techniques
CO14	Develop knowledge of milk processing and milk testing
COURSE OUTCOMES: MAJOR COURSE V: MICROBIAL PHYSIOLOGY & METABOLISM Students will be able to:	
CO15	Explain microbial growth phases and methods for measuring growth.
CO16	Assess the impact of environmental factors (temperature, pH, osmotic pressure, etc.) on microbial survival.
CO17	Describe membrane transport mechanisms in microorganisms.
CO18	Differentiate catabolism and anabolism with reference to energy flow in cells.

COURSE OUTCOMES: MAJOR COURSE VI: BIOINSTRUMENTATION & INDUSTRIAL MICROBIOLOGY Students will be able to:	
CO19	Explain the principles and applications of paper and thin-layer chromatography.
CO20	Describe the working and uses of electrophoresis techniques (Agarose gel and PAGE)
CO21	Understand the principles and functions of colorimeters and lyophilization.
CO22	Define fermentation and classify its types with examples of primary and secondary metabolites.
COURSE OUTCOMES: MAJOR COURSE VII: MICROBIAL GENETICS & MOLECULAR BIOLOGY Students will be able to:	
CO23	Explain the structure and function of DNA and RNA, and key genetic terms like gene, genome, and operon.
CO24	Classify and describe mutations, their types, causes, and mechanisms of action.
CO25	Differentiate between spontaneous and induced mutations and explain how mutagens cause genetic changes.
CO26	Understand mechanisms of gene transfer in bacteria, including transformation, conjugation, and transduction.
CO27	Describe DNA repair mechanisms, including photoreactivation and excision repair.
CO28	Illustrate the structure and regulation of the lac operon in bacteria.
COURSE OUTCOMES: BASICS IN MEDICAL MICROBIOLOGY & IMMUNOLOGY Students will be able to:	
CO29	Define key terms and concepts in medical microbiology and immunology.
CO30	Differentiate between types of infections and diseases and explain their modes of transmission
CO31	Describe virulence factors and their role in microbial pathogenicity
CO32	Explain the principles of disease prevention and control, and the role of normal human flora.
CO33	Understand innate and acquired immunity, and nonspecific defense mechanisms
CO34	Describe the structure, types, and functions of antigens and antibodies
CO35	Explain immune responses and the types of antigen-antibody reactions used in diagnostics.
COURSE OUTCOMES: MINOR COURSE V: BIOMOLECULES Students will be able to:	
CO36	Describe the structure and classification of amino acids and proteins, and explain various levels of protein structure.
CO37	Understand enzyme properties, types, and mechanisms of action, including models like Lock and Key and Induced Fit.
CO38	Explain the structural and functional aspects of DNA and RNA, including nucleic acid types.
COURSE OUTCOMES: MINOR COURSE VI: FUNDAMENTALS OF MEDICAL MICROBIOLOGY Students will be able to:	

CO39	Define the scope and significance of medical microbiology and explain the role of normal flora in human health.
CO40	Interpret fundamental microbiological terms and explain concepts such as virulence, pathogenicity, and immunity.
CO41	Classify infections and describe their clinical relevance, including acute, chronic, opportunistic, and nosocomial infections.
CO42	Explain modes of disease transmission and differentiate between epidemic, endemic, pandemic, and sporadic diseases.
COURSE OUTCOMES: MINOR COURSE VII: SOIL MICROBIOLOGY Students will be able to:	
CO43	Describe the composition and properties of soil, identify various soil microorganisms, and explain their significance in soil fertility.
CO44	Distinguish different types of microbial interactions (positive, negative, and neutral) within the soil ecosystem
CO45	Explain the role of soil microbes in major biogeochemical cycles such as the carbon and nitrogen cycles.
CO46	Demonstrate knowledge of biofertilizers, including their types, isolation, production, and application in sustainable agriculture.
COURSE OUTCOMES: MINOR COURSE VIII: INTRODUCTION TO FERMENTATION TECHNOLOGY & BIOSTATISTICS Students will be able to:	
CO47	Define and explain basic concepts of fermentation, including types, primary/secondary metabolites, and fermenter components.
CO48	Analyze factors affecting fermentation and apply knowledge of media components for optimal microbial growth and product formation.
CO49	Demonstrate methods for selecting and improving microbial strains used in industrial processes and explain their preservation techniques.
CO50	Identify types and uses of microbiological assays for evaluating microbial activity and product yield.
COURSE OUTCOMES: VOCATIONAL SKILL COURSE-1 (VSC- 1): MILK TESTING & QUALITY CONTROL Students will be able to:	
CO51	Operate basic laboratory equipment used in milk analysis.
CO52	Conduct organoleptic and physical tests of milk.
CO53	Carry out chemical tests to detect pH, acidity, and adulterants.
CO54	Perform microbiological tests such as MBRT, SPC, coliform, and mold counts
CO55	Assess pasteurization efficiency using the phosphatase test.

COURSE OUTCOMES: SKILL ENHANCEMENT COURSE-1 (SEC- 1): FUNDAMENTAL PRACTICES IN MICROBIOLOGY LABORATORY-I Students will be able to:	
CO56	Prepare standard solutions, stains, and buffers for microbiological and biochemical use
CO57	Calibrate basic laboratory instruments like pipettes, burettes, and pH meters.
CO58	Separate amino acids using paper chromatography.
CO59	Demonstrate essential microbiological techniques such as plugging and wrapping of glassware.
CO60	Operate autoclave, hot air oven, and UV sterilizer for sterilization of media, glassware, and heat-sensitive materials.
COURSE OUTCOMES: SKILL ENHANCEMENT COURSE- 2 (SEC-2): FUNDAMENTAL PRACTICES IN MICROBIOLOGY LABORATORY-II Students will be able to:	
CO61	Prepare agar slants and butts and preserve microbial cultures through subculturing
CO62	Perform microscopic examination of algae and fungi using standard staining techniques.
CO63	Evaluate potability of water using the MPN test.
CO64	Conduct Standard Plate Count (SPC) of food and water samples.
COURSE OUTCOMES: OPEN ELECTIVE COURSE-3 (OE-3): MICROORGANISMS IN EVERYDAY LIFE Students will be able to:	
CO65	Detect and analyze the presence of micro flora from air, water, soil, and common surfaces like currency.
CO66	Observe and compare micro flora from various body parts including skin, nails, and teeth
CO67	Demonstrate correct hand hygiene techniques and evaluate their effectiveness
CO68	Assess the impact of soap, disinfectants, and sanitizers on microbial growth.
COURSE OUTCOMES: OPEN ELECTIVE COURSE- 4 (OE-4): THE ROLE OF MICROORGANISMS	
CO69	Cultivate and observe microorganisms on natural and spoiled food surfaces.
C070	Identify microbial spoilage in food, plant, and household materials
CO71	Recognize plant disease symptoms caused by microbes.
CO72	Understand the role and preparation of microbial inoculants, biofertilizers, biopesticides, and bioinsecticides.
CO73	Appreciate the significance of root nodules and beneficial plant-microbe interactions.

Coordinator,
Dept. of Microbiology

CHHATRAPATI SHAHU COLLEGE KOLHAPUR RAJARSHI

Prof. (Dr.)P. B. Piste
In Charge (POs,PSOs,COs)

Principal
R. C. Shahu College, Kolhapur

RAYAT SHIKSHAN SANSTHA'S

RAJARSHI CHHATRAPATI SHAHU, KOLHAPUR

Department of Computer Science

(B.Sc Computer Science Entire-BCS / B.Sc Computer Science)

BCS

Program Outcomes (PO) 2024-25

After the Completion of this programme, the students will able to

PO1. Identify, formulate, research literature, and analyze complex scientific problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and applied sciences.

PO2. Apply computer science theory and software development fundamentals to produce computing–based solution.

PO3. Apply computer and related technologies to Solve Practical problems.

PO4. Explain professional, ethical, legal, security, and social issues and responsibilities for thecomputing profession.

PO5. Create, select, and apply appropriate techniques, resources, and modern computing and IT tools including prediction and modeling to complex scientific activities with an understanding of the limitations.

PO6. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.

PO7. Design Software technology oriented in computer science.

Program Specific Outcomes (PSO)

PSO1. Apply fundamental principles and methods of computer science to a wide range of applications

PSO2. Design correctly implement and document solution to significant computational problems

PSO3. Explain the basic of Computer Science

PSO4. Prepare for continued professional development

PSO5. Develop proficiency in the practice of computing

Head
Department Computer Science

Prof. Dr. P. B. Piste
In Charge (Pos,PSOs,Cos)

Principal,
Rajarshi Chh. Shahu College
R.C.Shahu College, Kolhapur

RAJARSHI CHHATRAPATI SHAHU COLLEGE KOLHAPUR

B.Sc-I Semester-I (Computer Science Entire)

CC101 Paper-I C Programming

- **Course outcomes:**

At the end of the course student should be in a position to

CO1 Understand the concept of design tools (Algorithm and Flowchart) to given solution to the problem.
CO2 Use basics of C language syntax as identifiers, keywords, variables, data types and operators
CO3 Apply the concept of branching, looping, decision-making statements and Array for given problem.
CO4 Break a large problem into smaller part, writing each part as a function and develop a C Program.

CC102 Paper-II Operating System

- **Course outcomes:**

At the end of the course student should be in a position to

CO5 Understand basic concepts of operating system, services and their structures.
CO6 Illustrate the concept of process and process life cycle and acquire the knowledge of CPU and I/O concepts.
CO7 Implement the issues and challenges of memory management and file management concept
CO8 Understand the concept of resource allocation and concept of deadlock with its prevention, avoidance, detection and recovery.

- **Course Title: - GEC-105 Discrete Mathematics.**
- **Course Outcome:**

CO9 Apply basic counting principles and combinatorial arguments.
CO10 Solve linear recurrence relations with constant coefficient.
CO11 Analyze the logical structure of statements symbolically, including the proper use of logical connectives.
CO12 Construct truth tables, prove or disprove a hypothesis and evaluate the truth of a statement using the principles of logic.

- **Course Title:-GEC-106 Algebra.**
- **CourseOutcomes:-**

CO13 Apply fundamental concepts in Number theory to solve problems on congruence.
CO14 Solve problems based on Fermat's theorem and residue classes.
CO15 Use fundamental concepts in Mathematics like sets, relations and functions.
CO16 learn basic concepts like poset, lattice, Boolean algebra and apply them to find CNF and DNF.

- **GEC-103 Paper I Fundamental Electronics**
  - **Course Outcomes:**

CO17: Understand the concept of electronics components.
CO18: Understand the transistor Applications.
CO19: To study and understand the amplifier and oscillator concept.
CO20: To study the concept of operational amplifier and Integrated circuit

- **GEC-104 Paper-II Basic Digital Electronics**
  - **Course Outcomes:**

CO21: Understand the concept of Number Systems,
CO22: Understand different Computer Codes,
CO23: Understand different Logic Gates & Boolean Algebra,
CO24: Understand various Combinational Logic circuits,

B. Sc. Part- I Computer Science Entire
(Semester II)

Course Code: DSC-201: Computer Paper-III Course Title:

Advanced C Programming

Course Outcome :At the end of the course student should be in a position to

CO25 Apply code reusability with functions and pointer, Implement string in C programs.
CO26 Understand how to allocate memory at runtime using different memory allocation functions.
CO27 Understand the need of structure and implement the structure with real life examples.
CO28 Understand the basics of file handling mechanism and uses of preprocessors.

Course Code: Subject II DSC III: Course Title: Graph theory

Total Contact Hours: 36 hrs (45 lectures of 48 min)

Course outcomes:

At the end of the course student should be in a position to

CO29 Achieve command of the fundamental definitions and concepts of graph theory.
CO30 Model problems using graphs and solve these problems algorithmically.
CO31 Illustrate fundamentals of spanning tree, circuits and cut-sets.
CO32 Apply this knowledge in (especially) computer science applications

- **Course Code: Subject II DSC IV: Course Title: Group and Coding Theory**
- **Course outcomes:**

After studying this course the students are able to –

CO33 Learn Group structure and its properties.

CO34 Understand fundamental properties of sub groups, cyclic groups, permutation groups.

CO35 identify different types of group structure and apply them in Cryptography

CO36 Compile the concepts, properties, aspects of Algebra and apply them in computer science.

- **Course Code: Subject III DSC III: Course Title: Sensors and Signal Conditioning**
  GEC-204 Digital Electronics - II
- **Course Outcomes**: After studying this course the students are able to
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CO37: After completion of this course, student will be able to
- understand the sensors.
- CO38: Describe the working principle, selection criteria and applications of various transducers used in
- the instrumentation systems.
- CO39: Getting a knowledge of signal conditioning circuits, data converters & digital instruments..
- CO40: Understanding of different Actuators, Data Acquisition Systems & Data loggers.
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-
-

Course Code: Subject III DSC IV: Course Title: Advanced Digital Electronics

CO41 Understand the Sequential Circuits like Flip-Flop,
CO42 Understand the various digital Counters & Shift registers,
CO43 Understand 8-bit Microprocessor-8085 architecture,
CO44 Understand 8085-microprocessor Instruction set & assembly language programming.

- **BSc (Computer Science) Entire Part II SEM III**
- **Subject :- Computer Science**
- **Course code:- DSC-301: computer science paper V(SEM III)**
- **Course title: - RDBMS With MySQL**
- **Course Outcomes:-**

CO45 Understand the concept of Database, Database management system Concept of Data models
CO46 Understand of MySQL with different Commands (Create, insert, select, update, Delete)
CO47 Understand different SQL Operators, functions and clauses
CO48 Design & develop proper database and get Knowledge of Sub Queries and Joins

- **Course code:- DSC-302: computer science paper VI(SEM III)**
- **Course title: - Object Oriented Programming using C++**
- **Course Outcomes:-**

CO 49: Understand basic concepts of object-oriented programming and Use of various control structures to improve programming logic.

CO50: Design classes, objects and functions.

CO 51: Use constructor and destructor.

CO 52: Implement inheritance and polymorphism concept.

Subject :- Electronics

- **Course Outcomes**
- **Semester – III Electronics Paper – V**
- **GEC-303 Computer Organization**
- **Course Outcomes: After studying this course the students are able to –**

CO 53 Understand code converters, digital comparators and counter design.
CO 54 Understand design of memory system with its expansion and mapping techniques.
CO 55 Understand various data transfer techniques in digital computer and the I/O interfaces.
CO 56 Understand the basics of register, stack, organization and study of ALU with instruction format.

- **Semester – III Electronics Paper – VI**
- **GEC-304 Computer Instrumentation**

Course Outcomes: After studying this course the students are able to –

CO 57 Describe the working principle, selection criteria and applications of various transducers used in instrumentation systems

CO 58 Gain knowledge about different type of signal conditioning circuits, data converters.

CO 59 Understand various types of Actuators and Data Acquisition systems.

CO 60 Understand construction, working principle of different types of digital instruments and Display devices

- **Subject – Mathematics**
- **Semester – III Mathematics Paper – V**
- **Course Outcome of (GEC-305) Linear Algebra**

After studying this course Students will able to

- CO 61 Understand the concept of linear transformation and its application to real life applications.
- CO 62 Evaluate mathematical expressions to compute quantities that deal with linear systems and eigenvalue problems.
- CO 63 Analyze mathematical statements and expressions.
- CO 64 Reason mathematically. Understand the notion of vector space, subspace, basis

- **Semester – III Mathematics Paper – VI**
  - **Course Outcome of (GEC-306)Numerical Methods**
  - **After studying this course Students will able to–**

CO 65 Understand how to find the roots of transcendental equations.
CO 66 Understand learn numerical solution of differential equations.
CO 67 Understand how to find the roots of transcendental equations.
CO 68 Understand how to interpolate the given set of values.

- **Course code:- DSC-401: computer science paper VII(SEM IV)**
- **At the end of this course, students will be able to**
- **Course title: - Data Structure using C++**
- **Course Outcomes:-**

CO 69 Understand concept of data structure and concept of array operations and applications of array.
CO 70 Understand different sorting and searching algorithms for problem solving.
CO 71 Implement algorithms to solve problems using appropriate data structures.
CO 72 Understand implementations of linked list and basics of Trees

- **Course code:- DSC-402: computer science paper VIII(SEM IV)**
- **Course title: - System Analysis and Design**
- **Course Outcomes:-**

CO 73 Understand concept of system, life cycle of system, different fact-finding techniques in system analysis.
CO 74 Design different charting techniques like decision table, decision trees, ERD, DFD to develop a system
CO 75Understand input and output design of a system and also different testing techniques.
CO 76 Design different systems using system development life cycle

- **Semester – IV Electronics Paper – VII**
- **GEC-403 Microcontroller Architecture and Programming**
- **Course Outcomes: After studying this course the students are able to –**

CO 77 Understand the architecture of 8051 microcontroller and its comparative family.
CO 78 Understand the detailed Instruction set of 8051 with addressing modes.
CO 79Understand Facilities in 8051viz. Timer, Counter, Delay calculations and Serial Communication with its operating modes.
CO 80 Understand 8051 and Real-world interfacing using I/O peripherals

- **Semester – IV Electronics Paper – VIII**
- **GEC-404 Principles of Electronics Communication**
- **Course Outcomes: After studying this course the students are able to –**

CO 81 Understand the functioning of basic communication system.
CO 82 Understand the concept of basic analog modulation techniques.
CO 83 Understand digital modulation and demodulation techniques.
CO 84Understand wireless communication systems and mobile communication concept.

- **Semester – IV Mathematics Paper – VIII**
- **Course Outcome Of (GEC-406)Computational Geometry**
- **Course Outcomes: After studying this course the students are able to –**

CO 85 Understand how to represent point, lines, transformations and matrices,
CO 86 Understand how to Various types of transformations.
CO 87 Solve multiple transformation and projection on three dimensional.
CO 88 Understand the concepts curve, its properties and B-spline curve.

- **Semester – IV Mathematics Paper – VII**
- **Course Outcome of (GEC-405)Operation Research**
- **Course Outcomes: After studying this course the students are able to –**

CO 89 To learn about characteristics, scope of operation Research.
CO 90 Understand the Assignment problem.
CO 91 Understand the Transportation problem Initial Solution and Optimization.
CO 92 To know the fundamental of game theory.

- **B.Sc. Computer Science Entire Part –III (Semester– V)**
- **Course Code: DSE 501 Paper IX**
- **Course Title: Core Java**
- **Course Outcomes:**

CO 93: Implement Object oriented concepts using java.

CO 94: Develop Object oriented software application.

CO 95: Develop multithreading applications

CO 96: Handle exceptions while executing programs,

- **B.Sc. Computer Science Entire Part-III (SEMESTER - V)**
- **Course Code: DSE-502: Computer Science Paper- X**
- **Course Title: C# Programming**
- **Course outcomes:**

CO 97: Understand working of .Net Framework

CO 98: Demonstrate concept of object oriented programming using C#.

CO 99: Study importance and applications of exception handling.

CO 100: Understand working of file handling in C#.

- **B.Sc. (Computer Science) Entire part-III (SEM V)**
- **Course Code: DSE-503: Computer Science Paper- XI**
- **Course Title: Software Engineering**
- **Course Outcomes: -**

CO 101: Understand the problem domain to choose process models correctly.

CO 102: Choose software projects using appropriate design notations.

CO 103: Measure the product and process performance using various metrics..

CO 104: Evaluate the system with various testing techniques and strategies

CO 105: Able to analyze, design, verify, validate, implement, and maintain software systems.

- **B.Sc.(Computer Science)Entire Part-III SEMESTER - V**
- **Course Code: DSE-504: Computer Science Paper-XII**
- **Course Title: Data Communication (Elective Course-I)**
- **Course Outcomes:**

CO 142: Identify key considerations in selecting various transmission media in networks.

CO 143: Familiar with switching and routing techniques in networking.

CO 144: Understand different data communication modes.

CO 144: Understand OSI model and networking protocols.

- **B.Sc. Computer Science Entire Part-III SEMESTER - V**
- **Course Code: AECC-E: English Paper-III**
- **Course Title: English for communication- III**
- **Course Outcomes:**

CO 145: comprehend communication process, methods of communication and flow of communication in business context.

CO 146: Apply acquired LSRW skills into real life situations and in professional context

CO 147: Compose effective business letters using standard language, style and structure

- **B.Sc. Part –III Computer Science Entire (Semester– VI)**
- **Course Code: DSE 601 Paper XIII**
- **Course Title: Advanced Java**
- **Course Outcomes:** At the end of the course student should be in a position to

CO 148: Develop GUI using Java.

CO 149: Handle Database connectivity using java.

CO 150: Develop dynamic web pages using servlet and JSP

CO 151: Develop client-server application

- **B.Sc. Computer Science Entire Part-III (SEMESTER – VI)**
- **Course Code: DSE-602: Computer Science Paper- XIV**
- **Course Title: ASP.NET**
- **Course outcome:**

CO 152: Discuss working of Asp.Net web application

CO 153: Demonstrate Asp.Net server controls.

CO 154: Explain database operations using ADO.Net.

CO 155: Explain importance and working of state management.

- **B.Sc. Computer Part-III Science Entire SEMESTER – VI**
- **Course Code: DSE-603: Computer Science Paper- XV**
- **Course Title: Software Project Management**
- **Course Outcomes:**

CO 156: Implement the basics of Project Management.

CO 157: Choose correct Scheduling Techniques as per the software.

CO 158: Develop Team Development skills and reduce conflicts.

CO 159: Implement various Software Quality Standards.

CO 160: Apply CASE tools, Software Re-Engineering for creating efficient softwares.

- **B.Sc. Computer Part-III Science Entire SEMESTER – VI**
- **Code: DSE-604: Computer Science Paper- XVI**
- **Course Title: Computer Networks (Elective Course-II)**
- **Total Contact Hours: 48 hrs. (60 lectures of 48 min)**

- **Course Outcomes:**

CO 161: Familiar with network basics concepts like protocols, topology etc.

CO 162: Familiar with OSI layered model services

CO 163: Understand with switching and routing concepts in networking technologies.

CO 164: Familiar with network security concepts

B.Sc. Computer Science Entire Part-III

- **Course Code: AECC-F: English Paper-IV**
- **Course Outcomes:**

CO 165: Comprehend the employment skills to have an effective first impression

CO 166: Construct effective technical reports and prepare effective presentations

CO 167: Use various interpersonal skills as per the need of situation and context

Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur.

Department of English

Name of Program: Master of Arts

2024-25

Program Outcomes

PO1: Critically Appreciate literary/linguistic developments of different countries and different periods.

PO2: Comprehend major trends, movements and '-isms' and different critical/linguistic approaches.

PO3: Interpret and critically evaluate prescribed texts.

PO4: Analyze and evaluate different varieties of written and spoken English.

PO5: Examine unseen poem and prose stylistically.

PO6: Interpret and demonstrate her /his understanding of form, structure, narrative techniques, devices and style.

Program Specific Outcomes

PSO1: Compare and analyze diverse literature with an enriched sensitization towards nature.
PSO2: Examine major literary trends and movements and schools of criticism.
PSO3: Plan research practices in language and literature.
PSO4: compose a dissertation based on approved research topic.
PSO5: Critique global and national socio- cultural issues proactively through literature.

Head
Dept. of English

HEAD
Department of English
Rajarshi Chh. Shahu College, Kolhapur

Prof. P. B. Piste
In-Charge (POs, PSOs & Cos)

I/C PRINCIPAL
Principal
R.C. SHAHU COLLEGE
KOLHAPUR

RAJARSHI CHHATRAPATI SHAHU COLLEGE KOLHAPUR

M.A Part- I Semester I

C1: Poetry in English up to 19th century (MAU0325MML503G1)

CO1: Trace the development of verse tradition through Pindaric ode, American Romanticism, Russian Romanticism and French Symbolist Poetry.

CO2: Locate a specific poem in historical and social context.

CO3: Interpret and aesthetically appreciate poems.

CO4: Understand the difference between implicit and explicit meaning of poems.

C2: Fiction in English up to 19th century (MAU0325MML503G2)

CO5: Critically appreciate fiction of different countries up to 19th Century in the light of various movements and aspects of fiction.

CO6: Understand major trends and writers in Fiction through detailed study of selected novels.

CO7: Interpret and critically appreciate the novels of the selected authors with reference to the realism (naturalism) and psychology.

CO8: Critically appreciate representative 19th century American short fiction.

C3: Modern Linguistics: An Introduction (MAU0325MML503G3)

CO9: Describe the nature, scope, and different branches of linguistics and pragmatics.

CO10: Understand and apply some major concepts related to Modern Linguistics.

CO11: Classify, compare and contrast the knowledge of various branches of Linguistics.

CO12: Understand and classify varieties of languages grounded on user- based differences like geographical location, class, caste, education and sex as well as use-based differences like register.

MM4 Understanding Shakespeare: Shakespearean Poetry (MAU0325MML503G4)

CO13: The students will be acquainted with the form of Shakespearean sonnet.

CO14: They will be able to appreciate Shakespearean poetry.

E1: British Renaissance Literature (MAU0325MEL503G4)

CO15: Students will understand various periods, trends and movements in British literature.

CO16: They will comprehend Renaissance poetry, drama, theatre and prose.

RM: Research Methodology (MAU0325RML5)

CO17: The students will develop basic skills of literary and linguistic research.

CO18: They will be able to apply the techniques of data collection and fieldwork.

CO19: They will learn the basic theoretical approaches to literary research and some basic statistical methods of data analysis.

CO20: They will learn research ethics and techniques of report writing using style sheets.

M.A Part- I Semester II

Poetry in English: Modern and Postmodern (MAU0325MML503H1)

CO21: Understand major trends and poets in Modern and Postmodern English Poetry through detailed study of prescribed poetical works of British, Indian, American and Australian poets.

CO22: Discuss a specific poem in historical and social context.

CO23: Interpret and aesthetically appreciate poems.

Fiction in English: Modern and Postmodern (MAU0325MML503H2)

CO24: Appreciate fiction of various countries during modern and postmodern era in the light of various movements and aspects of fiction.

CO25: Interpret and critically appreciate the selected novels with reference to existentialism and modernism.

CO26: Critically evaluate the selected texts and justify their readings with reference to postmodernism and nationhood.

CO27: Students will be able to critically appreciate Feminism in Postmodern Indian Fiction with reference to the selected text.

Critical Theories-I (MAU0325MML503H3)

CO28: Students will understand the thoughts of the prescribed critical and literary theorists from Indian and Western tradition.

CO29: Students will comprehend the historical development of critical and literary thought.

CO30: Students will develop critical insights to look at literature produced in various ages across the globe.

Shakespearean Tragedy (MAU0325MML503H4)

CO 31. Students will understand the characteristic features of Shakespearean Tragedy.

CO 32. They will be able to interpret Shakespearean Tragedy

British Neoclassical and Romantic Literature (MAU0325MEL503H4)

C033: Comprehend the salient features of literature of the Neo Neoclassical and Romantic Period.

CO34: Understand the works of dramatist of Restoration period.

CO35: Critically appreciate the significance of the rise and development of 18th Century British Fiction.

CO36: Comprehend Romanticism in British fiction.

CO37: Interpret and critically appreciate the Neoclassical and Romantic Poetry.

On Job Training/Field Project (MAU0325OJP503H)

CO38: Students implement acquired knowledge at some institute

CO39: Students prepare plans related to teaching/translation/ other tasks

CO40: Students acquire work culture.

CO41: Students prepare detailed reports based on their experience.

MM: Drama in English Up to 19th Century (MAU0325MML503I1)

CO42: Students will be able to understand and interpret drama as a genre of literature.

CO43: They will be able to compare the plays written in different countries.

CO44: They will be able to distinguish between the various trends in drama.

MM: Non-Fiction in English (MAU0325MML503I2)

C045: Students will understand important sub-genres of Nonfiction.

CO46: They will be able to interpret and critically appreciate the prescribed non-fictional works.

C047: Students will demonstrate knowledge of key texts of Indian nationalism

MM: Critical Theories II (MAU0325MML503I3)

CO48: Students will understand the thoughts of the prescribed critical and literary theorists from different traditions.

CO49: Students will analyses and compare various schools of critical and literary theories.

CO50: Students will develop critical insights to look at literature produced in various ages across the globe.

MM Understanding Shakespeare: Shakespearean Comedy (MAU0325MML503I4)

CO51: Students will understand the characteristic features of Shakespearean Comedy.

CO52: They will be able to interpret Shakespearean Comedy.

Victorian and Modern Period (MAU0325MEL503I4)

CO53: Students will be able to describe the features of Victorian and Early Modern British literature.

CO54: Students will be able to understand and to interpret the various trends in the literature of this period in relation to the socio-political context

Research Project (MAU0325RPL&P503I)

CO55: Students will learn and practice locating a research problem or research gap on the basis of a review of the relevant research literature

CO56: Students will learn and practice review writing skills

CO57: Students will learn and practice writing bibliographic information and references

CO58: Students will learn and practice research methodology and sampling techniques

CO59: Students will learn and practice report writing.

Drama in English: Modern & Postmodern (MAU0325MML503J1)

CO60: Students will understand trends in 20th century and contemporary drama in relation to the social context.

CO61: They will analyze and compare drama from various regions and languages.

Sociolinguistics and Stylistics (MAU0325MML503J2)

CO62: Students will learn the nature, scope, and different branches of sociolinguistics and stylistics.

CO63: Students will understand different concepts in Sociolinguistics and Stylistics.

CO64: Students will be able to relate the literary and ordinary language.

CO65: Students will be able to analyze the prose and poetry discourses stylistically.

Critical Theories III (MAU0325MML503J3)

CO66: Students will understand the thoughts of the prescribed critical and literary theorists from different traditions.

CO67: Students will analyze and compare various schools of critical and literary theories.

CO68: Students will develop critical insights to look at literature produced in various ages across the globe

Modern and Postmodern British Literature (MAU0325MEL503J4)

CO69: Students will comprehend contemporary works of Modern and Postmodern British Literature.

CO70: Students will be able to understand and to interpret the various trends in the literature of this period in relation to the socio-political context.

CO71: Students will learn to locate a research problem related to their elective courses on the basis of a review of the relevant research literature

CO72: Students will learn and practice review writing skills, and references

CO73: Students will learn and practice using different critical lenses to study their research problems

CO74: Students will learn and practice research methodology for data collection, data analysis and data presentation

CO75: Students will learn and practice report writing

Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur

Department of Commerce IT

M.Com. (Information Technology)

PO/PSO/CO:

Program Outcome / Program Specific Outcome:

(2024-25)

After completing the M.Com Information Technology program the students would beable to:

*PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO1: In depth understanding of core areas of Information Technology- programming, web designing, mobile computing, data analytics, research methods using IT

PSO2: Application of knowledge in problem solving, decision making

PSO3: Working in teams as well as taking initiative and leadership responsibilities

PSO4: To apply modern tools techniques and methods

PSO5: Applying inter personal communication skills

PSO6: Ability to identify role of IT in different functional areas of accounting, finance, taxation and administration

*PROGRAMME OUTCOMES (POs):

Program outcomes are attributes of the graduates from the program that are indicative of the graduates' ability and competence to work as an IT professional upon graduation. Program Outcomes are statements that describe what students are expected to do now or do by the time of post-graduation. They must relate to knowledge and skills that the students acquire from the program. The achievement of all outcomes indicates that the student is well prepared to achieve the program educational objectives down the road. Master of Commerce IT program has following PO's.

PO1: Computational Knowledge: Understand and apply mathematical foundation, computing and domain knowledge for the conceptualization of computing models from defined problems.

PO2: Problem Analysis: Ability to identify, critically analyze and formulate complex computing problems using fundamentals of computer science and application domains.

RAJARSHI CHHATRAPATI SHAHU COLLEGE KOLHAPUR

PO3: Design / Development of Solutions: Ability to transform complex business scenarios and contemporary issues into problems, investigate, understand and propose integrated solutions using emerging technologies

PO4: Conduct Investigations of Complex Computing Problems: Ability to devise and conduct experiments, interpret data and provide well informed conclusions.

PO5: Modern Tool Usage: Ability to select modern computing tools, skills and techniques necessary for innovative software solutions

PO6: Professional Ethics: Ability to apply and commit professional ethics and cyber regulations in a global economic environment.

PO7: Life-long Learning: Recognize the need for and develop the ability to engage in continuous learning as a Computing professional.

PO8: Project Management and Finance: Ability to understand, management and computing principles with computing knowledge to manage projects in multidisciplinary environments.

PO9: Societal & Environmental Concern: Ability to recognize economic, environmental, social, health, legal, ethical issues involved in the use of computer technology and other consequential responsibilities relevant to professional practice.

PO10: Acquire the managerial professional attributes and gain practical accounting skills through an internship program.

M.Com IT I
Sem I

After Completion of course, Students will be able to

►Web Technology using PHP (DSC1)

CO1. Apply the concept and usages web based programming techniques.
CO 2. Demonstrate the development of web applications using PHP.
CO 3. Design and implement user interactive dynamic web based applications.
CO 4. Demonstrate data validation techniques through PHP.

► Software Engineering and Project Management (DSC2)

CO 5. Understand various software Process Models
CO 6. Design SRS document for Software Project
CO 7. Understand Software Project Life Cycle
CO 8. Describe Software quality attributes and identify IT project risk

►Emerging Trends in Information Technology(DSC3)

CO 9. Make use ofsocial media for the different functional areasin the business.
CO 10. Explainthe design and architecture of mobile based applications for the business.
CO 11. Determinethe role of Expert Systems and Big Data Management for the Business Intelligence.
CO 12. ExamineCloud Computing Architecture for transformation, development and agility in the business.

►Lab based on DSC1 (DSC4)

CO 13. Identifycomponents of PHP applicable to web based solutions
CO 14. Implementthe different tools of PHP while developing web based applications for the business.

►Management Information System (DSE1.2)

CO 15: Relate the basic concepts a technologies used in the field of management information system.
CO 16: Compare the processes of developing & implementing information system.
CO 17: Outline the role of the ethical, social & security issues of information system.
CO 18: Translate the role of information systems in organizations the strategic management processes with the implications for the management.
CO19: Apply the understanding of how various information systems like DSS, ESS.
CO 20: Study system development lifecycle.

▶Research Methodology (RM)

CO 21: Familiarity with basics of research.
CO 22: Designing research protocol for research problem.
CO 23: Preparation of the instrument for data collection.
CO 24:Ability of analysis and interpretation of data.

Sem II

▶Introduction to Python Programming (DSC5)

CO 25:Understand Basic Syntax of Python Programming.
CO 26:Demonstrate and implement concepts of object oriented methodology using Python.
CO 27:Develop problem solving skills and their implementation through Python
CO 28:Design Graphical user Interfaces in Python.

▶ Emerging Trends in Web Technology (DSC6)

CO 29:Identify web application development technique through the framework of Web 2.0.
CO 30:Design and develop a modern web application solution using Rich Internet Applications
CO 31:Compare the benefits of jQuery over traditional web techniques
CO 32:Analyze emerging web technologies and applications through Semantic Web

▶ Advance Database Technology (DSC7)

CO 33: Identify the nature of data and need of database for an organization.
CO 34:Design relational database to store organizational data properly.
CO 35:Examine the different emerging database models in an organization.
CO 36:Compare and select appropriate database model for an organization.

▶ Lab Course Based on DSC5 (DSC8)

CO 37:Identifycomponents of Python applicable for data processing.
.CO 38:Implementthe different tools of Python for data processing.

▶Elective 1.Digital Marketing (DSE2.1)

CO 39:Understand concept and significance of Digital Marketing.
CO 40:Demonstrate the Technical Elements of Digital Marketing.
CO 41:Learn contemporary developments in Digital Marketing.
CO 42: Use Google analytics tools for generating various reports.

M.Com IT- II
Sem III

► R – Programming (DSC-9)

CO 43:Understand the basics of Fundamentals of R.
CO 44:Implement the loading, retrieval techniques of data using R.
CO 45:Identify how data is analyzed using R
CO 46: Apply Data visualization techniques using statistic functions in R

► Data Analytics (DSC-10)

CO 47:Explore the fundamental concepts of data analytics
CO 48:Understand ethics regarding privacy, data sharing and decision-making
CO 49:Apply various python elements used in data analytics process
CO 50:Identify various tools Visualize and present the data

► IT Security (DSC-11)

CO 51:Understand the concept and need of IT security
CO 52: Identify different security threats to information systems.
CO 53:Describe security controls used for IS security.
CO 54:Understand provisions in IT Act 2000 and Design Security policy for IT Enabled Organization

► Lab Based on DSC-9(DSC-12)

CO 55: Enable to build programming logic and thereby developing skills in Programming
CO 56:Understand how to organize data and analyze data using real time examples

► Business Process Outsourcing (DSE-3.3)

CO 57: Understand the basic concepts of Business Process Outsourcing
CO 58: Understand the structure of BPO Industry
CO 59: Identify the different services of transaction processing in BPO.
CO 60: Analyze the emerging trends in BPO.

► Research Project (RP)

CO 61: Identify different functional areas in business organization for IT implementation.
CO 62: Analyze the different operations in functional area for effective IT implementation.
CO 63: Find the need of IT framework for implementation of Information System in business organization
CO 64: Prepare Project report suggesting Information System to be implemented in business organization including its need.

Sem IV

► Advance Java (DSC-13)

CO 65: Develop GUI based Java Applications using Swing
CO 67: Understand the concept of JDBC, Servlet and its life cycle.
CO 68: Design and develop JSP applications using JSP tags
CO 69: Apply JDBC Technology to develop the Small Applications using database.

►AI and Management (DSC -14)

CO 70: To understand different problem solving techniques in AI.
CO 71: To Analyze the process of developing Expert System
CO 72:To identify different AI based models used for data analysis
CO 73: To determine the role of AI in management

►Mobile Computing(DSC-15)

CO 74:Understand the building blocks of Mobile Operating Systems
CO 75:Analyze different elements of Android Development Environment
CO 76:Illustrate the structure of Mobile Applications using Android
CO 77:Identify different components used in Mobile Applications using Android

►Data Center Management (DSE-4.3)

CO 78:Understand core concepts of data center and its functionality
CO 79:Illustrate architecture and key elements incorporated in data center.
CO 80:Analyze Risk management process of a data center environment.
CO 81:Evaluate requirements and recommendations for security of data center.

►Research Project (RP)

CO 82: Identify different functional areas in business organization for IT implementation.
CO 83: Analyze the different operations in functional area for effective IT implementation.
CO 84: Find the need of IT framework for implementation of Information System in business organization.
CO 85: Prepare Project report suggesting Information System to be implemented in business organization including its need
CO 86:Design a prototype model for the proposed Information System to be implemented in business organization
CO 87: Specify the Hardware and Software requirements for the implementation of the Information System.

H.O.D.
Department of Commerce (IT)
Rajarshi Chhatrapati Shahu College
Kolhapur

RAJARSHI CHHATRAPATI SHAHU COLLEGE ★ KOLHAPUR

Principal,
Rajarshi Chh. Shahu Coll.
Kolhapur.

Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur

DEPARTMENT OF CHEMISTRY

M.Sc. Analytical Chemistry

POs, PSOs and COs
2024-25

PROGRAMME OUTCOMES (POs)

PO-1:-Demonstrate, solve and an understanding of major concepts in all disciplines of Chemistry.
PO-2:-Solve the problem and also think methodically, independently and draw a logical conclusion.
PO-3:-Employ critical thinking and the scientific knowledge to design, carry out, record and analyze the results of chemical reactions.
PO-4:-Create an awareness of the impact of Chemistry on the environment, society and development outside the scientific community.
PO-5:-Find out the green route for chemical reaction for sustainable development.
PO-6:-To inculcate the scientific temperament in the students and outside the scientific community.
PO-7:-Use modern techniques, decent equipment's and Chemistry Software's.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO-1:- Acquire the knowledge of Chemistry through theory and practical's.
PSO-2:- To explain nomenclature, stereochemistry, structures, reactivity and mechanism of the chemical reactions.
PSO-3 Use modern chemical tools, Models, Chem-draw, Charts and Equipment's.
PSO-4:- Know the structure-activity relationship.
PSO-5:-Find Understand good laboratory practices and safety.
PSO-6:- Make aware and handle the sophisticated instruments/equipment.
PSO-7:- Develop research oriented skills to pursue Ph.D. Programme and specific placements in R & D and synthetic division of chemical industries & Allied Division.
PSO-8:- Discipline specific competitive exams conducted by CSIR – NET, service commission, etc.

PSO-8:- Discipline specific competitive exams conducted by CSIR – NET, service commission, etc.

COURSE OUTCOME (COs)

After successfully completion Chemistry course, the students will be able to;

M.Sc I Semester I (semester-I and semester-II)

CO-1:- The students will know the importance of nuclear chemistry and its applications.
CO-2:- Students will transform from memorization to understanding by programmed exposure to integrated problems involving mechanism, multi- step synthetic planning, and organic spectroscopy
CO-3 Acquire better knowledge of analytical techniques.
CO-4:- Use & handling of sophisticated instruments.

Head
Department of Chemistry

Chairman
POs, PSOs, COs

Principal
Rajarshi Chhatrapati Shahu College,
Kolhapur.

RAJARSHI CHHATRAPATI SHAHU COLLEGE KOLHAPUR

Rayat Shikshan Sanstha's
Rajarshi Chhatrapati Shahu College, Kolhapur
Department of Chemistry
Analytical Chemistry M.Sc II
(2024-25)

PROGRAM OUTCOMES

PO1: Students will have a thorough knowledge in the fundamentals and application of modern chemical and scientific theories including those in all branches of chemical sciences.

PO2: Students will be able to design and carry out scientific experiments as well as accurately record and analyse the results of such experiments.

PO3: Students will be able to use the evidence based comparative chemistry approach for synthesis and analysis of the chemical compounds.

PO4: Students will be skilled in problem solving, critical thinking and analytical reasoning as applied to scientific problems.

PO5: Students will be able to clearly communicate the results of scientific task in oral and written formats. Students will be able to function as a member of an interdisciplinary problem solving team.

PO6: Students will be able to explain the role of Inorganic Chemistry for addressing social, economic, and environmental problems.

PROGRAMME SPECIFIC OUTCOMESPS

O1: The students will be able to get global level research opportunities to pursue Ph.D. programme, targeted approach of competitive Exams such as CSIR-NET/GATE/SET ,discipline specific competitive exams conducted by service commission, etc.

PSO2: The students will be able to get employment opportunities in various industries like petrochemicals, metallurgical, materials and pharmaceutical, etc.

PSO3: Understands the background of Inorganic reaction mechanisms, complex chemical structures, and instrumental methods of chemical analysis, separation techniques and analytical methods of general purpose.

PSO4: Gains complete knowledge about all fundamental aspects of all the elements of chemistry.

M.Sc.Part-II(Sem-III)Analytical Chemistry

ACH301: ADVANCED ANALYTICAL TECHNIQUES

Course Outcomes(COs):

CO1: Develop knowledge of fundamental, instrumentation and working of state of art instrumental analytical techniques, effective use and choice of technique ,written and/oral communication of the concepts of analytical chemistry which will be use fulas analytical chemist and R&D.

CO2:Acquire knowledge of mass spectrometry, type of MS, ionization types and specific practical applications of MS.

CO3:Acquire knowledge of basics of nanochemistry, nanomaterials and nanotechnology and application orientated synthesis and characterization of nanomaterials.

CO4:This course gives wide understanding about the instrumental analytical techniques(SEM,

TEM,EDS,STM,AFM,Raman,XFS,ESR,XPS,AES,SIMSetc.)employedforqualitative and quantitative analysis for contemporary research.

ACH302:Organo Analytical Chemistry

ACH302:Organo Analytical Chemistry

Course Outcomes(COs):

CO1: Students will gain knowledge of the instruments used at the interface of Analytical-Organic chemistry useful for R&D and structural elucidation using UV-Visible IR, 1H & 13C NMR, Mass spectrometry data and interpretation of the same.

CO2: Students will acquire knowledge about the drug, their classification, sources of impurities (chemical, atmospheric and microbial contamination)in pharmaceutical Raw materials and analysis of the same.

CO3: Students will gain knowledge about the conventional and advanced analytical Approaches for analysis of drug, vitamin, body fluid sand clinical samples.

CO4: Students will have an idea of commonly used pesticide and the analysis and also About forensic science and forensic sample analysis.

ACH303:Electroanalytical Techniques in Chemical Analysis

CourseOutcomes(COs):

CO1: Fundamental knowledge of electrochemistry, electrodes, types ofelectrodes, Its construction will lay foundation for the course.

CO2: Students will gain knowledge and skill in electroanalytical techniques like Cyclic voltammetry and its types, polarography, coulometry and dynamic light scattering technique for qualitative and quantitative analysis.

CO3: Students will be familiar with the advanced electrodes used for chemical analysis, liquid-liquid membrane electrodes, enzymes and gas electrodes.

CO4: Students will learn about electrophoretic techniques, advances in Electrophoresis techniques and its analytical applications.

E-ACH304:Environmental Chemical Analysis and Control

CourseOutcomes(COs):

CO1: Students will acquire knowledge about sampling, criteria of good sampling, handling, preservation and storage of the samples, pretreatment and post treatment of samples.

CO2: Students will acquire knowledge of conditions and strategies required During sampling and electrochemical and spectral methods for analysis of environmental samples.

CO3: Students will learn about the air and water pollution, sources of pollution, typical parameters and properties (physical, chemical and biological)to be measure din air and water pollution with relevance To specific case studies.

CO4: Students will be acquainted with organic pollutants and their analysis With special reference to pesticide analysis.

PR-ACH305:AnalyticalChemistry Practical

Course Outcomes(COs):

CO1: The students will acquire hands on training for conducting the representative experiments for the analysis of wide variety of samples of inorganic,organicand Physical approaches by qualitative and quantitative analysis

CO2: Student would learn the sample preparation and characterization for purity and Qualitative and quantitative analysis of samples.

CO3: Students will have good experimental kills for separation and estimation of Amount of metal, metal ions in given samples.

CO4: Students will be acquainted with these parathion and estimation of organic Compounds in given samples.

M.Sc.II(Sem-IV)Analytical Chemistry

ACH401: Modern Separation Methods in Analysis

CourseOutcomes (COs):

CO1: Students will earn about modern separation n and chromatographic used for analysis of different type of samples

CO2: The student will understand instrumentation and mechanism of various separation

techniques.

CO3: Student will acquire knowledge regarding various choice of instrument and detectors To be used for analysis depending on the sample and matrix.

CO4: Student will learn fundamentals of extractive chromatography, types of extraction techniques, advances in extraction methods and their hyphenations with Chromatography leading to addressing challenging problems in analytical chemistry.

ACH402: Organic Industrial Analysis

Course Outcomes (COs):

CO1: Acquire knowledge of handling and investigating the characteristics of the oils, fats, detergents and soap samples and analysis of the same providing opportunity in cosmetic, pharmaceuticals, dyes and polymers industries.

CO2:Student will gain knowledge and importance of food quality, probe for food adulteration and adulterants, food preservative, food flavors and analysis of their components.

CO3: Students will also gain knowledge about the animal food stuff and the additives added in the animal food stuff as antibiotics, dietary supplements and growth promoting drugs, preservatives etc. and analysis of the same.

CO4: Student will learn about the analysis of cosmetics, face powder, hair dyes and hair care products, types of cosmetics, precautionary measures and composition of the cosmetics and specific role softening redients. Will acquire knowledge about the paints, pigments

and petroleum products, composition and analysis of the same using conventional and instrumental techniques

ACH403:Advanced Methods in Chemical Analysis

Course Outcomes(COs):

CO1: Students will be skilled in the techniques like fluorescence, phosphorescence, types of quenching, FRET and applications of the same in Analytical Chemistry and for addressing research problems.

CO2: Students will gain knowledge of the kinetic methods of analysis supporting the analysis and data procured in research.

CO3: The students will acquire the knowledge of advanced method of chemical ana XPS,XRF, fluorescence and phosphorescence spectroscopy which will be beneficia research.

CO4: Students will acquire knowledge of identifying types of plastic and will also be able to and determination of metallic impurities in plastics.

E-ACH404:Applied Analytical Chemistry

Course Outcomes(COs):

CO1: The students will acquire knowledge of analysis of metals, alloys, minerals and Ores commonly used in the industry.

CO2: The students will be acquainted with the analysis of real samples like cement, plaster of Paris, different commercial ores, soil composition, soil fertility,

Fertilizer set cusing conventional and instrumental methods of analysis.

CO3: Students will also gain the knowledge of analysis of commercial materials, Explosives, polymers, resins, rubber, luminescent paints, lubricant sand adhesives.

CO4: These would offer opportunity to the students to get employment in industries For Quality assurance and quality control (QA-QC)of the product.

RAYAT SHIKSHAN SANSTHA'S
RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR
DEPARTMENT OF STATISTICS
M.Sc. Statistics

Programme Outcomes, Programme Specific Outcome and Course Outcomes
2024-25

Program Outcomes (POs)

Post Graduates of the M.Sc. Statistics programme will be able to:

1. Explain theoretical concepts in Statistics for

   a. Choosing and applying the most appropriate statistical merhods/techniques for collecting and analyzing the data

   b. Interpreting the results of analyses in relation to given real life situations.

2. Have deep understanding and ability to explain the inter-connections between various sub disciplines and apt use of these inter-connections in modeling real life problems.

3. Have ability to recognize the importance of statistical thinking and training, and to acquire the state-of-the-art developments in Statistics independently from available resources.

4. Develop expertise in data management and analysis using widely used statistical software.

Programme Specific Outcomes (PSOs)

After cornpletion of M.sc. Statistics programme the student will be able to:

1. Develop stochastic models for studying, analyzing, interpreting and forecasting real life phenomenon in diverse disciplines.

2. Effectively use n€cessary statistical software and computing environment including R, MSEXCEL among others.

3. Have the versatility to work effectively in a broad range of establishments (including R&D sectors, analytics, scientific laboratories, govem{nen! financial, health, educational) or to continue for higher education, and exhibit ethical and professional behavior in team work.

Head ,
Department of Statistics

Prof.Dr.P.B. Piste
Incharge(POs,PSOs,Cos)

Principal,
R.C.Shahu College,Kolhapur

Course Outcomes (CO'S)

Semester I

Paper 1 DISTRIBUTION THEORY

CO 1. Describe the concept of univatiate and multivariate random variables and related entities

CO 2. Explain the nature of various probability distributions and perform related computations.

CO 3. Describe the probability models for multivariate data and perform related computations

CO 4. Define and describe in details non-central sampling distribution and able to perform their applications, able to perform computations related to order statistics

Paper II ESTIMATION THEORY

CO 5. Explain the principles of data reduction and obtain sufficient, minimal sufficient, and complete statistics for various families of distributions.

CO 6. Compute the UMVUE of parameters of various distributions and determine Cramer- Rao and Chapman Robbins-Kiefer lower bounds for the variances of unbiased estimators.

CO 7. Explain how to apply parametric and nonparametric methods to obtain estimators.

CO 8. Compute the CAN and BAN estimators.

Paper III STATISTICAL COMPUTING

CO 9. Explain how to perform data organization, data manipulation, statistical and mathematical computations, and data analysis using MSEXCEL.

CO 10. Describe how to perform data organization, data manipulation, statistical and mathematical computations, and data analysis using R.

Paper IV RESEARCH METHODOLOGY IN STATISTICS

CO 11. Explain the concept of research, research process, and research ethics.

CO 12. Describe how to apply various sampling methods for data collection and estimate the parameters.

CO 13. Explain the concept of simulation and able to simulate real life processes

CO 14. Compute bias and standard error of an estimator using resampling techniques and apply, numerical methods to solve systems of linear equations, to obtain the roots of a nonlinear equation, and to solve definite integrals.

Paper V STATISTICAL MATHEMATICS

CO 15. Explain the vector space, its dimension, and linear dependence/independence of vectors, and able to perform relation operations

CO 16. Describe the matrix theory and perform matrix operations

CO 17. Explain in detail sequences and series of real numbers and their convergence

CO18. Describe the concept of real valued function, continuity of functions, convergence of series of

functions, integration of functions, and obtain optima of a function.

Semester II

Paper VI LINEAR MODELS AND REGRESSION ANALYSIS

CO 19. Describe the concept of general linear model and associated inferential procedures.

CO 20.Explain in details the multiple linear regression models

CO 21. Explain how to identify the problems in developing multiple linear regression models and apply remedies.

CO 22. Describe the generalized linear models and apply them for analyzing real data.

Paper VII THEORY OF TESTING OF HYPOTHESES

CO 23. Describe the concept of testing of hypothesis, test statistic, critical regions, size and power of a test.

CO 24. Derive and apply MP test, UMP test, UMPU test, similar tests and a test with Neyman structure.

CO 25. Construct and interpret different interval estimates of parameters.

CO 26. Develop and apply large sample tests.

Paper VIII STATISTICAL PROGRAMMING USING PYTHON

CO 27. Explain how to develop programs in Python.

CO 28. Describe how to perform data organization, data manipulation, statistical and mathematical computations, and data analysis using Python.

Paper IX PROBABILITY THEORY

CO 29. Explain the concept of sets and events, field, measurable functions, measure space, random variable.

CO 30. Describe the concept of probability space, probability measure, distribution function, moments and expectation, convergence of random variables

CO 31. Define the concept of independence of events and 0-1 laws.

CO 32. Explain in detail and how to apply characteristic function, law of large numbers and central limit theorems.

Semester III

Paper X STOCHASTIC PROCESSES

CO 33. Explain in detail how to identify appropriate stochastic process model for a given real life process.

CO 34. Describe how to specify a given discrete time Markov chain in terms of a transition probability matrix and a transition diagram, and calculate higher step transition probabilities and limiting probabilities.

CO 35. Explain in detail analyses discrete state space continuous time Markov chains and their practical applications

CO 36. Describe the Galton-Watson BinaryBranching process and understand the fundamental elements of Queuing models

Paper XI THEORY AND PRACTICE OF MACHINE LEARNING.

CO 37. Explain supervised learning and construct classifiers namely, decision tree, k-nearest neighbour(s), logistic regression, naïve Bayes, Bayesian Belief Network

CO 38. Compare different classifiers and employ techniques to improve their performance.

CO 39. Explain the use Artificial Neural Network and Support Vector Machine for classification and prediction.

CO 40. Describe how to apply clustering techniques and generate association rules using apriori algorithm.

Paper XII MULTIVARIATE ANALYSIS

CO 41. Explain in detail how to perform exploratory multivariate data analysis, understand and apply discrimination and classification techniques and apply hierarchical and non-hierarchical clustering techniques

CO 42. Describe how to understand and apply the Canonical Correlation Analysis, principal component analysis and factor analysis.

Paper XIII DESIGN AND ANALYSIS OF EXPERIMENTS

CO 43. Explain the fundamentals of experimental design.

CO 44. Describe in detail how to design and analyze a general full factorial experiment with more emphasis on two-level and three-level full factorial experiments.

CO 45. Explain in detail how to design and analyze two-level and three-level fractional factorial experiments.

CO 46. Describe in detail how to Implement advanced experimental techniques such as Response Surface Methodology and Robust Parameter Design.

Semester IV

Paper XIV BIOSTATISTICS

CO 47. Explain the need, ethics, and various concepts in clinical trials.

CO 48. Describe how to design and perform various phases of clinical trials.

CO 49. Explain the analyze Phase I-III bio-equivalence trials, case-control and cohort designs.

CO 50. Derive the concept of censoring, various types of censoring, and perform inference about survival function.

Paper XV TIME SERIES ANALYSIS

CO 51. Explain how to understand the time series; understand the concept of stationarity to the analysis

of time series data in various contexts such as actuarial studies, climatology, economics, finance, geography, meteorology, political science, and sociology.

CO 52. Describe in detail how to identify and isolate non deterministic components of observed time series; learn to translate an observed non-stationary series to stationary time series using an appropriate transformation.

CO 53. Develop the model, estimate, interpret and forecast observed time series through ARMA, ARIMA and SARIMA approach and Perform residual analysis for checking model adequacy.

CO 54. Describe how to learn basics of time dependent volatility in time series, basics of ARCH and GARCH time series heteroscedastic models and basic of multivariate time series and its modeling

Paper XVI STATISTICAL QUALITY CONTROL

CO 55. Explain in detail how to apply Quality Improvement Tools and Shewhart Control Charts.

CO 56. Describe and explain how to apply Advanced Control Charts.

CO 57. Explain the Perform Process Capability Analysis and apply Six Sigma Methodology.

CO 58. Describe and Explain how to design and apply Acceptance Sampling Plans.