Maratha VidyaPrasarak Samaj's

Arts, Commerce and Science College, Taharabad.

Tal- Baglan, Dist-Nashik Pin Code: - 423302

Program Outcomes, Course Outcomes & Program Specific Outcomes.

Academic year 2023-24

Program Outcomes, Program Specific Outcomes and Course specific Outcomes

2023-24

Department of Geography

Program Outcome: B.A. (Geography)	
1.	❖ To articulate the theories, philosophies, and concepts in the discipline of geography, including unifying themes of spatial patterns and structures, the interrelationship between people and places, and the interactions between nature and society.
2.	❖ To explain and distinguish differences among the various methodologies usedin geographic research and analysis.
3.	❖ To acquire, analyze, evaluate, and interpret geographic data and/or research.
4	❖ To communicate geographic data, theories, philosophies, and concepts in oral,written, and visual forms, with ethical engagement and respect for diversity of individuals, groups, and cultures.
5	❖ To identify and assess how geographic concepts apply in the workplace and in everyday life to solve real-world problems.

Course Outcomes of B.A. (Geography)

Class	Course title & Code	Course Outcome
FYBA	**Physical geography. (Gg.110 A)**	To introduce the students to the basic concepts in Physical geography. To introduce latest concept in Physical geography To acquaint the students with the utility and application of Physical geography in different regions and environment. To make the students aware about Earth system (Lithosphere, Atmosphere, Biosphere and Hydrosphere)
FYBA	**Human geography. (Gg.110 B)**	To introduce the students to the basic concepts in Human geography. To introduce latest concept in Human geography To acquaint the students with the utility and application of Human geography in different regions and environment. To make the students aware about Elements And Study Area of Human Geography (Population, Settlement, and Agriculture)
SYBA	**Environment Geography- I, Gg.210 (A) G2**	❖ To create the awareness about dynamic environment among the student. ❖ To acquaint the students with fundamental concepts of environment geography for development in different areas.

		▯ The students should be able to integrate various factors of Environment and dynamic aspect of Environmental geography. ▯ To make aware the students about the problems of environment , their utilization and conservation in the view of sustainable development
SYBA	**Environment Geography-II,Gg.210 (B)** **G2**	▯ To create awareness about dynamic environment among the students. ▯ To acquaint students with the fundamental concepts of Environment Geography. ▯ To acquaint students about the past, presents and future utility and potentials of natural resources. ▯ To make aware students about the problems of environment, its utilization and conservation in the view of sustainable development.
SYBA	**Geography of Maharashtra, Gg.220(A)** **S1**	▯ To acquaint students with Geography of our State. ▯ To make students aware of the magnitude of problems and prospects in Maharashtra. ▯ To help students understand the inter relationship between the subject and the society. ▯ To help students understand the recent trends in regional studies
SYBA	**Geography of Maharashtra, Gg.220(B)** **S1**	▯ To make students aware about the Agriculture problems and prospects of Maharashtra. ▯ To understand the population distribution and settlement patternin Maharashtra. ▯ To understand the concept of rural development. ▯ To understand the prospectus in Tourism activity in Maharashtra and the role of MTDC and Role of MIDC in industrial development in rural area of Maharashtra
SYBA	**Scale and Map Projection,** **Gg. 201 (A)** **S2**	▯ To introduce the basic concepts in Practical Geography ▯ To enable students to use various Scales and Projection Techniques in Geography. ▯ To acquaint students with the utility of various Projections in Geographical knowledge. ▯ To explain the elementary and essential principles of practicalwork in Geography. ▯ To develop practical skill and use of map scale and projection. ▯ To make students aware of the new techniques, accuracy and skills of map making

SYBA	**Cartographic Techniques, Surveying and Excursion / Village /Project Report** **Gg. 201 (B)**	❖ To introduce the students to the basic and contemporary conceptsin Cartography. ❖ To acquaint the students with the utility and applications of various Cartographic Techniques. ❖ To introduce the latest concepts regarding the modern cartography in the field of Geography.

	S2	❖ To explain the elementary and essential principles of practical work in Geography. ❖ To develop practical knowledge and application of cartographical techniques. ❖ To make students aware of the new techniques, accuracy and skills of Map Making.
SYBA	**APPLIED COURSE OF DISASTER MANAGEMENT** **SEC – A Semester -III**	To introduce basic concepts and fundamental structure of Disaster Management (DM). To inculcate critical thinking and problem-solving abilities on disaster management. To enable students to assess the situation and design plan for Disaster management
SYBA	**APPLIED COURSE OF Travel &** **TourismSEC – B** **Semester -IV**	❖ To develop basic framework to understand the various elements of tourism management. ❖ To evaluate the role of transport in travel and tourism industry. ❖ To develop the skills to arrange, manage and implement various types of tours.
TYBA	**HUMAN GEOGRAP HYGg. 310 G3**	To acquaint the students with the nature of man-environment relationship and human capability. To adopt and modify the environment under its varied conditions from primitive life style to the modern living; To identify and understand environment and population in terms of their quality and spatial distribution pattern. To comprehend the contemporary issues facing the global community.
TYBA	**AGRICULTURAL GEOGRAPHY** **Gg-320(S-3)**	❖ To Introduce students Agricultural activities and its relation with Geography. ❖ To Familiarize the students with new modern technical methods and their applications in Agricultural activities. ❖ To enable students to apply Previously knowledge in Problems and Prospects in agriculture
TYBA	**Techniques of SpatialAnalysis** **Gg. 301(S-4)**	❖ To Introduce the Students with SOI Toposheets and to acquire the Knowledge of Toposheet ❖ Reading/Interpretation. ❖ To familiarize the students with the weather instruments and their applications in ❖ Geographical phenomena. ❖ To acquaint the students with IMD weather maps and to gain the knowledge of weather map ❖ Reading / interpretation. ❖ To train the students in elementary statistics as an essential part of geography. ❖ To awareness about GIS among the students

Program Outcomes, Program Specific Outcomes, Course specific Outcomes

Department of English

Program Outcome: B.A. (English)	
1.	To prepare students to go for detailed study and understanding of literature and language.
2.	To educate the student in both the artistry and the utility of the English Language through the study of literature.
3.	To make students aware of the different communicative skills and make them effectively communicate in written and spoken modes.
4	To provide students with the critical faculties necessary in an academic environment, while at job and in an increasingly complex and interdependent world.
5	Students should be able to identify, analyze, interpret and describe the critical ideas, values, and themes that appear in literary and cultural texts and understand the way these ideas, values, and themes inform and impact culture and society, both now and in the past.

Program Specific Outcome: B.A. (English)	
1.	To prepare students to go for detailed study and understanding of literature and language.
2.	To educate the student in both the artistry and the utility of the English Language through the study of literature.
3.	To make students aware of the different communicative skills and make them effectively communicate in written and spoken modes.
4	To provide students with the critical faculties necessary in an academic environment, while at job and in an increasingly complex and interdependent world.
5	Students should be able to identify, analyze, interpret and describe the critical ideas, values, and themes that appear in literary and cultural texts and understand the way these ideas, values, and themes inform and impact culture and society, both now and in the past.

Course Outcomes of B.A. (English)

Class	Course title & Code	Course Outcome

FYBA	Compulsory English	• To expose students to the best examples of prose and poetry in English so that they realize the beauty and communicative power of English • To instill human values and develop the character of students as responsible citizens of the world • To develop the ability to appreciate ideas and think critically • To enhance employability of the students by developing their linguistic competence and communicative skills • To revise and reinforce structures already learnt in the previous stages of learning.
FYBA	Optional English	• To prepare students to go for detailed study and understanding of literature and language. • To expose students to the basics of literature and language and develop an integrated view about language and literature in them. • To acquaint them with minor forms of literature in English and help them to appreciate the creative use of language in literature. • To introduce them to the basics of phonology of English so that they can pronounce better and speak English correctly. • To enhance the job potential of students by improving their language skills
SYBA	Compulsory English	• To expose students to the best examples of literature in English and to contribute to their emotional quotient as well as independent thinking. • To instill universal human values through best pieces of literature in English • To develop effective communication skills by developing ability to use right words in the right context. • To enhance employability of the students by developing their basic soft skills • To revise and reinforce the learning of some important areas of grammar for better linguistic competence.
SYBA	General English –G2- Advanced Study of English Language	• To familiarize students with the various components of language. • To develop overall linguistic competence of the students. • To introduce students to some advanced areas of language study. • To prepare students to go for detailed study and understanding of language. • To enhance communicative skills of students by developing insight into the working of language
SYBA	Special English-S1- Appreciating Drama	• To introduce Drama as a major form of literature • To introduce minor forms of Drama • To acquaint and enlighten students regarding the literary and the performing dimensions of drama

		• To acquaint and familiarize the students with the elements and the types of Drama • To encourage students to make a detailed study of a few sample masterpieces of English Drama from different parts of the world • To develop interest among the students to appreciate and analyze drama independently • To enhance students' awareness regarding aesthetics of Drama and to empower them to evaluate drama independently
SYBA	Special English- S2- Appreciating Poetry	• To acquaint students with the terminology in poetry criticism (i.e. the terms used in appreciation and critical analysis of poems). • To encourage students to make a detailed study of a few sample masterpieces of English poetry. • To enhance student's awareness in the aesthetics of poetry and to empower them to read, appreciate and critically evaluate poetry independently.
SYBA	Mastering Communication Skills	• Enhancing the skill of using English for everyday communication • To acquaint the students with the verbal and nonverbal communication • To create opportunities to access exposure of speaking in various contexts • To acquaint and familiarize the students with soft skills • To develop interest among the students to interact in English
TYBA	Compulsory English	• To introduce students to the best uses of language in literature. • To familiarize students with the communicative power of English. • To enable students to become competent users of English in real life situations. • To expose students to varied cultural experiences through literature. • To contribute to their overall personality development by improving their communicative and soft skills.
TYBA	General English- G3- SEC- Enhancing Employability Skills	• Enhancing the skill of using English for everyday communication • To acquaint the students with the verbal and nonverbal communication • To create opportunities to access exposure of speaking in various contexts • To acquaint and familiarize the students with soft skills • To develop interest among the students to interact in English

TYBA	Special English-S3-Appreciating Novel	• To introduce students to the basics of novel as a literary form. • To expose student s to the historical development and nature of novel. • To make students aware of different types and aspects of novel. • To develop literary sensibility and sense of cultural diversity in students. • To expose students to some of the best examples of novel.
TYBA	Special English-S4- Introduction to Literary Criticism	• To introduce students to the basics of literary criticism. • To make them aware of the nature and historical development of criticism. • To make them familiar with the significant critical approaches and terms. • To encourage students to interpret literary works in the light of the critical approaches • To develop aptitude for critical analysis.
TYBA	SEC-Mastering Life Skills and Life Values	• Enhancing the skill of using English for everyday communication • To acquaint the students with the verbal and nonverbal communication • To create opportunities to access exposure of speaking in various contexts • To acquaint and familiarize the students with soft skills • To develop interest among the students to interact in English

Course Outcomes of B.Com. (Compulsory English)

Class	Course title & Code	Course Outcome
FYB.Com	Compulsory English	• To offer relevant and practically helpful pieces of prose and poetry to students so that they not only get to know the beauty and communicative power of English but also its practical application • To expose students to a variety of topics that dominate the contemporary socioeconomic and cultural life • To develop oral and written communication skills of the students so that their employability enhances • To develop overall linguistic competence and communicative skills of students

Course Outcomes of B.Sc. (English)

Class	Course title &	Course Outcome

	Code	
SYB.Sc	Optional English	• To introduce the use of English in multimedia • To acquaint the students with the language skills in multivalent contexts • To acquaint and enlighten students regarding the speaking skill in various contexts • To acquaint and familiarize the students with advanced writing skills in different contexts • To acquaint and familiarize the students with soft skills • To minimize the gap between the existing communicative skills of the students and the skills they require at professional level • To develop competence among the students to appreciate and analyze short stories and poetry

DEPARTMENT OF ENGLISH

PROGRAMME OBJECTIVES

BA- English

- To prepare students to go for detailed study and understanding of literature and language.
- To educate the student in both the artistry and the utility of the English Language through the study of literature.
- To make students aware of the different communicative skills and make them effectively communicate in written and spoken modes.
- To provide students with the critical faculties necessary in an academic environment, while at job and in an increasingly complex and interdependent world.
- Students should be able to identify, analyze, interpret and describe the critical ideas, values, and themes that appear in literary and cultural texts and understand the way these ideas, values, and themes inform and impact culture and society, both now and in the past.

B.Com- Opt- English

- To offer relevant and practically helpful pieces of prose and poetry to students so that they not only get to know the beauty and communicative power of English but also its practical application
- To expose students to a variety of topics that dominate the contemporary socioeconomic and cultural life
- To develop oral and written communication skills of the students so that their employability enhances
- To develop overall linguistic competence and communicative skills of students

B.Sc.- Opt- English

- To introduce the use of English in multimedia
- To acquaint the students with the language skills in multivalent contexts
- To acquaint and enlighten students regarding the speaking skill in various contexts
- To acquaint and familiarize the students with advanced writing skills in different contexts
- To acquaint and familiarize the students with soft skills
- To minimize the gap between the existing communicative skills of the students and the skills they require at professional level
- To develop competence among the students to appreciate and analyze short stories and poetry

COURSE OBJECTIVES:

FYBA- Compulsory English

- To expose students to the best examples of prose and poetry in English so that they realize the beauty and communicative power of English
- To instill human values and develop the character of students as responsible citizens of the world
- To develop the ability to appreciate ideas and think critically
- To enhance employability of the students by developing their linguistic competence and communicative skills
- To revise and reinforce structures already learnt in the previous stages of learning.

FYBA- Optional English

- To prepare students to go for detailed study and understanding of literature and language.
- To expose students to the basics of literature and language and develop an integrated view about language and literature in them.
- To acquaint them with minor forms of literature in English and help them to appreciate the creative use of language in literature.
- To introduce them to the basics of phonology of English so that they can pronounce better and speak English correctly.
- To enhance the job potential of students by improving their language skills.

FYB.Com Compulsory English

- To offer relevant and practically helpful pieces of prose and poetry to students so that they not only get to know the beauty and communicative power of English but also its practical application
- To expose students to a variety of topics that dominate the contemporary socioeconomic and cultural life

- To develop oral and written communication skills of the students so that their employability enhances
- To develop overall linguistic competence and communicative skills of students

SYBA- Compulsory English

- To expose students to the best examples of literature in English and to contribute to their emotional quotient as well as independent thinking.
- To instill universal human values through best pieces of literature in English
- To develop effective communication skills by developing ability to use right words in the right context.
- To enhance employability of the students by developing their basic soft skills
- To revise and reinforce the learning of some important areas of grammar for better linguistic competence.

SYBA- General English –G2- Advanced Study of English Language

- To familiarize students with the various components of language.
- To develop overall linguistic competence of the students.
- To introduce students to some advanced areas of language study.
- To prepare students to go for detailed study and understanding of language.
- To enhance communicative skills of students by developing insight into the working of language.

SYBA- Special English- S1- Appreciating Drama

- To introduce Drama as a major form of literature
- To introduce minor forms of Drama
- To acquaint and enlighten students regarding the literary and the performing dimensions of drama
- To acquaint and familiarize the students with the elements and the types of Drama
- To encourage students to make a detailed study of a few sample masterpieces of English Drama from different parts of the world
- To develop interest among the students to appreciate and analyze drama independently
- To enhance students' awareness regarding aesthetics of Drama and to empower them to evaluate drama independently

SYBA- Special English- S2- Appreciating Poetry

- To acquaint students with the terminology in poetry criticism (i.e. the terms used in appreciation and critical analysis of poems).
- To encourage students to make a detailed study of a few sample masterpieces of English poetry.
- To enhance student’s awareness in the aesthetics of poetry and to empower them to read, appreciate and critically evaluate poetry independently..

SYBA- Mastering Communication Skills

- Enhancing the skill of using English for everyday communication
- To acquaint the students with the verbal and nonverbal communication
- To create opportunities to access exposure of speaking in various contexts
- To acquaint and familiarize the students with soft skills
- To develop interest among the students to interact in English

SYB.Sc- Optional English

- To introduce the use of English in multimedia
- To acquaint the students with the language skills in multivalent contexts
- To acquaint and enlighten students regarding the speaking skill in various contexts
- To acquaint and familiarize the students with advanced writing skills in different contexts
- To acquaint and familiarize the students with soft skills
- To minimize the gap between the existing communicative skills of the students and the skills they require at professional level
- To develop competence among the students to appreciate and analyze short stories and poetry

TYBA- Compulsory English

- To introduce students to the best uses of language in literature.
- To familiarize students with the communicative power of English.
- To enable students to become competent users of English in real life situations.
- To expose students to varied cultural experiences through literature.
- To contribute to their overall personality development by improving their communicative and soft skills.

TYBA- General English- G3- Enhancing Employability Skills

- Enhancing the skill of using English for everyday communication
- To acquaint the students with the verbal and nonverbal communication
- To create opportunities to access exposure of speaking in various contexts
- To acquaint and familiarize the students with soft skills
- To develop interest among the students to interact in English

TYBA- Special English- S3- Appreciating Novel

- To introduce students to the basics of novel as a literary form.
- To expose students to the historical development and nature of novel.
- To make students aware of different types and aspects of novel.
- To develop literary sensibility and sense of cultural diversity in students.
- To expose students to some of the best examples of novel.

TYBA- Special English- S4- Introduction to Literary Criticism

- To introduce students to the basics of literary criticism.
- To make them aware of the nature and historical development of criticism.
- To make them familiar with the significant critical approaches and terms.
- To encourage students to interpret literary works in the light of the critical approaches
- To develop aptitude for critical analysis.

TYBA- Mastering Life Skills and Life Values

- Enhancing the skill of using English for everyday communication
- To acquaint the students with the verbal and nonverbal communication
- To create opportunities to access exposure of speaking in various contexts
- To acquaint and familiarize the students with soft skills
- To develop interest among the students to interact in English

Program Outcomes, Program Specific Outcomes, Course specific Outcomes

Department of Economics

Program Outcome	
	Program Outcomes of all the programs are identified at the National Level by the concerned accrediting agency. Before this process, the college inculcates certain qualities among the stakeholders.
	The Programme outcomes help the stakeholders to manage the resources effectively to the maximum extent. For every degree program of Economics,
	specific outcomes are previously defined by the College. This enables the stakeholders to identify and analyse complex problems. They also learn to design solutions for problems that meet the specified needs with appropriate consideration for the cultural, societal and environmental well-being
	The students learn to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to provide valid conclusions. This is followed by modern tool usage, which they select and apply with an understanding of the limitations
	The students apply reasoning and understand the impact of the solutions in societal and environmental context. They learn to apply ethical principles and become committed to professional ethics and their responsibilities. They realize that individual and team work function effectively in multidisciplinary settings
	They learn to communicate effectively with society and they are able to comprehend and write effective reports and design documentation. They also make effective presentations and give and receive clear instructions. They understand the importance of critical thinking, social interaction, effective citizenship, ethics and environment and sustainability. Ultimately, they acquire the ability to engage in independent and life-long learning.
	The students understand the nature and basic concepts of Economics. They analyze the relationship between human beings and subject. Based on these outcomes, the students learn goal-setting, problem solving techniques and decision making.
	The college evaluates the students as Class Toppers, University Rank Holders and Best Outgoing Students. They are recognized and awarded during the Annual Day function by giving them Certificates and Mementos. Gold Medals are awarded to the

	University First Rank holders and Silver Medals to the remaining rank holders

Course Outcome: Class Course Course Outcomes

FYBA (sem-I & II) Indian Economic Environment :

- Students will be familiarized about background of Indian economic environment
- Ability to compare the India economic environment with international economic environment will be genrated
- Students will be awared about the banking system
- Students will get a primary introduction of different sector of Indian economy such as agri, industry and service.
- Awareness about digital economy will be generated and they will be ready for the digital India

SYBA (sem-I & II) Financial System, G-2 :

- awareness among students about Financial System in India.
- Students will be introduced with role of RBI in the Indian economy.
- Nature and function of cooperative and rural banking will be understood by students.
- Clear understanding of financial market with respects to Indian and international context.

SYBA Micro Economics, S1 :

- Students will be able to understand the behavior of different economic agents, markets, consumers and price fluctuations.
- Understanding of different cost and revenue concepts will be given to students.
- To understand linearity and non-linearity of micro economic variables.
- Knowledge of different welfare concepts and their importance into social context will be imparted into students through this course.

SYBA (sem-I & II) Macro Economics, S2 :

- Understanding of macro economics and its different components.
- Critical analysis of study different ideological schools and their theories of macro-economic development.

- Understanding of Saving and investment functions will be injected into their knowledge
- Different theories related to money will be studied by students.
- Understanding different policies in macro terms

SYBA (sem-I & II) Basic Concept of Research Methodology, SEC :

- Understanding of Basic Concept of Research Methodology.
- Research Design, Data Collection, Skill Development Activities. Data Analysis, Research Report.

T.Y.B.A. (sem-I & II) Indian Economic Development (G3) :

- Introduction of the concept like indicators of growth & development
- Students will study different development theories
- Students will study study different growth modeless
- Importance of economic Planning, & importance of foreign capital will be studied by students.

T.Y.B.A. (sem-I & II) International Economics (S3) :

- Understanding nature scope & Importance of international Economics
- Understanding of theories of international trade
- Understanding the role of international financial Institution
- Importance of foreign capital into the economy will be studied by students

T.Y.B.A. (sem-I & II) Public Finance (S4) :

- Understanding of the role of government in economy
- Various expenditure & revenue process in the public finance will be analyzed
- Information of fiscal policy in public finance and its importance will enhance student's macro level thinking Study of the theories of social welfare

TYBA (sem-I & II) Business Management (SEC) :

- Understanding of the Management of Business,
- Business Planning and decision making.

- Leadership Skills- Ability to work in teams at the same time, ability to slow leadership qualities.

F.Y.B.Com (sem-I & II) Business Economics(Micro) :

- Meaning, nature & scope of business economics will be given to all students.
- Understanding of basic concept of micro economics
- Students will learn to analyze demand & supply its determinants
- Analysis of market structure & pricing under the same
- Remunerative structure of different factors of production will be studied.

S.Y.B.com (Sem-I & II) Business Economics(Macro) :

- Information over Meaning nature & scope of macro economics. Studentswill learn to calculate National income & its importance.
- Use of money its functions and value of its value
- Analysis of trade cycles and their occurrence after certain specified period will be studied by students.
- Learning the evolution of different Employment theories. Information Public finance and its policy approached will be given to students

T.Y.B.Com(sem-I & II) Indian & Global Economic Development :

- Basic characteristics of Indian economy as an emerging economy will be discussed by students in the class
- Place and role of Agriculture & Industries sector in Indian economy will improve their knowledge about the Indian economy
- Critical analysis of the reforms like liberalization, privatization globalization & their challenges
- Study of foreign capital & balance of Payment will enlace students' knowledge about the international economics.

Department of Political Science

Program Outcomes, Program Specific Outcomes, Course specific Outcomes

Program Outcome: B.A. (Political Science)	
1.	Take informed actions after identifying the assumption that frame our thinking and action, checking out the degree to which these assumptions are accurate & valid looking at our ideas & decisions (intellectual, organizational & personal) from different perspectives.
2.	In depth knowledge of Indian Political system, Political thinkers, administrative system.
3.	Development knowledge of administrative studies with special reference to Indian administrative structures & practices.
4.	Critically evaluate the social, economic and political variables for a proper understanding of plurality of Indian society.
5.	Build overall consciousness regarding national political history, international relations & present Indian & western political thinkers.
6.	Understand the issues of environmental contexts & sustainable development.

Program Specific Outcome: B.A. (Political Science)	
1.	Knowledge about Political system of the nation
2.	Study of National & International Political Affair
3.	Understanding the government mechanism, its function duties & responsibilities.
4.	Getting knowledge of Constitution of India
5.	Creating appropriate & efficient political leader.

Course Outcomes of B.A. (Political Science)

Class	Course title & Code	Course Outcome
FYBA	Introduction to Indian Constitutions 11161A, (11162A)	• Recognize background & features of Indian constitution. • Explain Fundamental Rights, Duties & Directive principle of state Policy. • Describe Federal structure of India & Issues related to federal system. • Explain structure of Central, State government bodies. • Knowing about the problems & challenges in Indian Politics.
FYBA	An Introduce to Public Administration 11441 (11442)	• Introduce the students to the discipline of Public Administration. • Acquaint the principles & types of Administration. • Study of the mechanism for the solution of problems in public administration.
FYBA	History of Civilization: Indian Civilization & Heritage 11251, (11252)	• To increase a sense of awareness and affection towards the nation & its historic heritage among the students. • Knowledge about the Indian culture, Civilization & its heritage with its sources like Archeological, Numismatic & Epigraphic & Literary from pre-historic period. • Discuss the importance & methods of conservation of Historical Heritage.
SYBA	An Introduction to Political Science 23163 (24164)	• Knowing about the Political Science. • Approaches to study Political Science • Knowledge about basic concept & values in Political Science
SYBA	Western Political Thoughts 23161 (24161)	• Getting information about western thinkers and their political thoughts. • The great diversity of social contexts and philosophical visions. • The history of political thought as a series of critical, interconnected and open-ended conversations about the ends and means of the good life.
SYBA	Political Journalism 23162 (24162)	• To Aquent knowledge of Political Journalism. • Complex relationship between the communication, media and power politics. • Critical appraisal of practices of political image management, campaigns, propaganda and

		censorship. • Indian context of political Journalism
TYBA	Local Self-Government in Maharashtra (3167)	• To introduce the students to the structure of Local Self Government of Maharashtra. • To make students aware of the various Local Self Institutions, their functions, compositions and importance. • To identity the role of Local Government and Local Leadership in development
TYBA	Public Administration (3168)	• An Introduction to Public Administration. • The essence of Public Administration lies in its effectiveness in translating the governing philosophy into programmers, policies and activities and making it a part of community living. • Knowing personnel public administration in its historical context thereby proceeding to highlight several of its categories, which have developed administrative salience and capabilities to deal with the process of change. • The recent developments and particularly the emergence of New Public Administrations are incorporated within the larger paradigm of democratic legitimacy. • Knowledge of legislative and judicial control over administration.
TYBA	International Politics (3169)	• Knowledge with concepts and dimensions of international relations and makes an analysis of different theories highlighting the major debates and differences within the different theoretical paradigms. • The dominant theories of power and the question of equity and justice, the different aspects of balance of power leading to the present situation of a unipolar world are included. • Getting various aspects of conflict and conflict resolution, collective security and in the specificity of the long period of the post Second World War phase of the Cold War, of Détente and Deterrence leading to theories of rough parity in armaments

Department of Commerce

Programme Outcome, Programme Specific Outcomes, Course SpecificOutcomes

Program Outcome:-B.Com.

Program Outcome:B.Com.	
1.	This program could provide Industries, Banking Sectors, Insurance Companies, Financing companies, Transport Agencies, Warehousing etc., well trained professionals to meet the requirements
2.	After completing graduation, students can get skills regarding various aspects like Marketing Manager, Selling Manager, over all Administration abilities of the Company.
3.	Capability of the students to make decisions at personal & professional level will increase after completion of this course.
4.	Students can independently start up their own Business.
5.	Students can get thorough knowledge of finance and commerce.
6.	The knowledge of different specializations in Accounting, costing, banking and finance with the practical exposure helps the students to stand in organization.

Program Specific Outcome	
1.	The students can get the knowledge, skills and attitudes during the end of the B.com degree course.
2.	By goodness of the preparation they can turn into a Manager, Accountant , Management Accountant, cost Accountant, Bank Manager, Auditor, Company Secretary, Teacher, Professor, Stock Agents, Government employments and so on.,
3.	Students will prove themselves in different professional exams like C.A. , C S, CMA, MPSC, UPSC. As well as other coerces.
4.	The students will acquire the knowledge, skill in different areas of communication, decision making, innovations and problem solving in day to day business activities.
5.	Students will gain thorough systematic and subject skills within various disciplines of finance, auditing and taxation, accounting, management, communication, computer.
6.	Students can also get the practical skills to work as accountant, audit assistant, tax consultant, and computer operator. As well as other financial supporting services.
7.	Students will learn relevant Advanced accounting career skills, applying both quantitative and qualitative knowledge to their future careers in business.
8.	Students will be able to do their higher education and can make research in the field of finance and commerce.

Course Outcomes of Commerce		
Class	Course title	Course Outcomes
F.Y.B.Com.	Financial Accounting	• To enable the students to learn principles and concepts of Accountancy.
		•
		• Students are enabled with the Knowledge in the practical applications of accounting.
		•
		• To enable the students to learn the basic concepts of Partnership Accounting, and allied aspects of accounting.
		• The student will get thorough knowledge on the accounting practice prevailing in partnership firms and other allied aspects.
		• To find out the technical expertise in maintaining the books of accounts.
		• To enable the students to learn principles and concepts of Accountancy.
		• To encourage the students about maintaining the books of accounts for further reference.
F.Y.B.Com.	Computer Concepts & Applications	• To make students familiar with computer environment & operating systems
		• To introduce students with accounting packages like tally.
		• To develop skill and knowledge among students in applications of internet in education of commerce.
		• To make students familiar with computer environment & operating systems
F.Y.B.Com.	Business Mathematics and Statistics	• To use and understand useful functions in business as well as the concept of EMI.
		• To understand the different concept of population and sample and to make students familiar with Calculation of various types of averages and variation.
		• To learn the applications of matrices in business.
		• To understand the students to solve LPP to maximize the profit and to minimize the cost.
		• To use regression analysis to estimate the relationship between two variables and to use frequency distribution to make decision.
		• To understand the techniques and concept of different types of index numbers.
F.Y.B.Com.	Business Environment and Entrepreneurship	1. To make the students aware about the Business and Business Environment.
		2. To develop entrepreneurial awareness among students.
		3. To motivate students to make their mind set for thinking entrepreneurship as

F.Y.B.Com.	Compulsory English	• To offer relevant and practically helpful pieces of prose and poetry to students so that they not only get to know the beauty and communicative power of English but also its practical application.
		• To expose students to a variety of topics that dominates the contemporary socio-economic and cultural life.
		• To develop oral and written communication skills of the students so that their employability enhances.
		• To develop overall linguistic competence and communicative skills of students
F.Y.B.Com.	Business Economics (Micro)	• To provide students knowledge of Micro Economic concepts and inculcate an analytical approach to the subject matter.
		• To arouse the students interest by showing the relevance and use of various economic theories.
		• To apply economic reasoning to solve business problems.
F.Y.B.Com.	Organizational skill development	• To make familiar the students with the emerging changes in the modern office environment and to develop organizational skills.
		• To build up the conceptual , analytical , technical and managerial skills of students efficient office organization and records management
		• Technical skills among the students for designing and developing effective means to manage records , consistency and efficiency of work flow in the administrative section of an organization will be developed.

S.Y. B.com

Business Communication

- To make the students aware about the business communication.
- To understand the process and importance of communication.
- To develop awareness regarding new trends in business communication, various media of communication and communication devices.
- To extend business communication skills through the application and exercises

Corporate Accounting

- This course aims to enlighten the students on the accounting procedures followed by the Companies.
- Student's skills about accounting standards will be developed.
- To make aware the students about the valuation of shares.
- To impart knowledge about holding company accounts, amalgamation, absorption and reconstruction of company.

Business Economics (Macro)

- To familiarize the students with the basic concept of Macro Economics and its application.
- To aware students about Gross National Product (GNP), Net National Product (NNP) ,Income at Factor cost or National Income at Factor Prices ,Per Capita Income , Personal Income (PI) ,Disposable Income etc.
- To Study the relationship among broad aggregates.
- To apply economic reasoning to solve the problems of the economy.

Business management

- To understand the concept & functions and importance of management and its application.
- To make the student understand principles, functions and different management theories.

Elements of company law

- To impart students with the knowledge of fundamentals of Company Law and provisions of the Companies Act of 2013.
- To apprise the students of new concepts involving in company law regime.
- To acquaint the students with the duties and responsibilities of Key Managerial Personnel.

Cost and works accounting I

- To understand Basic Cost concepts, Elements of cost and cost sheet.
- Providing knowledge about difference between financial accounting and cost accounting.
- Ascertainment of Material and Labor Cost.
- Student's Capability to apply theoretical knowledge in practical situation will be increased.

A course in environmental studies

- To furnish awareness about environmental problems among people.
- Impart basic knowledge about the environment and its allied problems.
- Developing an attitude of concern for the environment.
- Acquiring skills to help the concerned individuals in identifying and solving environmental problems.

T.Y. B. Com.

Business Regulatory Framework (Mercantile Law)

- The student will well verse in basic provisions regarding legal frame work governing the business world.
- To know the students with the basic concepts, terms & provisions of Mercantile and Business Laws.
- To develop the awareness among the students regarding these laws affecting trade business, and commerce.

Advanced Accounting

- To provide the knowledge of various accounting concepts

- To impart the knowledge about accounting methods, procedures and techniques.
- To acquaint students with practical approach to accounts writing by usingsoftware package and by learning various accounts.

Indian & Global Economic Development

- To enable students to understand students to a new approach to the study ofthe Indian Economy.
- To help the students in analyzing the present status of the Indian Economy.
- To rendering the process of integration of the Indian Economy with otherеconomics of the world.
- To notify students with the emerging issues in policies of India's foreign trade.

Auditing and taxation

- Students will be versed in the fundamental concepts of Auditing and different aspectsof tax.
- Students can understand Income Tax system properly, and can get the knowledge ofdifferent tax provisions.
- To give knowledge about preparation of Audit report, Submission of Income Tax Return, Advance Tax, and Tax deducted at Source, Tax Collection Authorities under the Income Tax Act, 1961.

Cost and Works Accounting II

- To keep the students conversant with the ever – enlarging frontiers of CostAccounting knowledge.
- Students can get knowledge of different methods and techniques of cost accounting.
- To impart Knowledge about the concepts and principles application of Overheads.

Cost and Works Accounting III

- To provide knowledge regarding costing techniques.
- To give training as regards concepts, procedures and legal Provisions of cost audit.

Program Outcomes, Program Specific Outcomes, Course specific

Outcomes

Academic year 2020-2021

Department of Botany

Program Outcome: B.Sc. (Botany)	
After successful completion of three-year degree program in Botany, a student will be able to;	
	Compete in different types of science related branches and examinations
	Seeks admission to M.Sc. Botany, Biotechnology and other branches of Lifesciences
	Enter in any research field of life science after completion of PG to find out new solutions to biology related issues.
	Solve the problem and also think methodically, independently anddraw a logical conclusion.
	Employ critical thinking and the scientific knowledge to design, carryOut, record and analyze the results of biological (botanical) concepts.
	to think practically on various environmental issues like pollution, global warming,soil erosion etc. and act accordingly.
	To inculcate the scientific temperament in the students and outsideThe scientific community.
	Use modern techniques, decent equipment's and biological software's
	Find out biological solutions to revolutionize agriculture and crop improvement
	To implement Integrated pest management effectively
	Take care of environment, agriculture and society with his knowledge
	Appear for competitive examinations and defend interviews

Program Specific Outcome: B.Sc. (Botany)	
	Student can get knowledge of plant world and can apply it in his daily life
	He is able to identify and classify any plant with his medicinal properties and basic chemical constituents.
	He is able to get job in agriculture, forest and any other sectors.
	He will become expert in operating various basic and advanced equipment's and chemical solutions for the basic experiments.
	He can compete any subject related competitive examinations like forest department.
	Understand good laboratory practices and safety.
	Develop research-oriented skills.
	Gets appropriate knowledge of environment and regarding solutions of various environmental issues by biological way.
	Act and aware people for environmental pollutions and other issues.
	With his knowledge he can effectively run the afforestation programme in the society.

Course Outcomes of B.Sc. (Botany)

Class	Course title & Code	Course Outcome
Semester- I		
F.Y.B. Sc.	**BO-111: Plant Life and Utilization**	• Students may get knowledge of world of lower plants. • An understanding of morphology, anatomy, reproduction methods, systematic position can be acquired by students. • Economic and medicinal importance of different cryptogams like. Algae, fungi, lichens and bryophyte's may be known by the students. • The utilization of different types of lower plants for the welfare of man can be understood by the students. • Students can make small projects on collection, identification and enumeration of different types of algae, fungi, lichens and bryophytes occurring in the local area.
F.Y.B.Sc.	**BO-112: Plant morphology and Anatomy**	• Students will be well acquainted with morphology and different terms used for the study of morphology of plants • They can also study plant identification, nomenclature systems and classification of plants.

		• Students will get knowledge of different anatomical terms and different tissue system • They will be well acquainted with the morphological and anatomical differences of monocot and dicot plants.
F.Y.B.Sc.	**BO-113: Botany Practical Course I**	• Actual practical of lower plants like algae, fungi, bryophytes and lichens gives student the better understanding of lower plants. • They may also get familiar with different morphological terms with direct practical experience by handling different plants. • They may know diversity of flowers and fruits in Angiospermic plants and get knowledge to identify the plant. • By practicing taking sections of various plant parts, students may become familiar with anatomical studies and get skills of sectioning and staining of different plant parts.
Semester- II		
F.Y.B.Sc.	**BO-121: Plant Life and Utilization-II**	• Students will get an idea of vascular plants • They may know the morphology, reproduction and systematic position of different pteridophytes like *Nephrolepis.* • Economic and medicinal importance and utilization of different Pteridophytes can be learnt by the students. • Students will definitely learn difference between phanerogamas and cryptogams, i.e., higher plants and lower plants. • The morphology, anatomy and reproductive organs of gymnosperms like Cycas can be better understood by students with their economic importance. • Students will be well acquainted with the different systems of classification of higher plants. • The economic importance and utilization of different food, fodder, fiber and medicinal plant can be better understood by students. •
F.Y.B.Sc.	**BO: Principles of Plant Science**	• Important physiological phenomenon like diffusion, osmosis, plasmolysis, plant growth etc. can be learnt by the students. • The role of all these physiological process in plant life can be better understood by the students. • The students will be better familiar with basics of plant cells and also get knowledge of various cell organelles. • They may become familiar with the cell cycle and different stages of mitosis and meiosis. • Advanced knowledge of molecular biology can be

		acquired by students. • They may also know the structure of DNA and nucleotides and also learn popular theory of DNA proposed by Watson and Crick. • They will know different types of DNA. Chromosomes etc. • Students will get thorough knowledge of DNA replication and enzymes involved in it which will be applicable for the for the better understanding of important concepts of molecular biology and molecular basis of inheritance.
F.Y.B.Sc.	**BO-123: Botany Practical –II**	In this practical student can handle the plants like *Nephrolepis* for the better understanding of these plants. Also, they will be well acquainted with the gymnosperms by handling specimens of Cycas. Students can easily make comparison between Dicot and monocot plants. They will practically study importance of angiospermic plants which includes, food, fodder, fiber, medicine etc. Students with a study tour van better he knows about plant diversity in the local area. Students will be well acquainted with mitosis and meiosis processes by using various plant parts. They can understand the concepts of plasmolysis, osmosis and DPD by direct practical's.
Semester- III		
S.Y.B.Sc.	**BO-231: Taxonomy of Angiosperms and Plant Ecology**	• In this course students will get basic knowledge of plant taxonomy. • They can be acquainted with the different systems of classification, Rules of plant nomenclature and Identification. • Student may learn basic knowledge of plant identification. • Students are well acquainted with some basic terms like typification, binomial nomenclature etc. • Students will study some representative families in detail. • In other half of course students are getting knowledge of some basic phenomenon of ecology • Different plants and ecological grouping will also be studied by the students.
S.Y.B.Sc.	**BO-232: Plant Physiology**	• Students will be familiar with many physiological phenomenon like Water absorption, ascent of sap, transpiration, nitrogen metabolism, seed dormancy and germination and physiology of flowering. • Students may get answers of the questions in their mind about the metabolic activities of the plants.

		• Students will get an idea of various phenomenon of flowering, how plants absorb water from soil and provide it to upper plant parts. • They may get knowledge of seed dormancy and germination. • Students may be well acquainted with basic phenomenon of nitrogen fixation and microorganisms associated with it.
S.Y.B.Sc.	**BO-233: Practical Botany-III**	• In this practical course, students will have hands on training on • Identification of plant families • Description of flowering plants • Study of different types of taxonomic and ecological instruments. • Different physiological processes like, DPD, Leaf protein isolation, transpiration etc. • Some ecological field work practicals also carried out by students including seed germination percentage, study of vegetation by list count quadrat method etc. • Students will also experience the field trips, excursion visits arranged by department.
Semester- IV		
S.Y.B.Sc.	**BO-241: Plant Anatomy and Embryology**	• In this basic theory course, students will be familiar to • Basics of plant anatomy • Plant embryology • Different types of tissue systems which includes, epidermal, mechanical and other. • Students may learn how secondary normal and abnormal growth takes place in dicot and monocot plants. • In the second half of this course, students will get an idea of plant embryology. • They may learn in details about the concepts of microsporangium and mega sporangium with their stepwise development. • . Students will get knowledge of pollination and its various types. • They may also get familiar with the fertilization and formation of endosperm and embryo. □

S.Y.B.Sc.	**BO-242: Plant Biotechnology**	• In this advanced subject, students will get an idea of plant biotechnology and its importance. • Students will learn in detail about emerging branch which is known as Plant tissue culture. • They also get knowledge of single cell proteins and their application. • Plant genetic engineering and its different techniques may be learned by the students with different types of enzymes associated with. • Students also will learn the concepts of genomics, proteomics and bioinformatics. • A new and emerging field, bioremediation is included in the syllabus which can be utilized by the students for pollution control. • Biofuel is an emerging technology and it is need of time. Students by studying the concept of biofuel may be well acquainted with the techniques and significance of biofuel over fossil fuels.
S.Y.B.Sc.	**BO-243: Practical Botany-IV**	• In this, practical paper, students will practice hands on training on sectioning for the better understanding of concepts like different types of tissue system, including epidermal, meristamatic, vascular etc. • Students may get practical knowledge of staining. • In the biotechnology section, they may learn practical's of tissue culture, media preparation, stant preparation, sterilization etc. • Students may practice laboratory cultivation of Spirulina. • They will have demonstration of some practical like gel electrophoresis, transgenic crops, tissue culture etc. • Students will visit any tissue culture laboratory for the better understanding of different steps. • By better understandings of the cultivation techniques of spirullina, students may start their own business.
Semester-V		
T.Y.B.Sc.	**BO-331: Cryptogamic Botany**	• This course is important for the better understanding of the basic botany. • Algae, fungi, bryophytes and pteridophytes will be better understood by the students in here. • General characteristic features of different cryptogamic plants including algae, fungi, bryophytes and pteridophytes can be better understood by the students. • Nutrition, taxonomic positions, and reproduction of different cryptogams will be better understood by the students. • Morphological and anatomical characteristics of different cryptogams will be better understood by the students.

		• Classification of different cryptogamic plants can be studied by students.
T.Y.B.Sc.	**BO-332: Cell and Molecular Biology**	• Cell is basic fundamental unit of life. How it is can be learnt by students in this paper. • Introduction to cell and cell biology with its brief history will be learned by the students. • Students will be familiar with cell and different types of cell organelles. • Cell organelles like, cell wall, plasma membrane, Endoplasmic reticulum, mitochondria, chloroplast etc can be learn by the students with their morphology, chemical constituents and functions. • It is very important for the better understanding of prokaryotic and eukaryotic cells. • In the second half of this course students are able to learn various phenomenon of molecular biology which includes central dogma, transcription, translation, DNA replication, damage and repair, genetic code etc. • Students may also get familiar with different gene actions and regulations.
T.Y.B.Sc.	**BO-333: Genetics and Evolution**	• In this course students can learn concepts of two different mechanisms i.e., Genetics and Evolution. • In the first half, students may learn basics of genetics, Mendelism and his laws and different crosses. • They will also learn concepts like gene interaction, multiple alleles, linkage and crossing over, quantitative and cytoplasmic inheritance, sex linked inheritance, euploidy and aneuploidy with suitable examples. • Students also will get an idea of chromosomal aberrations. • In the second half, students may get an idea of different theories of evolution, evidences of evolution, population genetics etc. • This study is very important to find answers to different problems related to plant and animal genetics.
T.Y.B.Sc.	**BO-334: Spermatophyta and Palaeobotany**	• Phanerogams are the higher plants which includes gymnosperms and angiosperms. • Through this course, students will learn the different types of classifications systems associated with gymnosperms and angiosperms. • In gymnosperms students are able to learn distribution, morphology, anatomy, reproduction, gametophyte and sporophyte of the plants *Pinus* and *Gnetum*. • In angiosperms they are able to understand their origin and different plant families with their systematic position, distinguishing feature, economic importance etc. • Students will also understand different concepts of

		plant identification and authentication. • In the last chapter of course, students will learn about palaeobotany and fossils with different type of fossil groups. • This course is very important for students to differentiate angiosperms and gymnosperms and also to describe and identify different plants.
T.Y.B.Sc.	**BO-335: Horticulture and Floriculture**	• This is applied paper in which students will get theoretical as well as practical knowledge of horticulture and floriculture. • Students will get knowledge of different horticultural plants and methods of plant propagation. • Students will also learn special practices in horticulture like bahar treatment, girdling, notching, bending etc. • Students will also get well acquainted with fruits and vegetable production technology applicable for different types of fruits like banana and mango. • This is also applicable for the ornamental plant production. • In this course students will get theoretical and practical knowledge of cultivation and marketing some important flowers like, Aster, Orchids , *Tagetes* etc. • Also, they will become well acquainted with some processing and preservation practices of flowers.
T.Y.B.Sc.	**BO-336: Computational Botany**	• This course deals with the analytical studies related with plants. • In this biostatistical phenomenon like, population, sample, qualitative and quantitative data etc. will be learnt by students. • Sample and sampling, • Collection and representation of data, measures of dispersion, correlation and regression, probability, tests of significance and data analysis will be learnt by the students. • Knowledge of this course would be very beneficial for students for the analytical data related with plants.
Semester-IV		
T.Y.B.Sc.	**BO- 341: Plant Physiology and Biochemistry**	• In the first half of this course, the concepts like photosynthesis, respiration, translocation of solutes, stress physiology will be studied in detail. • Different physiological phenomenon like photophosphorylation, HSK pathways, C4 pathways, Glycolysis, ETS, etc. can be studied by students in detail. • In the second half of course, details of carbohydrates, amino acids and proteins, lipids are studied in detail.

		• The enzymology part of this course is also very important to understand different mechanisms associated with enzymes. • Secondary metabolites are the important byproducts of plant metabolism which would be studied by the students with their importance and metabolism.
T.Y.B.Sc.	**BO-342: Plant Ecology and Biodiversity**	• This course is divided into two different parts, 1. Ecology and 2. Biodiversity • In the ecology section, students may learn about, different types of pollutions with the causes, effects and control measures. • The mechanisms like eutrophication, bioaccumulation, biomagnification is learnt by the students in detail. • Students will also get knowledge of desertification, ozone depletion and global warming, Environmental Impact Assessment, Ecology and Economics, Remote sensing. • In the biodiversity section, students get an idea of biodiversity, types of biodiversity, concept of endemism and phytogeography. • It is also related with loss of species and genetic diversity. • In last section, the students will get an idea of in-situ and ex-situ conservation with their examples. • Students also get acquainted with social approach of biodiversity conservation.
T.Y.B.Sc.	**BO-343: Plant Pathology**	• In this course students will get knowledge of some important terms of plant pathology, incitants, host etc. • Also, students will also get knowledge of the mechanism of disease development, defense mechanism etc. • Students also learn the methods of studying plant diseases. • The students can get knowledge of different fungal, bacterial, mycoplasma, nematodal, viral diseases with causal organisms, symptoms and control measures. • Some non-parasitic plants diseases are also included under the syllabus which are also beneficial for students to get better knowledge of plant diseases. • Students will also learn about principles of plant disease control and molecular diagnostic features and transgenic in crop protection. • By the knowledge of this course students will get basic knowledge of local crop diseases.

T.Y.B.Sc.	**BO-344: Medicinal and Economic Botany**	• This course deals with the study of medicinal plants and their applications for different purposes. • Students will get knowledge of pharmacognosy and classification of various crude drugs. • Students also will get basic knowledge of Ayurveda which includes, concept of tridosha, Indigenous systems of medicine, Ayrvedic principles, formulations like Asava, Arishtha, churna etc. • In the analytical medicinal botany, students would get knowledge of drug adulteration, methods of extraction, drug evaluation etc. • Students also get knowledge of cultivation, processing and marketing of different herbal drugs. • Also, students will become well acquainted with the term ethnobotany with its introduction and basics. • Economic botany deals with the study of different economically important plants like, rice, turmeric, safflower, palas etc. • This course is very important for students for basic understandings of some crude drugs.
T.Y.B.Sc.	**BO-345: Plant Biotechnology**	• This is advanced course of botany in which some biotechnological principles will be learnt by students. • In the plant tissue culture section, students are able to study techniques, and applications of callus, cell suspension, protoplast, and embryo culture. Apart from this, students may get knowledge of some concepts like somatic hybridization, micropropagation, embryo rescue etc. • Students will also become familiar with the concept of germplasm and cryopreservation. • Also, they will better know with the concept of plant as bioreactors. • Student also know in detail the mechanism of symbiotic as well as asymbiotic nitrogen fixation by some nodule forming and free-living bacteria. • Student by taking this course will better understand concept of biofertilizers with its types. • Students will also become well acquainted with the different databases and their applications coming under the term bioinformatics. • Students will also get a knowledge of genomics and proteomics with their concept and applications.
T.Y.B.Sc.	**BO-346: Plant Breeding and Seed Technology**	• This course deals with two branches 1. Plant breeding and 2. Seed technology. • In the first half of this course, students will learn basics of plant breeding, plant introduction and

		acclimatization. • Also, students will learn about different selection methods like mass, pure line and clonal selection. • Also, students will learn about different concepts of hybridization, breeding methodology, heterosis and hybrid vigour, mutation breeding. • Students may know the different types of mutagens like chemical and physical to carryout mutation breeding. • Students also get an idea of polyploidy and aneuploidy in crop improvement. • Also, students become acquainted with breeding for stress tolerance. • Seed technology is another section of this course in which students would learn about different types of seeds. • Students also get knowledge about different concepts of seed technology including, seed certification, seed processing, seed sampling, storage and packaging, testing and marketing.
T.Y.B.Sc.	**BO-347: Botany Practical-I**	• This practical is based on four theory courses from which students will get hands on practice of some important practicals. • It includes practicals based on cryptogams like, algae, fungi, bryophytes and pteridophytes. • Morphology, anatomy and reproductive structures of different types of cryptogams would be better studied by the students. • Also, students will get an idea of preparation of different stains. • Also, they will actually observe different stages of mitosis and meiosis. • Students will also learn to study chromosome morphology and DNA and RNA extraction techniques. • Students will also learn to estimate chlorophyll a and b by using paper chromatography and TLC. • Students also practically estimate amino acids and proteins by different methods. • Students will learn to prepare MS medium. • Also, students will study different types of biofertilizers including algal, fungal and bacterial.

		• Also, student will able to estimate Nitrate Reductase enzyme from legume nodules. • Students will also practically study about transgenic plants like Bt Cotton, Bt Tomato, Golden rice etc.
T.Y.B.Sc.	**BO-348: Botany Practical-II**	• Students are able to study structural heterozygotes in *Rhoeo* plant to study multiple translocations. • Also, practically students will observe salivary gland chromosome of Chironomous larvae. • By some calculations student will become expert to solve genetic problems based on PTC taste sensitivity, Earlobe and rolling of tongue and three-point test cross. • Practically study of morphology and anatomy of *Pinus* and *Gnetum* would made students expert in the subject gymnosperms and also in staining and sectioning. • Also, they may become expert in description and identification of living plants as well as fossils. • With proper knowledge of plant taxonomy, students will be preparing artificial keys. • Different studies of polluted water including BOD, turbidity, conductivity also practically observed by the students. • Also, student will visit nearby locality to study biodiversity. • Students will become well acquainted with different hybridization techniques. • Student may artificially induce polyploidy in different plants like onion. • Students can perform different seed testing by instruments like hot air oven.
T.Y.B.Sc.	**BO- 349: Botany practical- III**	• In these practical students will become expert on • Understanding phenology of fruits, vegetables and flowering crops. • Will get know about different types of garden tools like sprayer, duster etc. • Will learn techniques of cutting, budding, layering and grafting. • Learn technique of making dry flowers

		• Also, student will learn about many other horticultural techniques. • Students will learn to calculate different types of statistical problems like mean, mode, median, standard deviation and other types of statistical problems. • Also, students will practically learn to prepare culture media, culture techniques. • Students will learn about different fungal, bacterial and mycoplasma diseases. • Students will practically observe and study different herbal drugs. • Also, they will learn prepare different ayurvedic formulations like Asav, Arishtha, Churna etc. • Students will learn to extract different phytochemicals from the medicinal plants.

Program Outcomes, Program Specific Outcomes, Course specific Outcomes

Department of Chemistry

Program Outcome: B.Sc. (Chemistry)	
After successful completion of three-year degree program in Chemistry, a student should be able to;	
	Every branch of Science and Technology is related to Chemistry
	Helps in understanding the causes of environmental pollution and can open up new methods for environmental pollution control.
	Demonstrate, solve and an understanding of major concepts in all Disciplines of chemistry.
	Solve the problem and also think methodically, independently and draw a logical conclusion.
	Employ critical thinking and the scientific knowledge to design, carry Out, record and analyze the results of chemical reactions.
	Create an awareness of the impact of chemistry on the environment, Society and development outside the scientific community.
	To inculcate the scientific temperament in the students and outside The scientific community.
	Use modern techniques, decent equipments and Chemistry software's
	Find out the green route for chemical reaction for sustainable Development.

Program Specific Outcome: B.Sc.	
	Gain the knowledge of Chemistry through theory and practicals.
	To explain nomenclature, stereochemistry, structures, reactivity, And mechanism of the chemical reactions.
	Identify chemical formulae and solve numerical problems.
	Use modern chemical tools, Models, Chem.-draw, Charts and Equipments.
	Know structure-activity relationship.
	Understand good laboratory practices and safety.
	Develop research-oriented skills.
	make aware and handle the sophisticated instruments/equipments

Course Outcomes of B.Sc. (Chemistry)

Class	Course title & Code	Course Outcome
F.Y.B.Sc.	**CH-101: Physical Chemistry**	Students will be able to apply thermodynamic principles to physical and chemical process Calculations of enthalpy, Bond energy, Bond dissociation energy, resonance energy Variation of enthalpy with temperature –Kirchoff's equation Third law of thermodynamic and its applications Ionic equilibria chapter will led students to understand Concept to ionization process occurred in acids, bases and pH scale Related concepts such as Common ion effect hydrolysis constant, ionic product, solubility product Degree of hydrolysis and pH for different salts, buffer solutions Knowledge of Chemical equilibrium will make students to understand Relation between Free energy and equilibrium and factors affecting on equilibrium constant. Exergonic and endergonic reaction Gas equilibrium, equilibrium constant and molecular

		interpretation of equilibrium constant
F.Y.B.Sc.	**CH-102: Organic Chemistry**	• The students are expected to understand the fundamentals, principles, and recent developments in the subject area. • It is expected to inspire and boost interest of the students towards chemistry as the main subject. • To familiarize with current and recent developments in Chemistry. • To create foundation for research and development in Chemistry.
F.Y.B.Sc.	**CH-103: Chemistry Practical Course I**	Importance of chemical safety and Lab safety while performing experiments in laboratory Determination of thermochemical parameters and related concepts Techniques of pH measurements Preparation of buffer solutions Elemental analysis of organic compounds (non instrumental) Chromatographic Techniques for separation of constituents of mixtures
F.Y.B.Sc.	**CH-201: Inorganic Chemistry**	Various theories and principles applied to revel atomic structure Origin of quantum mechanics and its need to understand structure of hydrogen atom Schrodinger equation for hydrogen atom Radial and angular part of hydrogenic wave functions Significance of quantum numbers Shapes of orbitals Explain rules for filling electrons in various orbitals- Aufbau's principle, Pauli exclusion principle, Hund's rule of maximum multiplicity Discuss electronic configuration of an atom and anomalous electronic configurations. Describe stability of half-filled and completely filled orbitals. Discuss concept of exchange energy and relative energies of atomic orbitals Design Skeleton of long form of periodic table. Describe Block, group, modern periodic law and

		periodicity. - Classification of elements as main group, transition and inner transition elements - Write name, symbol, electronic configuration, trends and properties. - Explain periodicity in the following properties in details: - Effective nuclear charge, shielding or screening effect; some numerical problems. - Atomic and ionic size. - Crystal and covalent radii - Ionization energies - Electronegativity- definition, trend, Pauling electronegativity scale. - Attainment of stable electronic configurations. - Define various types of chemical bonds- Ionic, covalent, coordinate and metallic bond - Explain characteristics of ionic bond, types of ions, energy consideration in ionic bonding, lattice and solvation energy and their importance in the context of stability and solubility of ionic compounds - Summarize Born-Lande equation and Born-Haber cycle, - 5. Define Fajan's rule, bond moment, dipole moment and percent ionic character.
F.Y.B.Sc.	**CH- 202: Analytical Chemistry**	By studying this course students are able to understand • Analytical Chemistry –branch of chemistry • Perspectives of analytical Chemistry • analytical problems • Calculations of mole, molar concentrations and various units of concentrations which will be helpful for preparation of solution • Relation between molecular formula and empirical formula • Stoichiometric calculation • Define term mole, millimole, molar concentration, molar equilibrium concentration and Percent Concentration. • SI units, distinction between mass and weight • Units such as parts per million, parts per billion, parts per thousand, solution-dilatant volume ratio, • function density and specific gravity of solutions. • Separation of binary mixtures and analysis • Elemental analysis -Detection of nitrogen, sulfur, halogen and phosphorous by Lassiagen's test. • Purification techniques for organic compounds. • pH meter and electrodes for pH measurement • Measurement of pH

		• Working of pH meter • iv. Applications of pH meter
F.Y.B.Sc.	**CH- 203: Chemistry Practical –II**	By studying this course students are able to understand Inorganic Estimations using volumetric analysis Synthesis of Inorganic compounds Analysis of commercial products Purification of organic compounds Preparations and mechanism of reactions involved
S.Y.B.Sc.	**CH-301: Physical and Analytical Chemistry**	After studying this course students are able to understand Define, explain and compare meaning of accuracy and precision. Apply the methods of expressing the errors in analysis from results. Explain / discuss different terms related to errors in quantitative analysis. Apply statistical methods to express his / her analytical results in laboratory. Solve problems applying equations. Explain / define different terms in volumetric analysis such as units of concentration, indicator, equivalence point, end point, standard solutions, primary and secondary standards, complexing agent, precipitating agent, oxidizing agent, reducing agent, redox indicators, acid base indicators, metallochome indicators, etc. Perform calculations involved in volumetric analysis. Explain why indicator show colour change and pH range of colour change. To prepare standard solution and **b.** perform standardization of solutions. To construct acid – base titration curves and performs choice of indicator for particular titration. Explain / discuss acid-base titrations, complex metric titration / precipitation titration / redox titration. Apply volumetric methods of analysis to real problem in analytical chemistry / industry Discuss factors influencing adsorption, its characteristics, differentiates types as physisorption and Chemisorption

		Classification of Adsorption Isotherms, to derive isotherms. Explanation of adsorption results in the light of Langmuir adsorption isotherm, Freundlich's adsorption Isotherm and BET theory. Apply adsorption process to real life problem. Determination of order of reaction by integrated rate equation method, graphical method, half-life method and differential method. Explain / discuss the term energy of activation with the help of energy diagram. Explanation for temperature coefficient and effect of temperature on rate constant k. Derivation of Arrhenius equation and evaluation of energy of activation graphically. Derivations of collision theory and transition state theory of bimolecular reaction and comparison.
S.Y.B.Sc.	**CH-302: Inorganic and Organic Chemistry**	• Identify and draw the structures aromatic hydrocarbons from their names or from structure name can be assigned. • Explain / discuss synthesis of aromatic hydrocarbons • Give the mechanism of reactions involved. • Explain /Discuss important reactions of aromatic hydrocarbon. • To correlate reagent and reactions. • Identify and draw the structures alkyl / aryl halides from their names or from structure name can be assigned. • Write / discuss the mechanism of Nucleophilic Substitution (SN1, SN2 and SNi) reactions. • To correlate reagent and reactions. • Give synthesis of expected alkyl / aryl halides. • Identify and draw the structures alcohols / phenols from their names or from structure name can be assigned. • Able to differentiate between alcohols and phenols • Write / discuss the mechanism of various reactions involved. • Give synthesis of expected alcohols / phenols.
S.Y.B.Sc.	**CH-303: Practical Chemistry-III**	• Verify theoretical principles experimentally. • Interpret the experimental data on the basis of theoretical principles.

		• Correlate theory to experiments. Understand/verify theoretical principles by experiment observations; explain practical output / data with the help of theory. • Understand systematic methods of identification of substance by chemical methods. • Write balanced equation for the chemical reactions performed in the laboratory. • Perform organic and inorganic synthesis and is able to follow the progress of the chemical reaction by suitable method (colour change, ppt. formation, TLC). • Set up the apparatus / prepare the solutions - properly for the designed experiments. • Perform the quantitative chemical analysis of substances explain principles behind it. • Systematic working skill in laboratory will be imparted in student.
S.Y.B.Sc.	**CH-401: Physical and Analytical Chemistry**	• Define different terms in conductometry such as electrolytic conductance, resistance, conductance, Ohm's law, cell constant, specific and equivalent conductance, molar conductance, Kohlrausch's law, etc. • Discuss / explain Kohlrausch's law and its Applications, Conductivity Cell, Conductivity Meter, Whetstone Bridge. • Explain / discuss conductometric titrations. • Apply conductometric methods of analysis to real problem in analytical laboratory. • Solve problems based on theory / equations. • Correlate different terms with each other and derive equations for their correlations • Discuss / explain / derive Beer's law of absorptivity • Explain construction and working of colorimeter. • Apply colorimetric methods of analysis to real problem in analytical laboratory. • Solve problems based on theory / equations. • Define different terms in column chromatography such as stationary phase, mobile phase, elution, adsorption, ion exchange resin, adsorbate, etc.

		• Explain properties of adsorbents, ion exchange resins, etc. • Discuss / explain separation of ionic substances using resins. • Discuss / explain separation of substances using silica gel / alumina. • Differentiate between ideal and non-ideal solutions and can apply Raoult's law. • Interpretation of i) vapour pressure–composition diagram ii) temperature- composition diagram. • Explain distillation of liquid solutions from temperature – composition diagram. • Explain / discuss azeotropes, Lever rule, Henrys law and its application. • Discuss / explain solubility of partially miscible liquids- systems with upper **c**ritical. Solution temperature, lower critical solution temperature and having both UCST and LCST.
S.Y.B.Sc.	**CH-402: Inorganic and Organic Chemistry**	Isomerism in coordination complexes Explain different types of isomerism in coordination complexes • Apply principles of VBT to explain bonding in coordination compound of different geometries. • Correlate no of unpaired electrons and orbitals used for bonding. • Identify / explain / discuss inner and outer orbital complexes. • Explain / discuss limitation of VBT • Explain principle of CFT. • Apply crystal field theory to different type of complexes (Td, Oh, Sq. Pl complexes) • Explain: i) strong field and weak field ligand approach in Oh complexes ii) Magnetic properties of coordination compounds on the basis of weak and strong ligand field ligand concept. iii) Origin of colour of coordination complex. • Calculate field stabilization energy and magnetic moment for various complexes. • To identify Td and Sq. Pl complexes on the basis of magnetic properties / unpaired electrons. • Explain spectrochemical series, tetragonal distortion / Jahn-Teller effect in Cu (II) Oh complexes only • Identify and draw the structures aldehydes and

		ketones from their names or from structure name can be assigned. • Explain / discuss synthesis of aldehydes and ketones. • Write / discuss the mechanism reactions aldehydes and ketones. • Explain /Discuss important reactions of aldehydes and ketones. • To correlate reagent and reactions of aldehydes and ketones • Give synthesis of expected aldehydes and ketones. • Perform inter conversion of functional groups • Identify and draw the structures carboxylic acids and their derivatives from their names or from structure name can be assigned. • Explain / discuss synthesis of carboxylic acids and their derivatives. • Write / discuss the mechanism reactions carboxylic acids and their derivatives. • Explain /Discuss important reactions of carboxylic acids and their derivatives. • Correlate reagent and reactions of carboxylic acids and their derivatives • Give synthesis of expected carboxylic acids and their derivatives. • Perform inter conversion of functional groups • Identify and draw the structures amines from their names or from structure name can be assigned. • Explain / discuss synthesis of carboxylic amines. • Write / discuss the mechanism reactions carboxylic amines. • Explain /Discuss important reactions of carboxylic amines. • To correlate reagent and reactions of carboxylic amines. • Give synthesis diazonium salt from amines and reactions of diazonium salt. • Perform inter conversion of functional groups
S.Y.B.Sc.	**CH-403: Practical Chemistry-IV**	• Verify theoretical principles experimentally • Interpret the experimental data on the basis of theoretical principles. • Correlate the theory to the experiments. Understand / verify theoretical principles by experiment or explain practical output with the help of theory. • Understand systematic methods of identification of substance by chemical methods. • Write balanced equation for all the chemical reactions performed in the laboratory. • Perform organic and inorganic synthesis and able to follow the progress of the chemical reaction.

		• Set up the apparatus properly for the designed experiments. • Perform the quantitative chemical analysis of substances and able to explain principles behind it.
Semester-III Course: ()		
T.Y.B.Sc.	**CH-331: Physical Chemistry**	**Chemical Kinetics** After studying this topic students are expected to knowing. Expression for rate constant k for third order reaction Examples of third order reaction Characteristics of third order rate constant k Derivation for half-life period of third order reaction and to show that half-life is inversely proportional to square of initial concentration of reactants. Experimental determination of order of reaction by Integrated rate equation method, Graphical method, Half-life method and Differential method. Explain the term energy of activation with the help of energy diagram Explain the term temperature coefficient. Effect of temperature on rate constant k Derivation of Arrhenius equation Graphical evaluation of energy of activation Solve the numerical problems based on this topic. **Electrolytic Conductance:** • After studying these topic students are expected to knowing. Ohm's law and electrical units such as coulomb, Ampere, Ohm and Volt. • Meaning of specific resistance, specific conductance, cell constant and their units. • Cell constant, its theoretical and experimental determination. • Preparation of conductivity water. • Experimental determination of conductance. • Variation of specific and equivalent conductance of strong and weak electrolyte with dilution • Meaning of infinitely dilute solution. • Kohlrausch's law of independent migration of ions and its applications such equivalent conductance of weak electrolyte at zero conc., degree of dissociation (α), ionic product of water. • Transport number of an ion • Hittorf's rule

		Experimental determination of transport number by Hittorf's and moving boundary method. Drawbacks of Arrhenius theory, Debye-Huckel-Onsager Interionic Attraction theory Asymmetry /Relaxation effect Electrophoresis effect Validity of Onsager equation Fugacity and activity concept Activity and activity coefficient of strong electrolyte. Solve the numerical problems based on this topic. **Investigation of molecular structure:** After studying this topic students are expected to Known. Understand the term additive and constitutive properties Understand the term specific volume, molar volume and molar refraction. Understand the meaning of electrical polarization of molecule. Understand the meaning of induced and orientation polarization Dipole moment and its experimental determination by temperature variation method. Application of dipole moment for structure determination. Nature of wave and its characteristics such as wavelength, wave number, frequency and velocity. Rotational / Microwave spectroscopy Derivation for rotational spectra for the transition from J to J+1 Limitations of Rotational Spectra. Vibrational Spectra Vibrational rotational Spectra Raman Spectroscopy Solve the numerical problems based on this topic. **Phase Rule:** After studying this topic students are expected to knowing Meaning and Types of equilibrium such as true or static, metastable and Unstable Equilibrium. Meaning of phase, component and degree of freedom. Derivation of phase rule. Explanation of water system: Description of the curve, Phase rule relationship and typical features. Explanation of Sulphur system: Description of the

		curve, Phase rule relationship and Typical features. • vi. Explanation of two component system curve: for silver-lead and Zinc-cadmium.
T.Y.B.Sc.	**Inorganic Chemistry (CH-332)**	**Molecular orbital theory** • Know the theories of covalent bond formation • Know the assumptions and limitations of VBT • Understand the need of concept of MOT • Know LCAO principal and its approximation • Understand and show the formation of bonding and antibonding MO's • Draw the shapes of s, p, d orbital • Draw combinations of s-s, s-p, p-p and d-d orbital to form σ and π molecular orbitals. • Give the comparison of a) Atomic orbital and molecular orbital b) BMO and ABMOc) Sigma and pi MO'sd) VBT and MOT e) Comparison between BMO, ABMO and NBMO • Draw the MO energy level diagrams for homonuclear diatomic molecules having interactions between 2s and 2p orbitals and having no interactions between 2s and 2p orbitals: H2, H2+,He2+, Li2, Be2, B2, C2, N2, O2, O2+, O2-, O_2^{2-}, F2, Ne2, • Draw the shapes of molecular orbitals. • Give the calculations of bond order, energy and explanation on stability of the above molecule and ions • Draw the MO energy level diagrams for heteronuclear diatomic molecules: CO, NO, HCl, HF and calculations of bond order, energy and explain the stability of the molecules. • Understand the formation of BMO, ABMO and NBMO in CO2 or NO2 molecule and construct MO energy level diagrams for them. **Co-ordination Chemistry** Know the meaning of various terms involved in coordination chemistry. • Know the different types of Ligands. • Understand the chelating agents, chelate and stability of chelates and complexes. • Calculate the charge on complex ion and the oxidation number. • Be able to give the IUPAC name the co-ordination compound. • Know the application of co- ordination compounds in biology and chemistry. • Be able to understand the Werner's formulation of

		complexes and identify the ionizable ions. • Be able to distinguish between ionizable and non-ionizable valencies with suitable examples. • Give the suitable physical and chemical test for identification of number and types of ionizableions. • Be able to draw the geometrical and optical isomerism of complexes. • Choose the correct geometry for complexes with C.N. 4 and C.N. 6 with the help of stereoisomerism. • Be able to define and explain isomerism in complexes. • Be able to explain various types of isomerism. • Comment on the stereoisomerism in complexes with C.N. 4 and C. N. 6. • Define EAN rule and calculate EAN value of the complexes. • Comment on EAN value and stability of complexes. • Know the merits and the demerits of Sedgwick's theory. • Be able to explain the need of concept of hybridization. • Explain the VB representation of tetrahedral, square planar, trigonalbipyramidal and octahedral Complexes. • Be able to identify which d-orbitals are involved in hybridization during formation of complexes with different geometries such as tetrahedral, square planar, trigonalbipyramidal and octahedral. • Be able to explain structure and magnetic behavior of the complexes. • Be able to identify the high spin and low spin complexes. • Be able to identify inner orbital and outer orbital complexes. • Explain elctroneutrality principle and different types of pi bonding. • Know the limitations of VBT. • Know the shapes of d-orbitals and degeneracy of d-orbitals.
T.Y.B.Sc.	**Organic Chemistry (CH-333)**	• Definition and types of organic acid and base • The pka and pkb concepts • Effect of temperature on pka/pkb • Comparison between strengths of acids/base • What is acid-base catalysis • To draw different types of disubstituted

		cyclohexane in Chair form - To distinguish between geometrical and optical isomerism - Stability, energy calculations with potential energy diagram and optical activity of these conformers. - Definition and type of nucleophiles and leaving groups - Different types of nucleophilic substitution reactions - Definition of inversion and racemization - The kinetics, mechanism & stereochemistry of these reactions - Whether a given reaction follows SN1 or SN2 mechanism? - The comparison between SN1 & SN2 reactions - An SNi mechanism in presence and absence of pyridine - To predict product/s or supply the reagent/s for these reactions - Different types of carbon-carbon unsaturated compounds - Orientation / rules in addition reactions - The structure of carbonyl group - Reactivity concept - Correct mechanism of addition reactions using different reagents - Types of some known addition reactions - To predict product/s or supply the reagent/s for such reactions. - Definition and types of elimination reactions - Different types of bases and leaving groups - Statement of Hoffmann and Saytzeff rule - The evidences, mechanism & stereochemical aspects of these reactions - Whether a given reaction follows E1, E2 or E1cB mechanism? - Comparison between E1 & E2 reactions - The effect of structure, attacking and leaving group on reactivity of such reactions - To predict product/s or supply the reagent/s for these reactions
T.Y.B.Sc.	**Analytical Chemistry (CH-334)**	Student should know, • Principles of common ion effect and solubility product • Formation of complex ion • Factors affecting on solubility of precipitation • Phenomenon of super saturation and precipitation

		formation • Meaning of co-precipitation and post precipitation • Choice of liquid for washing the precipitate • Precautions during filtration, drying and ignition of precipitate • Conceptual understanding of electro gravimetric principle • Numerical Problems Methods of thermo gravimetric analysis • Principles of TGA and DTA • Types of TGA • Relation between TGA and DTA • Thermal equation of TGA • Different factors affecting TGA curve • Determination of calcium oxalate precursor • Applications of TGA, DTA and DSC • Principles of Spectrophotometric analysis and properties of electromagnetic radiations • Different Terms like absorbance, transmittance, and molar absorptivity • Mathematical Statement and derivation of Lambert's Law and Beer's Law • Different wavelength selectors and their importance • Instrumentation and working of single and double beam spectrophotometer • Additivity Principle • Different methods of color comparators Applications • Numerical Problems • Voltammetry and polarography as an analytical tool • Construction, working, advantages and disadvantages of DME • Different terms involved in Ilkovic equation • Determination of Zn and Cd from the mixture • Significance of the different terms involved. • Need of removal of dissolved oxygen from analyte solution • Applications and numerical problems • Atomic absorption spectroscopy as an analytical tool • Measurement of absorbance of atoms by AAS. • Interferences in atomic absorption spectroscopy • Applications and numerical problems • Emission spectroscopy as an analytical tool • Measurement of emission of atomic species

		• Different methods of analysis • Application and numerical problems.
T.Y.B.Sc.	**Industrial Chemistry (CH-335)**	**1. Modern Approach to Chemical Industry** The students are expected to learn; • Importance of chemical industry, • Meaning of the terms involved, • Comparison between batch and continuous process, • Knowledge of various industrial aspects **2. Agrochemicals** Students should know the • Various insecticides, • Pesticides, • Fungicides, • Rodenticides &biopesticides used in agriculture field with their synthesis and applications. **3. Manufacture of Basic Chemicals** Students should know the • Concept of basic chemicals, • Their uses and manufacturing process. • They should also know the physic chemicals principals involved in manufacturing process **4. Petrochemicals and eco-friendly fuels** • Introduction, occurrence, composition of petroleum, resources, processing of petroleum, other properties • Fuels and eco-friendly fuels, use of solar energy etc. **5. Food and Starch Industry** • **Food Industry:** • Students should know • Scope, • Nutritive aspects of food constituents, • Quality factors and their measurements, • Food deterioration factors and their control; • Food preservation and Food additives **Starch Industry**: Students should know about the • Chemistry of starch, • Manufacturing of industrial starch and its applications, • Characteristics of some food starches, • Non-starch polysaccharides-cellulose-occurrence **6. Cement and Glass industry** • **Cement industry** The students are expected to

		• Learn importance of these industries, • Manufacture of cement by modern methods • Definition of setting and hardening • Reinforced concrete **Glass industry** • The students are expected • To learn about making of glass by different methods, • Various operations involved in the manufacture and compositions, • Properties and uses of special glasses.
T.Y.B.Sc.	**CH-346D Environmental and Green Chemistry**	Students should know. • Importance and conservation of environment. Knowing Segments of atmosphere • Hazards of flue gases • Ozone depletion • Ecological changes due to hazardous gases • Understand the social issues • Water resources • Quality of potable water • WHO limits for toxic materials in water stream • Quality measures • Need of green chemistry technology • Principles of green chemistry • Advantages of green chemistry • Simple examples to clarify the principles • Catalytic routes for sustainable developments

Program Outcomes, Program Specific Outcomes & Course specific Outcomes

Department of Physics

Program Outcome: B.Sc. (Physics)	
1.	To help students to learn various experimental and computational tools thereby developing analytical abilities to address real world problems.
2.	To enrich knowledge through problem solving, minor/major projects, seminars, tutorials, participation in scientific events, study visits, etc.
3.	To familiarize with recent scientific and technological developments.

Program Specific Outcome: B.Sc. (Physics)	
1.	To help students to build-up a progressive and successful career in Physics.
2.	To foster scientific attitude, provide in-depth knowledge of scientific and technological concepts of Physics.
3.	To create foundation for research and development in Physics.

Course Outcomes of B.Sc. (Physics)

Class	Course title & Code	Course Outcome
F.Y.B.Sc.	Mechanics and Properties of Matter (PHY-111)	1. Demonstrate an understanding of Newton's laws and applying them in calculations of the motion of simple systems. 2. Use the free body diagrams to analyze the forces on the object. 3. Understand the concepts of energy, work, power, the concepts of conservation of energy and be able to perform calculations using them. 4. Understand the concepts of elasticity and be able to perform calculations using them. 5. Understand the concepts of surface tension and viscosity and be able to perform calculations using them. 6. Use of Bernoulli's theorem in real life problems.

		7. Demonstrate quantitative problem solving skills in all the topics covered.
	Physics Principles and Applications (PHY-112)	1. To understand the general structure of atom & spectrum of hydrogen atom. 2. To understand the atomic excitation and LASER principles. 3. To understand the bonding mechanism and its different types. 4. To demonstrate an understanding of electromagnetic waves and its spectrum. 5. Understand the types and sources of electromagnetic waves and applications. 6. To demonstrate quantitative problem solving skills in all the topics covered.
	Physics Laboratory-IA (PHY-112)	1. Use various instruments and equipment. 2. Design experiments to test a hypothesis and/or determine the value of an unknown quantity. 3. Investigate the theoretical background of an experiment. 4. Setup experimental equipment to implement an experimental approach. 5. Analyze the data, plot appropriate graphs and reach conclusions from data analysis. 6. Work in a group to plan, implement and report on an experiment. 7. Keep a well-maintained and instructive laboratory Practical book.
	Heat and Thermodynamics (PHY-121)	1. Describe the properties of and relationships between the thermodynamic properties of a pure substance. 2. Describe the ideal gas equation and its limitations. 3. Describe the real gas equation. 4. Apply the laws of thermodynamics to formulate the relations necessary to analyze a thermodynamic process. 5. Analyze the heat engines and calculate thermal efficiency. 6. Analyze the refrigerators, heat pumps and calculate coefficient of performance. 7. Understand property 'entropy' and derive some thermo dynamical relations using entropy concept. 8. Understand the types of thermometers and their usage
	Electricity and Magnetism (PHY-122)	1. To understand the concept of the electric force, electric field and electric potential for stationary charges. 2. Able to calculate electrostatic field and potential of charge distributions using Coulomb's law and Gauss's law. 3. To understand the dielectric phenomenon and effect of electric field on dielectric.

		4. To Study magnetic field for steady currents using Biot-Savart and Ampere's Circuital laws. 5. To study magnetic materials and its properties. 6. Demonstrate quantitative problem solving skills in all the topics covered.
	Physics Laboratory-IB (PHY-123)	1. Use various instruments and equipment. 2. Design experiments to test a hypothesis and/or determine the value of an unknown quantity. 3. Investigate the theoretical background of an experiment. 4. Setup experimental equipment to implement an experimental approach. 5. Analyze the data, plot appropriate graphs and reach conclusions from data analysis. 6. Work in a group to plan, implement and report on a project/experiment. 7. Keep a well-maintained and instructive laboratory Practical book.
S.Y.B.Sc.	Mathematical Methods in Physics I (PHY-231)	1. To understand the complex algebra useful in physics courses. 2. Tounderstand the concept of partial differentiation. 3. To understand the role of partial differential equations in Physics. 4. To understand vector algebra useful in mathematics and Physics. 5. To understand the concept of singular points of differential equations.
	Electronics I (PHY-232)	1. Apply different theorems and laws to electrical circuits. 2. To understand the relations in electricity. 3. To understand the parameters, characteristics and working of transistors. 4. To understand the functions of operational amplifiers. 5. Design circuits using transistors and applications of operational amplifiers. 6. To understand the Boolean algebra and logic circuits.
	Physics Laboratory-2A (PHY-233)	8. Use various instruments and equipment. 9. Design experiments to test a hypothesis and/or determine the value of an unknown quantity. 10. Investigate the theoretical background of an experiment. 11. Setup experimental equipment to implement an experimental approach. 12. Analyze the data, plot appropriate graphs and reach conclusions from data analysis. 13. Work in a group to plan, implement and report on a project/experiment. 14. Keep a well-maintained and instructive laboratory Practical book.

	Oscillations, Waves and Sound (PHY-241)	1. To study underlying principles of oscillations and it's scope in development 2. To understand and solve the equations / graphical representations of motion for simple harmonic, damped, forced oscillators and waves. 3. To explain oscillations in terms of energy exchange with various practical applications. 4. To solve numerical problems related to undamped, damped, forced oscillations and superposition of oscillations. 5. To study characteristics of sound, decibel scales and applications.
	Optics (PHY-242)	1. Acquire the basic concept of wave optics. 2. Describe how light can constructively and destructively interfere. 3. Explain why a light beam spread out after passing through an aperture. 4. Summarize the polarization characteristics of electromagnetic wave. 5. Understand the operation of many modern optical devices that utilize wave optics 6. Understand optical phenomenon such polarization, diffraction and interference in terms of the wave model. 7. Analyze simple example of interference and diffraction
	Physics Laboratory-2B (PHY-243)	1. Use various instruments and equipment. 2. Design experiments to test a hypothesis and/or determine the value of an unknown quantity. 3. Investigate the theoretical background of an experiment. 4. Setup experimental equipment to implement an experimental approach. 5. Analyze the data, plot appropriate graphs and reach conclusions from data analysis. 6. Work in a group to plan, implement and report on a project/experiment. 7. Keep a well-maintained and instructive laboratory Practical book.
T.Y.B.Sc.	Mathematical Methods in Physics II (91213)	1. To understand Cartesian, Spherical polar and Cylindrical co-ordinate systems, transformation equations. 2. To understand General Curvilinear co-ordinate system: Co-ordinate surface, co-ordinate lines, length, surfaces and volume elements in curvilinear co-ordinate system, metric coefficient. 3. To know the Newtonian relativity, Postulates of special relativity, Michelson-Morley experiment,Mass-energy relation. 4. Can solve Frequently occurring partial differential equations, degree, order, linearity and homogeneity 5. To understand Legendre,Hermite Polynomials, Recurrence relations, their differential equations and orthogonality properties. Bessel function of first kind and their properties. 6. Demonstrate quantitative problem solving skills in all the topics covered.

	Solid State Physics (91223)	1. Can explain & understand crystal system, 2-D,3-D Bravaislattics, Miller indices, Crystal Structures & concept of Reciprocal lattice. 2. Can explain & understand Bragg's diffraction condition, different experimental methods. 3. Can explain & understand free electron model, Fermi energy, Fermi level, Hall Effect and origin of energy gap and difference between metal, Semiconductor and insulators. 4. Can explain & understand different types of magnetic material and its applications. 5. Can explain & understand occurrence of Superconductivity, Meissner effect, Curie temperature Neel temperature and critical temperature. 6. Developed problem solving Skill.
	Classical Mechanics (91233)	1. To understand the concepts of Applications of Newton's laws of motionProjectile motion in various medium, Rocket motion, Motion of a charged particle in constant electric, magnetic and electromagnetic field. 2. Can solve Central force, equivalent one body problem , Motion in central force field. 3. To know Elastic and inelastic scattering, Elastic scattering - Laboratory and centre of mass system. Scattering, 4. Limitations of Newtonian formulation 2 Types of constraints, degrees of freedom, generalized coordinates, configuration space D' Alembert's principle of virtual work ,Langrangian equation from D' Alembert's principle, cyclic coordinates 5. Able to develop quantitative problem solving skills in all the topics covered
	Atomic and Molecular Physics (91243)	1. To understand the general structure of atom & spectrum of hydrogen atom. 2. Understand Zeeman effect, Raman effect &Stark effect. 3. Understand rotational, vibrational and vibrational –rotational spectra. 4. Understand production of X-ray and its applications 5. Developed problem solving Skill.
	Computational Physics (91253)	1. Able to understand Concepts of programming like algorithm, flow charts,etc. 2. To know the Structure of C program, Character set, key words, Constants andvariables, Variable names, Data types and their declarations, Symbolic Constants. 3. To use the Arrays and Pointers in C, User Defined Function in C, Graphics in C while writing the program. 4. Able to find out Errors in Computation: Inherent errors in storing numbers due to finite bit representation to use in Computer, Truncation error, round

		off errors. 5. Able to write program independently and correct the errors occurred in program.
	Renewable Energy Sources (912E3)	1. To understand Solar Constant, Structure and characteristics of sun. 2. To understand renewable and nonrenewable sources of energy. 3. To understand how windmill, solar cooker, solar drier, solar distillation work. 4. To understand Photothermal applications 5. To understandPhotovoltaic systems 6. To understandadvantages and disadvantage of floating and fixed dome type plant and Working of biogas plant, 7. To understand working of solar cell 8. Developed problem solving Skill
	Classical Electrodynamics (91214)	1. To understand the concept of the electric force, electric field and electric potential for stationary charges. 2. Able to calculate electrostatic field and potential of charge distributions using Coulomb's law and Gauss's law. 3. To understand the dielectric phenomenon and effect of electric field on dielectric. 4. To Study magnetic field for steady currents using Biot-Savart and Ampere's Circuital laws. 5. To study magnetic materials and its properties 6. To understand Maxwell's equations. 7. Developed problem solving Skill.
	Quantum Mechanics (91224)	1. Able to understand the Origin of Quantum Mechanics. 2. Can understand and solve problems related with Physical interpretation of wave function , Schrodinger time dependent equation, Schrodinger time independent equation. 3. To understand Applications of Schrodinger Steady state equation Like Free particle, Particle in infinitely deep potential well, Particle in three dimension rigid box, Step potential, Potential barrier, Barrier penetration and tunneling effect, Harmonic oscillator. 4.To understand the Operators in Quantum Mechanics. 5. Demonstrate quantitative problem solving skills in all the topics covered.
	Thermodynamics and Statistical Physics (91234)	1. To understand basics of Kinetic Theory of Gases. 2. Able to interpret Maxwell Relations and Application. 3. To understand Elementary Concepts of Statistics,Probability, distribution functions, Random Walk and Binomial distribution, Simple random walk problem.

		4. To know the concepts of Statistical Distribution of System of Particles: 5. To understand the concepts of Quantum Statistics, Quantum distribution function, Maxwell-Boltzmann's statistics, Bose-Einstein Statistics, Fermi Dirac Statistics, Comparison of the distributions.
	Nuclear Physics (91244)	1. To understand basic nuclear properties. 2. To understand radioactivity disintegration, half-life, specific activity, successive disintegration and application of radioactivity. 3. To understand meson theory of nuclear forces, elementary particle and quarks model, 4. To understand working of Linear accelerators, Cyclotron, Gas filled detector & solid state detector. 5. To understand compound nucleus, Q-value equation, exothermic and endothermic nuclear reactions. 6. To understand nuclear fission, fusion, chain reaction. 7. To understand working and construction of Power reactor, 8. Developed problem solving Skill.
	Electronics (91254)	1. To understand Special Purpose of diodes (LED, Photodiode, Varactor and Optocupler.) 2. To understand the parameters, characteristics and working of transistors. 3. To understand the parameters, characteristics and working of JFET, MOSFET, CMOS and Application of FET. 4. To understand the functions of operational amplifiers. 5. To understand the functions of Astable, Monostable and Bistable Multivibrator. 6. To understand the functions of IC- Regulator, IC-78XX and 79XX. 7. To understand the digital non-memory and memory types combinational and Sequential circuits respectively.
	Lasers (912K5)	1. Able to understand the concepts of Ordinary light and Lasers, Brief history of Lasers, Interaction of radiation with matter, Energy levels, Population density, Boltzmann distribution, 2. To know the Transition Lifetimes, Allowed and Forbidden Transitions, Stimulated Absorption, Spontaneous Emission and Stimulated Emission, Einstein's Coefficients, Einstein's relations 3. To understand the Laser Action. 4. To know the Laser Output 5. To demonstrate the Characteristics of Laser, Directionality, Monochromaticity Coherence Brightness. 6. Able to perform experiments regarding lasers.
	Laboratory Course I (91274)	1. Use various instruments and equipment. 2. Design experiments to test a hypothesis and/or determine the value of an unknown quantity. 3. Investigate the theoretical background of an experiment.

		4. Setup experimental equipment to implement an experimental approach. 5. Analyze the data, plot appropriate graphs and reach conclusions from data analysis. 6. Work in a group to plan, implement and report on a experiment.
	Laboratory Course II (91284)	1. Use various instruments and equipment. 2. Design experiments to test a hypothesis and/or determine the value of an unknown quantity. 3. Investigate the theoretical background of an experiment. 4. Setup experimental equipment to implement an experimental approach. 5. Analyze the data, plot appropriate graphs and reach conclusions from data analysis. 6. Work in a group to plan, implement and report on a experiment.
	Laboratory Course III (Project) (91294)	1. Use various instruments and equipment. 2. Design experiments to test a hypothesis and/or determine the value of an unknown quantity. 3. Investigate the theoretical background of an experiment. 4. Setup experimental equipment to implement an experimental approach. 5. Analyze the data, plot appropriate graphs and reach conclusions from data analysis. 6. Work in a group to plan, implement and report on a project. 7. To enrich knowledge through problem solving, projects, review of research articles/papers, participation in scientific events, study visits, etc. 8. To help students to learn various experimental and computational tools thereby developing analytical abilities to address real world problems.

Maratha Vidya Prasarak Samaj's
Arts, Commerce and Science College, Taharabad
Tal. Baglan, Dist. Nashik

Department of Marathi -2023-2024

Course Outcomes (COs) of Bachelor of Arts (B.A. B.Com.and B.Sc.)

Class	Course	Course Outcomes
FYBA G.1	**Marathi sahitykatha and Akankika**	CO.1. To familiarize students with excellent pieces of prose and poetry in Marathi so that they realize the beauty and communicative power of Marathi
		CO.2. To expose them to native cultural experiences and situations in order to develop humane values and social awareness
		CO.3. To develop overall linguistic competence and communicative skills of the students
SYBA (G.-2)	**Adhunik Marathi sahity and Upyojit Marathi**	CO.1 To expose students to the basics of short story, one of the literary forms
		CO.2 To familiarize them with different types of short stories in Marathi
		CO.3 To make them understand the literary merit, beauty and creative use of language
		CO.4 To introduce some advanced units of language so that they become aware of the technical aspects and their practical usage
		CO.5 To prepare students to go for detailed study and understanding of literature and language
		CO.6 To develop integrated view about language and literature in them
SYBA (S-1)	**Atamcharitra andmadyaugin Marathi gaday and paday**	CO.1. To acquaint and familiarize the students with the terminology in Drama Criticism (i.e. the terms used in Critical Analysis and Appreciation of Drama)
		CO.2. To encourage students to make a detailed study of a few sample masterpieces of marathi Drama from different parts of the world
		CO.3. To develop interest among the students to appreciate and analyze drama independently
		CO.4. To enhance students awareness in the aesthetics of Drama and to empower them to evaluate drama independently

Maratha Vidya Prasarak Samaj's
Arts, Commerce and Science College, Taharabad
Tal. Baglan, Dist. Nashik

Department of Marathi -2023-2024

Course Outcomes (COs) of Bachelor of Arts (B.A. B.Com.and B.Sc.)

Class	Course	Course Outcomes
FYBA G.1	**Marathi sahitykatha and Akankika**	CO.1. To familiarize students with excellent pieces of prose and poetry in Marathi so that they realize the beauty and communicative power of Marathi
		CO.2. To expose them to native cultural experiences and situations in order to develop humane values and social awareness
		CO.3. To develop overall linguistic competence and communicative skills of the students
SYBA (G.-2)	**Adhunik Marathi sahity and Upyojit Marathi**	CO.1 To expose students to the basics of short story, one of the literary forms
		CO.2 To familiarize them with different types of short stories in Marathi
		CO.3 To make them understand the literary merit, beauty and creative use of language
		CO.4 To introduce some advanced units of language so that they become aware of the technical aspects and their practical usage
		CO.5 To prepare students to go for detailed study and understanding of literature and language
		CO.6 To develop integrated view about language and literature in them
SYBA (S-1)	**Atamcharitra andmadyaugin Marathi gaday and paday**	CO.1. To acquaint and familiarize the students with the terminology in Drama Criticism (i.e. the terms used in Critical Analysis and Appreciation of Drama)
		CO.2. To encourage students to make a detailed study of a few sample masterpieces of marathi Drama from different parts of the world
		CO.3. To develop interest among the students to appreciate and analyze drama independently
		CO.4. To enhance students awareness in the aesthetics of Drama and to empower them to evaluate drama independently

SYBA (S-2)	**Sahityvichar and Sahitya Samiksha**	CO1 To acquaint and familiarize the students with the terminology in history criticism (i.e. the terms used in critical analysis and appreciation of poems and sahity.)
		CO.2 To encourage students to make a detailed study of a few sample masterpieces of Marathi
		CO.3To enhance students awareness in the aesthetics of poetry and to empower them to read, appreciate and critically evaluate the history independently
TYBA (G-3)	**Aadhunik Marathi sahitya ani vyavaharik v upyojit Marathi**	CO.1 To expose students to some of the best samples of Indian Marathi
		CO.2 To make the students see how Indian expresses the ethos and culture of India
		CO.3 To make them understand creative uses of language in Indian Marathi sahity
		CO.4 To introduce students to some advanced areas of language study
		CO.5 To introduce students to some advanced areas of language study
		CO.6 To prepare students to go for detailed study and understanding of literature and language
		CO.7 To develop integrated view about language and literature among the students
TYBA (S-3)	**Madyaugin Marathi WangmayachaSthulEthihas 1and 2 Sem.Prarambh te1600, 1600 te1817**	CO.1To introduce students to the basics of as a literary form
		CO.2 To expose students to the historical development and nature of
		CO.3 To make students aware of different types and aspects of
		CO.4To develop literary sensibility and sense of cultural diversity in students
		CO.5 To expose students to some of the best exam.
TYBA (S-4)	**Bhashavidnyan : Varnanatmak v Atihasik Bhag-1va 2**	CO.1To introduce students to the basics of literary bhashavichar
		CO.2 To make them aware of the nature and historical development ofbhasik criticism
		CO.3To make them familiar with the significant Bhasikvichar approaches and terms
		CO.4To encourage students to interpret literary works in the light of the critical approaches
		CO.5To develop aptitude for critical analysis
F.Y.B.C.om Add.marathi	**Utakarshvata and Upyojit Marathi**	CO.1 To offer students good pieces of prose and Article so that they realize the beauty and communicative power of Marathi

		CO.2 To expose them to native cultural experiences and situations so that they understand the importance and utility of Marathi language
		CO.3 To develop overall linguistic competence and communicative skills among the students
		CO.4 To develop oral and written communicative skills among the students so that their employability enhances and Marathi becomes the medium of their livelihood and personality
SYBSC	**Marathi**	1.To develop oral and written communicative skills among the students so that their employability enhances and Marathi becomes the medium of their livelihood and personality . 2 To expose them to native cultural experiences and situations so that they understand the importance and utility of Marathi language. 3. To develop overall linguistic competence and communicative skills of the students 4To encourage students to interpret literary works in the light of the critical approaches

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Department Of Hindi 2023-2024

Course Out comes	
Class: -	
FYBA Hindi General Paper-1 (G1)	1.Get familiarized to basic writing in Hindi.
	2. Generate interest in Hindi literature
	3. Get familiarized various types of literature
SYBA Hindi General Paper-2 (G2)	1. Acquire ability to appreciate stories
	poems and plays in Hindi
	2. Understand various genres in Hindi literature.
	3. Get acquainted with the socio-political
	contexts of various Hindi writers
	4. Understand nationalistic values
	through the study of Hindi literature
SYBA Hindi Special Paper-1 (S1)	1. Get acquainted with literary critical
	terminology used in Hindi language.
	2. Augment translation skill of various
	types of texts from different languages.
	3. Acquire skills of drafting official and
	Scientific documents in Hindi.
SYBA Hindi Special Paper-2 (S2)	1. Get acquainted with literary critical

	terminology used in Hindi language.
	2. Augment translation skill of various
	types of texts from different languages.
	3. Acquire skills of drafting official and
	Scientific documents in Hindi.
TYBA Hindi General Paper-III (G-3)	1. Get acquainted with literary critical
	terminology used in Hindi language.
	2. Augment translation skill of various
	types of texts from different languages.
	3. Acquire skills of drafting official and
	Scientific documents in Hindi.
TYBA Hindi Special Paper-3 (S3)	1. Get acquainted with literary critical
	terminology used in Hindi language.
	2. Augment translation skill of various
	types of texts from different languages.
	3. Acquire skills of drafting official and
	Scientific documents in Hindi.
TYBA Hindi Special Paper-4 (S4)	1. Get acquainted with literary critical
	terminology used in Hindi language.
	2. Augment translation skill of various
	types of texts from different languages.
	3. Acquire skills of drafting official and
	Scientific documents in Hindi.

Head, Department of Hindi

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Department of Hindi
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Arts, Commerce and Science College, Taharabad

Tal. Baglan, Dist. Nashik

Department of English-2023-24

Course Outcomes (COs) of Bachelor of Arts (B.A.) and Bachelor of Commerce (B.Com.)

Class	Course	Course Outcomes
FYBA Compulsory English	Literary Gleam: An Anthology of Prose & Poetry	CO.1. To familiarize students with excellent pieces of prose and poetry in English so that they realize the beauty and communicative power of English
		CO.2. To expose them to native cultural experiences and situations in order to develop humane values and social awareness
		CO.3. To develop overall linguistic competence and communicative skills of the students
FYBA Optional English	Initiations- Minor Literary Forms & Basics of Phonology (G-1)	CO.1. To expose students to the basics of literature and language
		CO.2 To familiarize them with different types of literature in English, the literary devices and terms so that they understand the literary merit, beauty and creative use of language
		CO.3. Understood the important features of Indian population and its obstacles to the development process.
		CO.4 To introduce the basic units of language so that they become aware of the technical aspects and their practical usage
		CO.5 To prepare students to go for detailed study and understanding of literature and language.
		CO.6 To develop integrated view about language and literature in them
SYBA Compulsory English	Panorama – Values & Skill Through Literature	CO.1 To develop competence among the students for self-learning
		CO.2 To familiarize students with excellent pieces of prose and poetry in English so that they realize the beauty and communicative power of English
		CO.3 To develop students' interest in reading literary pieces
		CO.4 To expose them to native cultural experiences and situations in order to develop humane values and social awareness
		CO.5 To develop overall linguistic competence and communicative skills of the students
SYBA Optional English (Old-G-2)	Advanced Study of English Language	CO.1 To familiarize students with the various components of language
		CO.2 To develop overall linguistic competence of the students

Skill Enhancement Course-SEC-1A		CO.3 To introduce students to some advanced areas of language study
		CO.4 To prepare students to go for detailed study and understanding of language
SYBA Optional English (Old-S-1) Discipline Specific Course (DSC-1A)	Appreciating Drama	CO.1. To introduce Drama as a major form of literature
		CO.2. To introduce minor forms of Drama
		CO.3. To acquaint and enlighten students regarding the literary and the performing dimensions of drama
		CO.4. To acquaint and familiarize the students with the elements and the types of Drama
		CO.5. To encourage students to make a detailed study of a few sample masterpieces of English Drama from different parts of the world
		CO.6. To develop interest among the students to appreciate and analyze drama independently
		CO.7. To enhance students awareness in the aesthetics of Drama and to empower them to evaluate drama independently
SYBA Optional English (old S-2) Discipline Specific Course (DSC-2A)	Appreciating Poetry	CO1 To acquaint and familiarize the students with the terminology in poetry criticism (i.e. the terms used in critical analysis and appreciation of poems)
		CO.2 To encourage students to make a detailed study of a few sample masterpieces of English poetry
		CO.3 To enhance students awareness in the aesthetics of poetry and to empower them to read, appreciate and critically evaluate the poetry independently
TYBA Compulsory English CC-Core Course- 03 Credit	Exploring New Horizons	CO.1 To familiarize students with some excellent pieces of prose and poetry in English so that they realize the beauty and communicative power of English. CO.2. To enable students to become competent and effective users of English in real life situations.
		CO.3. To contribute to the overall personality development of the students.
		CO.4. To instill humanitarian values and foster sympathetic attitude in the students.
		CO.5. To train the students in practical writing skills required in work environment.
		CO.6. To impart knowledge of some essential soft skills to enhance their employability.
TYBA Optional English (Old-G-3)	Enhancing Employability Skills	CO.1 To get the awareness of career opportunities available to them.
		CO.2 To identify the career opportunities suitable to them.

Skill Enhancement Course (SEC 1-C & SEC 1-D)		CO.3 To understand the use of English in different careers.
		CO.4 To develop competence in using English for the career of their choice.
		CO.5 To enhance skills required for their placement.
		CO.6 To use English effectively in the career of their choice.
		CO.7 To exercise verbal as well as nonverbal communication effectively for their career.
TYBA Optional English (Old-S-3) Discipline Specific Elective (DSE-1C& DSE-1D)	Appreciating Novel	CO.1To introduce students to the basics of novel as a literary form
		CO.2 To expose students to the historical development and nature of novel
		CO.3 To make students aware of different types and aspects of novel
		CO.4 To develop literary sensibility and sense of cultural diversity in students
		CO.5 To expose students to some of the best examples of novel
TYBA Optional English (S-4) Discipline Specific Elective (DSE-2C & DSE-2D)	Introduction to Literary Criticism	CO.1To introduce students to the basics of literary criticism
		CO.2 To make them aware of the nature and historical development of criticism
		CO.3 To make them familiar with the significant critical approaches and terms
		CO.4 To encourage students to interpret literary works in the light of the critical approaches
		CO.5 To develop aptitude for critical analysis
F.Y.B.C.om Compulsory English	Success Avenue	CO.1 To offer relevant and practically helpful pieces of prose and poetry to students so that they not only get to know the beauty and communicative power of English but also its practical application
		CO.2 To expose students to a variety of topics that dominate the contemporary socio-economic and cultural life
		CO.3 To develop oral and written communication skills of the students so that their employability enhances
		CO.4 To develop overall linguistic competence and communicative skills of students

S.Y. B. Sc. Optional English Ability Enhancement Compulsory Course-AECC	Horizons- English In Multivalent Contexts	CO.1 To introduce the use of English in multimedia
		CO.2 To acquaint the students with the language skills in multivalent contexts
		CO.3 To acquaint and enlighten students regarding the speaking skill in various contexts
		CO.4 To acquaint and familiarize the students with advanced writing skills in different contexts
		CO.5 To acquaint and familiarize the students with soft skills
		CO.6 To minimize the gap between the existing communicative skills of the students and the skills they require at professional level
		CO.7 To develop competence among the students to appreciate and analyse short stories and poetry

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NAAC Accredited 'B' GradewithCGPA-2.23 AISHE:C-41305

Department of Political Science

Academic Year 2023-2024

Programme	Program Outcomes
Bachelor of Arts degree (B.A) After completing the B.A degree, students are able to	PO1 Go for higher education such as M A , MBA, LLB, Journalism and Mass Communication & MSW.
	PO2 Prepare for various Competitive Exams such as UPSC,MPSC, SSC, LIC, BANK, Railway Recruitment
	PO3 Prepare for NET SET Examinations
	PO 4 Go for professional education such as B. Ed., M.Ed., etc.
	PO 5 Apply for TKT (Teachers Knowledge Test)

HOD

Dept. of Political Science

Head

Department of Political Science

M.V.P's Arts,Commerce & Science

CollegeTaharabad Tal.Baglan (Nashik)

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Course Objectives and Outcomes - Political Science

FYBA - Course No. G 1

Introduction to Indian Constitution **(2023-2024)**

Syllabus	Objectives	Outcomes
Introduction to Indian Constitution **Semester-I** Unit 1: Making of the Indian Constitution a)Historical Background b) Constituent Assembly c) Preamble d) Salient Features Unit 2: Fundamental Rights, Duties and Directive Principles a) Fundamental Rights b) Fundamental Duties c) Directive Principles of State Policy Unit 3: Federalism a) Salient Features of Indian Federalism b) Centre –State Relations c) Issues of Conflict (Water and Border Issues) Unit 4: Constitutional Amendments: Scope and Limitations a) Constitutional Provisions b) Major Constitutional Amendments (42, 44 & 86) c) Basic Structure of the Indian Constitution **Semester- II** Unit5: Legislature a) Union Legislature – Structure, Powers and Role b) State Legislature – Structure, Powers and Role Unit6: Executive a) Union Executive – i) President and Vice President– Powers, Functions and Role ii) Prime Minister - Powers, Functions and Role iii) Council of Minister – Powers and Functions and	1). To acquaint students with the important features of the Constitution of India and with The basic framework of Indian government. 2). To familiarize students with the working of the Constitution of India. 3) This paper focuses in detail on the political processes and the actual functioning of the political system. It simultaneously studies in detail the political structure both Constitutional and Administrative. 4) the major contradictions of the Indian Political Process are to be critically analyzed along with an assessment of its relative success and failure	Students develop the basic understanding of Indian Constitution. The concept of fundamental rights is systematically grasped. The importance of rights based approach is properly appreciated. The concept of federalism is comprehensively understood and the salient features are studied. A clear understanding of the structure of government is attained. The role and nature of judiciary is correctly grasped. The structure of state government is clearly understood and the various functions recognized. True appreciation of the functions and powers of the state the nature of party system and elections is comprehensively understood

Role b) State Executive- i) Governor - Powers, Functions and Role ii) Chief Minister – Powers, Functions and Rol iii) Council of Minister – Powers and Functions and Role Unit7: Judiciary a) Supreme Court : Powers and Functions b) High Court : Powers and Functions c) Judicial Review and Judicial Activism Unit8: Electoral System a) Election Commission: Composition, Functions and Role b) Chief Election Commissioner c) Electoral reforms		

SYBA - Course No. G 2

Paper Title: Introduction to Political Science

Syllabus	Objectives	Outcomes
Semester- I **Unit 1: The Study of Political Science** a) Definition b) Nature c) Scope **Unit 2: Approaches to Study Political Science** a) Normative b) Empirical c) Feminist **Unit 3: Basic Concepts** a) The State b) The Market c) The Civil Society **Unit 4: Democracy 11** a) Representative b) Deliberative c) Participatory	Important sub themes of Political Science as a discipline. Approaches to study Political Science. Basic Concepts and Values in Political Science This is an introductory paper to the concepts, ideas and theories in political Science. It seeks to explain the evolution and usage of these concepts, ideas and Theories with reference to individual thinkers both historically and analytically. The different ideological standpoints with regard to various concepts and theories are to be critically explained with the purpose of highlighting the differences in Their perspectives and in order to understand their continuity and change. Furthermore there is a need to emphasize the continuing relevance of these concepts	The definition of political Science is systematically grasped · The perspectives on state are properly understood by the students. · The role and nature of state and market and civil Society is correctly realized. · The concepts of Democracy and authority are systematically followed and the differences are recognized. · An understanding about rights and justice is arrived at and conceptual capacity to analyze the relationships is developed. · The concepts of liberty and equality are comprehensively understood and the salient features are studied.

Semester- II **Unit 5: Basic Political Values** a) Liberty b) Equality c) Justice **Unit 6: Rights** a) Definition and Meaning b) Types c) Challenges **Unit 7: Ideologies** a) Nationalism b) Socialism c) Fascism **Unit 8: International Organizations** a) United Nations – Structures, Functions and Challenges b) Regional – EU, SAARC, OPEC, NATO c) MNCs	today and explain how an idea and theory of yesteryears gains prominence in contemporary political theory	· True appreciation of the concept of democracy is arrived at and students understand the differences between the two types. . International organization nature of globalization is understood by the students and various ramifications are perceived.

Course Outcomes at SYBA Political Science Course No. S 1
(Special paper 1)
Paper Title: Western Political Thought

Syllabus	Objectives	Outcomes
Semester- I **Unit 1: Plato** a) Ideal State b) View on Education c) Theory of Justice **Unit 2: Aristotle** a) Classification of the State b) Views on Slavery c) Theory of Revolution **Unit 3: Machiavelli** a) Human Nature b) Attitude towards Religion and Morality c) Views on State **Unit 4: Locke 11** a) State of Nature b) Natural Rights	This paper studies the classical tradition in political theory from Plato to Marx with the view to understand how the great Masters explained and analyzed political events and problems of their time and prescribed solutions. The texts are to be interpreted both in the universality of the enterprise of political theorizing. The limitations of the classical tradition, namely its neglect of women's concerns and issues and the non-European world are critically examined. The legacy of the thinkers is explained with the view to establish the continuity and change within the Western political tradition.	The various ideologies develop by the Western political thinkers are comprehensively understood and the salient features are studied. · The concept of slavery is systematically grasped. · The views on human nature and religion and morality are grasped by the students. · The concept of utilitarianism is Comprehensively understood and its implications are realized. · Views on Representative Government & State are eveloped. · The concept of historical

c) Theory of Social Contract **Semester- II** **Unit 5: Rousseau** a) State of Nature b) General Will c) Theory of Social Contract **Unit 6: Hegel** a) Idealism b) Theory of State c) Views on Freedom **Unit 7: J. S. Mill** a) Views on Liberty b) Representative Government c) Views on Utilitarianism **Unit 8: Karl Marx** a) Historical Materialism b) Class Struggle c) Theory of State and Revolution		materialism is systematically understood. · The theory of class struggles is properly grasped. · An understanding about the social contract and nature of rights is arrived at and conceptual capacity to analyze the relationships is developed.

Course Outcomes at SYBA Political Science
Course No. S 2
Paper Title: Political Journalism

Syllabus	Objectives	Outcomes
Semester- I **Unit 1: An introduction to Political Journalism** a) Definition and Meaning b) Nature c) Scope 2 **Unit 2: Agencies of Political Journalism** a) Print b) Electronic c) Web **Unit 3: History of Political Journalism 11**	1. Complex relationship between the communication, media and power politics. 2. Critical appraisal of practices of political image management, campaigns, propaganda and censorship. 3. Indian context of political Journalism	A clear understanding of the nature and scope of political Journalism is attained. · The importance of political Journalism is properly appreciated. · Students develop the basic understanding of political Journalism and the agencies of socialization. · The nature of political Journalism is comprehensively understood. · True appreciation of the need

a) Pre-Independence b) Post-Independence c) World History **Unit 4: Methods of Political Journalism** a) Reporting of Political Events b) Political Interview c) Commentary of Legislation **Semester- II** **Unit 5: Indian Political Process & Journalism** a) Role of Social Media in Political Process b) Election and Media: Loksabha and Maharashtra Vidhansabha 2014 and 2019 General Elections c) Political Parties and Social Media **Unit 6: Mediatisation of Politics** a) Definition and Meaning b) Practices c) Mediums **Unit 7: Media & Public Opinion** a) Definition and Meaning b) Practices c) Mediums **Unit 8: Challenges before Political Journalism** a) Increase of Paid News b) Party Spirited News Papers & Commercialization c) Media Saturation		for political participation is attained. · Students develop the basic understanding of political change processes.

S. Y. B. A. (Extra Credit)
BASICS OF INDIAN CONSTITUTION (SEC)

Syllabus	Objectives	Outcomes
UNIT – I **1. Making of the Indian Constitution** a) Historical Background b) Constituent Assembly	1) This paper focuses in detail on the political processes and the actual functioning of the political system.	-Students develop the basic understanding of Indian Constitution. The concept of fundamental rights is systematically grasped. - The importance of rights based approach is

c) Preamble d) Salient Features **UNIT - II** **2. Fundamental Rights** Major Fundamental Rights) Right to Equality b) Right to Liberty c) Right to Freedom of Religion d) Cultural and Educational Rights **SEMESTER – IV** **UNIT – I** **1. Fundamental Duties** a) Concept of Fundamental Duties b) Nature of Fundamental Duties c) Importance of Fundamental Duties **UNIT – II** **2. Directive Principles of State Policy** a) Concept of Directive Principles of State Policy b) Nature of Directive Principles of State Policy c) Significance of Directive Principles of State Policy	2) It emphasizes on local influences that derive from social stratification of castes and jatis, from language, religion, ethic and economic determinants and critically assesses its impact on the political processes.	properly appreciated.

Course Outcomes at TYBA Political Science
Course No. G-III
Paper Title: **Modern Political Analysis**

Syllabus	Objectives	Outcomes
Unit 1: Introduction to Modern Political Analysis a) Meaning b) Nature - Difference between Traditional and Modern Political Approach c) Features of Modern Political Analysis **Unit 2: Political System** a) Meaning and Nature b) Functions of the Political System c) Classification of Political System : Gabriel Almond	This course will introduce the overall scope of the sub-discipline of Modern Political Analysis. The focus of the course will be on the Modern Political Analysis of power. The emphasis is on the nature of power in modern societies- more in the form of organizations and social formations than as individual power.	The understanding meaning, nature and approaches to modern political Analysis · The importance of political culture is properly appreciated. · Students develop the basic understanding of political socialization, and the agencies of socialization. · The nature of political ideology is comprehensively understood.

d) **Unit 3: Political culture** a) Meaning b) Basic Elements c) Types d) **Unit 4: Political Socialization** a) Meaning b) Agencies c) Types **SEMESTER-VI** **Unit 1: Political Participation** a) Meaning & Nature b) Levels of Participation c) Factors affecting Political Participation **Unit 2: Political Elite** a) Meaning b) Nature c) Different approaches of Mosca, Michels, Pareto, Burnham and C. wright Mills **Unit 3: Political Communication** a) Meaning b) Nature c) Agencies of Political Communication **Unit 4: Power, Influence, Authority and Legitimacy** a) Meaning, Nature of Power and Influence b) Different Types of Authority c) Different Types of Legitimacy	Students are also expected to understand different forms of justifications of power and the role of ideology in this regard. State will be studied as a repository of power in society while class and patriarchy are two instance of how the nature of power is shaped by social factors.	· True appreciation of the need for political participation is attained. · Students develop the basic understanding of political change processes.

Course Outcomes at TYBA Political Science
Course No. S 3
Paper Title: Public Administration

Syllabus	Objectives	Outcomes
SEMESTER-V **Unit 1: Public Administration** a) Meaning b) Nature c) Scope and Significance **Unit 2: New Public Administration** a) Evolution b) Salient Features c) Goals **Unit 3: Approaches to Public Administration** a) Traditional Approach b) Behavioral Approach c) System approach	This paper is an introductory course in Public Administration. The essence of Public Administration lies in its effectiveness in translating the governing philosophy into programmes, policies and activities and making it a part of community living. The paper covers personnel public administration in its historical context thereby proceeding to highlight several of its categories, which have developed	· The meaning and nature of public administration is clearly understood and the various Functions recognized. · Clarity regarding the approaches to public Administration is attained. · True context of governance is understood and the idea of good governance is

Unit 4: Governance a) Idea of Good Governance b) E-Governance c) Public Private Partnership **SEMESTER-VI** **Unit 1: Bureaucracy 12** a) Meaning and Definitions b) Administrative Reforms **Unit 2: Personnel Administration** a) Recruitment b) Training c) Promotion **Unit 3: Budgeting** a) Meaning and types and Principles of sound Budget b) Budgetary Process in India c) Gender Budgeting **Unit 4: Accountability and Control** a) Administrative Accountability b) Legislative Control c) Judicial Control	administrative salience and capabilities to deal with the process of change. The recent developments and particularly the emergence of New Public Administrations are incorporated within the larger paradigm of democratic legitimacy. The importance of legislative and judicial control over administration is also highlighted.	Comprehended. · Proper appreciation of the functions and powers of the Bureaucracy is attained. · A clear understanding of the process of budgeting is attained. · The importance of accountability is properly appreciated.

Course Outcomes at TYBA Political Science

Course No. S 4

Paper Title: **International Relations**

Syllabus	Objectives	Outcomes
SEMESTER-V **Unit 1: Introduction to International Relations** a) Development and Meaning b) Nature c) Scope **Unit 2: Approaches to International Relations** a) Idealism b) Realism – Neo realism c) System approach d) Marxism **Unit 3: World War II and the Cold War** a) Causes and Consequences of the world war II b) Emergence of the cold war and its phase c) End of cold war and the emerging world order **Unit 4: International Organizations** a) The United Nations - its structure and peacekeeping Functions- Reforms of UN	This paper deals with concepts and dimensions of International Relations and makes an analysis of different theories highlighting the major debates and differences within the different theoretical paradigms. The dominant theories of power and the question of equity and justice, the different aspects of balance of power leading to the present situation of a unipolar world are included. It's highlights various aspects of conflict and conflicts resolution, collective security and in the	The nature of international politics is comprehensively understood. · True appreciation of the nature of international relations is realized. · The meaning and nature of power is grasped by the students and the concept of balance of power is understood. · An understanding about the role of international Organization and the relationships between regional and collective economical growth is developed.

b) International Financial institutions : World Bank, IMF, WTO c) Regional Organizations : EU, SAARC, ASEAN, BRICS **SEMESTER-VI** **Unit 1: The Theory of Non-Alignment** a) Meaning and basic principles of Non-Alignment b) Emergence of Non-Alignment c) Non-Alignment as a Movement d) Relevance of NAM In Post cold war period **Unit 2: Globalization** a) Meaning of Globalization b) Evolution and Impacts of Globalization c) Limits of Globalization d) Role of The state **Unit 3: International Political Economy** a) Neo-Colonialism b) New International Economic Order c) North-South Divide d) South-South Co-operation **Unit 4: Contemporary Global Issues 12** a) International Terrorism b) Environmental Issues c) Poverty, Development and Hunger d) Human Rights	specificity of the long period of the post second world war phase of the cold war, of Detent and Deterrence leading to theories of rough parity in armaments.	The nature of Non Alignments and Globalization are understanding Also challenges is appreciated. · The concept of international Economy systematically grasped. · True appreciation of the concept of terrorism, Environment and human rights is developed

Syllabus of T.Y.B.A. (Extra Credit)

Samyukta Maharashtra Movement (Value/Skill Based Course)

Syllabus	Objectives	Outcomes
SEMESTER – V **UNIT - I** **1. Regional Aspirations in India** a. Concept of Regionalism: Its Nature b. Genesis of Regionalism in India c. Indian National Congress and Regionalism **UNIT - II**	1. This Course is an introduction to the political process in Maharashtra with special reference to regionalism sub-regionalism and Samyukta Maharashtra Movement. 2. The aim of the course is that students are expected to understand both the historical evolution of Maharashtra's politics and	Students develop the basic understanding o Samyukta Maharashtra Movement . The concept of Samyukta Maharashtra Movement is systematically grasped. - The importance of Development of Maharashtra based approach is properly appreciated.

2. Samyukta Maharashtra Movement a. Emergence and Development of Regional Consciousness in Maharashtra b. Preferntial Treatment for the 'Sons of Soil' c. Difficulties in the Formation of Samyukta Maharashtra **SEMESTER – VI** **UNIT - I** **1. Samyukta Maharashtra Movement - II** a. Rethinking on the Bilingual Bombay state b. Formation of the Samyukta Maharashtra c. The aftermath of the formation of Samyukta Maharashtra **UNIT - II** **2. Emergence of Sub-Regionalism in Maharashtra** a. Regional Imbalance and Regional Development Boards b. Seperate Vidarbha State c. Marathwada Vikas Andolan	different analyses of politics of the state. 3. It tries to acquiant students with the main issues and concerns in the public life of a regional society as it shaped in the concept of colonialism, nationalism and modernity	The nature of Regional Imbalance and Regional Development Boards are understanding Also challenges is appreciated.

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MVP Samaj's

Arts, Commerce and Science College Taharabad.

Tal-Baglan, Dist-Nashik

Department of physics

Course outcome 2023-24

FYBSC:- (PHY-111) Mechanics and properties of matter

CO Number	CO Statement	Knowledge Level
CO1.	Learning the basics concepts of elasticity, surface tension, gravitation, Viscosity and sound	K1
CO2.	Understand the concepts of properties of matter and to recognise their applications in various real problems.	K2
CO3.	Describe the key evidence for the breakdown of the classical description Of the properties of matter.	K3
CO4.	Recall the principles and basic equations and apply them to unseen Problems.	K4
CO5.	Formulate the equations for unique cases in the diverse categories of material systems	K5

Course- PHY 112- Physics Principles and Applications

CO Number	CO Statement	Knowledge Level
CO1:	Students learn about an atom is made up of protons, neutrons and electron, how they arranged to make up an atom. They learn different atomic models, Atomic spectrum and types of spectrum.	K1
CO2:	Students learn about Different forces which hold atoms together to form a molecule. Different types of chemical and physical bonds like ionic, covalent, Van der Waal's bonds. Energy levels of rotational and vibrational diatomic molecule	K2
CO3:	Students will identify and compare the characteristics of electromagnetic spectrum including speed, wavelength and frequenc	K3
CO4:	Students will learn common uses and applications of electromagnetic waves.	K4

Ms. S. B. Ahire.

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Course outcome 2023-24

SYBSC

Course - PHY-231- Mathematical Method in Physics

CO Number	CO Statement	Knowledge Level
CO1:	Study of De Moivre's theorem includes understanding of determination of power of given complex number	K1
CO2:	Many times students come across the terms like divergence, curl and gradient but they don't understand their physical significance. From this course they will learn the concepts to a depth.	K2
CO3	Students can understand the use of the concept of partial differentiation in solving Physics situations which have more than one variable.	K3
CO4	Students can also understand the need of complex numbers in solving mathematical equations in different branches of Physics like Electricity and Magnetism, Fluid Dynamics and quantum mechanics.	K4

PHY-232 Electronics-I

Co . Number	CO Statement Knowledge	Knowledge Level
CO1.	Recognize basic terms in electricity and magnetism	K1
CO2.	Understand the laws of electrostatics and magnetostatics	K2
CO3.	Apply theorems to construct and solve electrical circuits.	K3
CO4.	Ability to design and conduct experiments as well as to analyze and interpret data	K4
CO5.	Build up strong problem solving skills by effectively formulate a circuit problem into a mathematical problem using circuit laws and theorems	K5

Ms. S. B. Ahire.

Head Of Department.

Principal

Maratha Vidya Prasarak Samaj's,

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Tal. Baglan, Dist. Nashik

Year 2023-2024

Course Outcomes (COs) of Bachelor of Arts (B.A.)

Department of Economics

Class	Course	Course Outcomes
FYBA	Indian Economy – Problems and Prospects (G-1)	CO.1 Understood the difference between developed and developing economy.
		CO.2 Learned Indian economy as developing economy through its characteristics.
		CO.3 Understood the important features of Indian population and its obstacles to the development process.
		CO.4 Enabled students to analyze the issue of poverty and unemployment in India
		CO.5 Understood the economy of Maharashtra. Its features and addressed the issue of regional imbalance in state economy.
SYBA	Financial System (G-II)	CO.1 Enabled students to understand the working of RBI,IMF,IRDA,IBRD,BRICS
		CO.2 Understood the basic structure of the Indian banking system and cleared understanding the operations of banking and their interaction with the rest of the economy
		CO.3 Awareness of the basic concepts of modern banking,main principles and functions of commercial banks

		CO.4 Created awareness of new technology of banking and made implementation of it.
		CO.5 Understood the operation of the monetary policy, functions of RBI and enable them to understand the effects on macro economy.
SYBA	**Micro Economics (S-1)**	CO.1 Enabled students to understand the consumer and producer behavior.
		CO2 Understood the market structure and application to the different product market
		CO 3 Enriched the knowledge of the factor pricing theory and examined the problems in determination of factor price.
		CO 4 Understood the several view on welfare economics.
SYBA	**Macro Economics (S-2)**	CO 1 Familiarized the students the basic concept of Macro Economics. Economics and application.
		CO 2 Awareness of the basic theoretical framework underlying the field of macroeconomics
		CO 3 Understood the role of government in macro economy by its involvement through fiscal and monetary policy
		CO 4 Improved knowledge on phases of business cycle and inspired to think on policy making issues.
TYBA	**Economics Development &Planning (G-3)**	CO 1 Gained the importance of understanding the difference between economic growth and development
		CO.2 Understood the characteristics of developing as emerging economy and Realized the obstacles in development of developing economy
		CO.3 Gained the knowledge of approaches and theories of economic development

		CO.4 Understood the important role of foreign capital in process of economic development.
		CO.5 Realized the need of economic planning for achieve goal of inclusive growth
TYBA	**International Economics (S-3)**	CO.1 Gained the knowledge of basic principles of international economics
		CO.2 Understood the classical and recent theories of international trade
		CO.3 Realized the importance of Indias foreign trade policy and balance of payments for countries better performance international trade
		CO.4 Improved the knowledge regarding the international institution SAARC,BRICS,EEC
TYBA	**Public Finance (S-4)**	CO.1 Understood the role of a government in economy
		CO.2 Enabled to explore the importance of public revenue and public expenditure in the economy for inclusive growth.
		CO.3 Improved the knowledge of budget and understood the budgetary concepts.
		CO.4 Gained the information of centre-state relationship and realized its importance to sustain democracy in India.
		CO.5 Learned important role of fiscal policy in the country and realized its positive and inverse effects

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Arts, Commerce and Science College Taharabad,Tel- Baglan Nashik

Program Outcomes, Course specific Outcomes Outcomes

Department of Botany

TYBSC 2023-24

Semester III

TYBSc (Paper-I)	Cryptogamic Botany	Co-1 Systematics and Taxonomy Co-2 Evolution from Cryptograms to phanerogams Co-3 Classification, economic and ecological importance.
TYBSc (Paper-II)	Cell and Molecular Biology	Co-1 Cell biology gives the knowledge of Internal organization of the cell Co-2 Cellular signaling, transport and trafficking, Cellular Processes. Co-3 Molecular biology provides the Gene structure and Function, DNA: Structure, Functions and Damage
TYBSc (Paper-III)	Genetics and Evolution	Co-1Genetics provides knowledge regarding Classical Genetics, Microbial Genetics & Cytogenetics Co-2 Plant Breeding Co-3Evolution provides Information about Darwin theory and lamark's theory
TYBSc (Paper-IV)	Spermatophyta and Palaeobotany	Co-1 SPERMATOPHYTA gives knowledge of general characters, economic importance and classification of Gymnosperm and Angiosperm. Co-2 PALAEOBOTANY provides the information regarding the Fossils.
TYBSc (Paper-V)	Horticulture and Floriculture	Co-1 Understand economic importance of plant and plant product. Co-2 Know the methods of plant propagation. Co-3 Understand the fruit & vegetables production technology, scope & importance of floriculture. Co-4 Methods of cultivation of different flowering plants.
TYBSc (Paper-VI)	Computational Botany	Co-1 Study the scope & importance of biostatistics. Co-2Know scope and some basic commonly used terms like sampling, data, dispersion, population, central tendency etc. Co-3Knowledge to apply statistical analysis to biological data for testing different hypothesis.

Semester IV

TYBSc (Paper-I)	Plant Physiology and Biochemistry	Co-1Plant physiology and Biochemistry give knowledge regarding the Photosynthesis, Respiration, Translocation of organic solutes Co-2 Carbohydrates, Amino acids and proteins, Secondary Metabolites
TYBSc (Paper-II)	Plant Ecology and Biodiversity	Co-1 Know the biotic and abiotic components of ecosystem. Co-2Food chain & food web in ecosystem. Co-3Understand diversity among various groups of plant kingdom. Co-4Understand plant community & ecological adaptation in plants. Co-5Scope, importance and management of biodiversity.
TYBSc (Paper-III)	Plant Pathology	Co-1 Study scope and importance of plant pathology. Co-2 Know disease cycle and disease development, Co-3 Effect of plant diseases on economy of crops. Co-4 Know the methods of studying plant diseases They can identify the plant diseases like bacterial, nematode, and fungal, disease forecasting. Co-5Study prevention and control measures of plant diseases.
TYBSc (Paper- IV)	Medicinal and Economic Botany	Co-1 Understand scope and importance of pharmacognosy. Co-2 Know the cultivation, collection, processing & importance of various herbal drugs and scope of economic botany. Co-3 Know the botanical resources like non wood forest products and study the concept of Ayurvedic pharmacy.
TYBSc (Paper-V)	Plant Biotechnology	Co-1 Study of Plant tissue culture Technology and Recombinant DNA technology Co-2 Understand Role of microbes in agriculture, medicine & industry. Co-3Study the concept of bioinformatics & genomics proteomics.Understand technical germplasm & cryopreservation.
TYBSc (Paper- VI)	Plant Breeding and Seed technology	Co-1 Study the scope & importance of plant breeding. Co-2 Study the technique of production of new superior crop varieties, heterosis, hybrid vigor etc. Co-3 Know the process of hybrid variety, development & their release. Co-4 Know about seed germination, processing , production
TYBSc (Paper-VII)	Practical I	Co-1 Study of Vegetative and Reproductive structure of Algae, Fungi, Bryophytes and Pteridophytes Co-2 Study techniques of cytology, Mitosis, Meiosis, Chromosome morphology Co-3 Estimation of DNA and RNA Co-4 Estimate Chlorophyll, TLC, Proteins and Amino acids Co-5 Study of advanced biotechnological techniques

TYBSc (Paper-VIII)	Practical II	Co-1 Study plant families Co-2 Study structural heterozygote's, Gene mapping, Co-3 Study of Vegetative and Reproductive structure of gymnosperms and Pleobotany
TYBSc (Paper- IX)	Practical III	Co-1 Study techniques in Horticulture and floriculture like cutting, Layering, Budding, Grafting Co-2 Calculating Mean mode median, methods of graphical presentations Co-3Study different plant diseases like fungal, bacterial, microbial etc. Co-4 Study medicinal plants and methods of preparation of extracts and quantitative analysis of alkaloids, tannins etc.

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Tal. Baglan, Dist. Nashik

Department of Zoology

2023 -2024

Name of the Class	Course Code	Course Title	Course Outcomes	
SEMESTER I				
F.Y. B.Sc.	CO - 111	Animal Diversity -I	CO1	. The student will be able to understand classify and identify the diversity of animals..
			CO2	The student understands the importance of classification of animals and classifies them effectively using the six levels of classification.
			CO3	The student knows his role in nature as a protector, preserver and promoter of life which he has achieved by learning, observing and understanding life.
F.Y. B.Sc.	ZO - 112	Animal Ecology	CO1	The learners will be able to identify and critically evaluate their own beliefs, values and actions in relation to professional and societal standards of ethics and its impact on ecosystem and biosphere due to the dynamics in population.
			CO2	To understand anticipate, analyse and evaluate natural resource issues and act on a lifestyle that conserves nature
F.Y. B.Sc.	ZO - 113	Practicals Based On ZO 111 & ZO 112	CO1	The Learner understands and appreciates the diversity of ecosystems and applies beyond the syllabi to understand the local lifestyle and problems of the community
			CO3	Through field trips, students will observe biodiversity, adaptations in plants according to their habitat and ecological significance of each plant group.
SEMESTER II				
F.Y. B.Sc.	ZO - 121	Animal Diversity -II	CO1	The student will be able to understand classify and identify the diversity of animals.
			CO2	. The student understands the importance of classification of animals and classifies them effectively using the six levels of classification

F.Y. B.Sc.	ZO - 122	Cell Biology	CO1	The learner will understand the importance of cell as a structural and functional unit of life
			CO2	Students will be able to learn different types of cell divisions, their stages and importance.
			CO3	Students will focus on the central dogma of molecular biology by studying the structures of DNA & RNA with special reference to their regulatory role.
			CO4	Students will understand the principle mechanisms of DNA replication.
F.Y. B.Sc.	ZO - 123	Practicals Based On ZO 121 & ZO 122	CO1	The learner understands and compares between the prokaryotic and eukaryotic system and extrapolates the life to the aspect of development.
			CO2	The learner understands and compares between the prokaryotic and eukaryotic system and extrapolates the life to the aspect of development
			CO3	The cellular mechanisms and its functioning depends on endo-membranes and structures. They are best studied with microscopy.
SEMESTER III				
S.Y. B.Sc.	ZO-231	Animal Diversity -III	CO1	The students will able to understand the complexity of higher vertebrates
			CO2	The students will be able to understand different life functions of higher vertebrates.
			CO3	The students will be able to understand the linkage among different groups of higher vertebrates.
S.Y. B.Sc.	ZO-232	Applied Zoology -I	CO1	The learner understands the basics about beekeeping tools, equipment, and managing beehives.
			CO2	The learner understands the basic information about fishery, cultural and harvesting methods of fishes and fish preservation techniques
			CO3	Students will understand the role of various

				types of agricultural pests, Major insect pests of agricultural importance and Pest control practices
S.Y. B.Sc.	ZO 233	Practical based on ZO 231 & ZO 232	CO1	Identify the fishes from freshwater and marine water, Describe external characters and other important systems of sea star, Design the experiment to culture and identify the crustacean larvae
			CO2	Identify and compare the shell and foots modification in molluscs and mouth parts of different insects.
			CO3	Determine the age of fishes and measure the length -weight of given fish, Calculate fin formula of the given fish specimen
			CO4	Determine the distribution of fishes on world map and carry out morphometric analysis of fish.
SEMESTER IV				
S.Y. B.Sc.	ZO-241	Animals-IV	CO1	Identify and describe the characters of class – Reptilia, aves and mammals.
			CO2	Differentiate and interpret the morphological characters of class reptilia, aves and mammals
S.Y. B.Sc.	ZO-242	Applied Zoology - II	CO1	Differentiate between different life stages of silkworm and honey bee and explain their life cycle. Discuss control and prevention of pests and diseases..
			CO2	Demonstrate and discuss the culture methods of B.mori and Apis species. Outline the silkworm rearing technology, bee pollination and management of bee colonies for pollination.
S.Y. B.Sc.	ZO 243	Practical based on ZO 241 & ZO 242	CO1	Identify the birds on the basis of beak and feet. Discriminate, poisonous and nonpoisonous snakes with the help of identification key.
			CO2	Identify and explain mouth parts, wings legs and sting of honey bee. Describe the life cycle of honey bee and silk worm.
			CO3	Assess the quality of soil and interpret its suitability for moriculture.
			CO4	Classify the vertebrates, reptiles, aves, mammals.

Head
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Department of Mathematics-2023-24

I. Course Outcomes (COs) of Bachelor of Science (B.Sc.)

Class	Semester	Course	Course Outcomes
F.Y.B.Sc. Mathematics	I	MT111:Algebra	CO.1. Learn to solve system of linear equation.
			CO.2. Learn to solve Diophantine equation.
			CO.3. Learn to find roots of polynomial over rational.
			CO.4. Introduction to complex analysis.
		MT112:Calculus-I	CO.1. Gain knowledge of fundamentals concepts of real numbers.
			CO.2.Verify the value of the limit of a function at a point using the definition of the limit.
			CO.3.Introduction to sequence and series.
			CO.4.Learn to check function is continuous understand the consequences of the intermediate value theorem for continuous functions.
F.Y.B.Sc. Mathematics	II	MT121:Analytical Geometry	CO. 1.Introduction to analytical geometry of 2 Dimensional.
			CO.2.Study of lines in 2 and 3 dimensions.
			CO.3.Finding equation in various form of line, circle, ellipse, sphere, cones etc.
		MT122:Calculus-II	CO.1. Student will be to understand differentiation and fundamental theorem in differentiation and various rules
			CO.2. Geometrical representation and problem solving on MVT and Rolls theorem.
			CO.3. Finding extreme values of function
			CO.4.Introduction to Ordinary differential equation.
S.Y.B.Sc Mathematics	I	MT231:Calculus of Several Variables	CO.1.Introduction to Functions of several variables
			CO.2.Student will to be understand Partial derivatives & Differentiability
		MT232(A):Numerical Methods & Its Applications	
			CO.1.Introduction to Bisection method,Regula Falsi Method,Newton Raphson Method
			CO.2.Student will to understand Numerical Differentiation & Integration

		MT241:Linear Algebra	CO.1. Introduction toSubspaces ,Linear Independent,Linear Dependent .
			CO.2. Gain knowledge of fundamentals concepts of Linear Algebra
			CO.3. Learn to solve Examples of Matrix Representation
		MT242(A):Vector Calculus	CO.1.Introduction to Vector Valued Function
			CO.2.Learn to solve Line Integrals in Vector Field.
			CO.3.Gain Knowledge of Surface Integrals, Applications of Integrals.

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Arts, Commerce and Science College Taharabad,Tell- Baglan Nashik

Program Outcomes, Course specific Outcomes Outcomes

Department of Botany
SYBSC 2023-24

SYBSc-(Paper-I)	Taxonomy of Angiosperms	Co-1 Know principals of taxonomy, methods in taxonomy Co-2 Types of taxonomy, Sources of data for taxonomy CO-3Methods of preparation of Herbarium, E- Herbarium etc.
SYBSc (Paper-II)	Plant Physiology	Co-1Applications of plant physiology, Mechanism of Absorption of water, Transpiration Co-2 Plant growth and growth regulators, Nitrogen Metabolism in plants Co-3 Physiology of flowering

Semester - II

SYBSc (Paper-I)	Plant Anatomy and Embryology	Co-1Know different tissue systems in plants Co-2Normal secondary growth and different types of anomalous secondary growth Co-3 Study of male and female gametes in angiosperms, Process of fertilization and types of endosperms and structure of embryo.
SYBSc (Paper-II)	Plant Biotechnology	Co-1Know various application of biotechnology like Enzyme technology, Fermentation technology Co-2Single Cell Proteins and Environmental biotechnology Co-3Know Basics of Plant Genetic Engineering, Methods of gene transfer in plants and applications of plant genetic engineering in crop improvement Co-4 Knowledge about Nanotechnology and its applications in Agriculture

		Co-3Study different parameters of plant physiology like WHC, DPD, Rate of transpiration and Different instruments used in physiology Co-4 Study of Different tissue systems and normal and anomalous secondary growth Co-5 Study of fermentation techniques, *Spirullina* cultivation for SCP
SYBSc (Paper-III)	Practical based on theory paper I & II	Co-1Kno w practical knowledge of plant family ofangiosperms Co-2Study of different ecological groups and methods to study vegetations in forests

Maratha Vidya Prasarak Samaj's

Arts, Commerce and Science College Taharabad,Tell- Baglan Nashik

Program Outcomes, Course specific Outcomes Outcomes

Department of Botany
FYBSC 2023-24

	Program outcome : B.Sc. (Botany)
1.	PO-1. Students know about different types of lower & higher plants their evolution in from algae to angiosperm & also their economic and ecological importance.
2.	PO-2.Cell biology gives knowledge about cell organelles & their functions
3.	PO-3.Molecular biology gives knowledge about chemical properties of nucleic acid and their role in living systems.
4.	PO-4.Genetics provides knowledge about laws of inheritance, various genetic interactions, chromosomal abrasions & multiple alleles.
5.	PO-5. Structural changes in chromosomes.
6.	PO-6. Student can describe morphological & reproductive characters of plant and also identified different plant families and classification.
7.	PO-7. They knows economic importance of various plant products & artificial methods of plant propagation
8.	PO-8. Use modern Botanical techniques and decent equipments.
9.	PO-9.To inculcates the scientific temperament in the students and outside the scientific community
10.	PO-10 Industrial Botany: By studying this course students can apply this knowledge in various industries such as Mushroom cultivation, biofertilizer production, biopesticide, etc. They can also set up their own industries.

Maratha Vidya Prasarak Samaj's

Arts, Commerce and Science College Taharabad,Tell- Baglan Nashik

Program Outcomes, Course specific Outcomes Outcomes

Department of Botany
FYBSC 2023-24

Class	Course title	Outcome
FYBSc (Paper-I) BO 111	Plant life and utilization I	Co-1 Study of morphology & Anatomy of lower plants Co-2 know about life cycle of different plant groups i.e., crypgams and phanerogams Co-3 Study of Classification of plants
FYBSc- (Paper-II) BO 112	Plant morphology and Anatomy	Co-1 Study of morphology & Anatomy of higher plants Co-2 Know about different types of infloroscences and parts of typical flower Co-3 Types of fruits and seeds Co-4 Tissue differentiation and different types of tissues Co-5 Internal origination of primary plant body
FYBSc-113 (Paper-III)	Practical based on theory paper I& II	Co-1 Study of anatomy and morphology of different plants Co-2 Know about different types of infloroscences and parts of typical flower
		Co-3 life cycle of different plant groups i.e., cryptogams and phanerogams Co-4 Study of internal organization of plant

Semester II

Class	Course title	Outcome
FYBSc (Paper-I) BO 121	Plant life and utilization II	Co-1 Study of morphology & Anatomy of vascular plants Co-2 Introduction to plant diversity Co-3 Utilization and economic importance of Pteridophytes, Gymnosperm and angiosperms
FYBSc- (Paper-II) BO 122	Principles of plant science	Co-1 Applications of plant physiology Co-2 Study of diffusion, osmosis, plasmolysis, plant growth Co-3 Study of cell cycle Co-4 Study of plant cell Co-5 Study of molecular biology – Study of DNA, RNA and replication
FYBSc- (Paper-III) BO 123	Practical based on theory paper I& II	Co-1 Study of anatomy and morphology of different plants Co-2 Study of plasmolysis, DPD Co-3 Study of mitosis and meiosis Co-4 Study of prokaryotic and eukaryotic cells

Maratha Vidya Prasarak Samaj's

Arts Commerce & Science College Taharabad

DEPARTMENT OF GEOGRAPHY

Academic Year 2023-24

Course Outcomes

Course Outcomes

Subject	Programmer Specific Outcomes
F. Y. B. A. Geography Course Gg110 (A): Physical Geography	1. The student who successfully completes this course can able to: 2. Explain principal terms, definitions, Concept and theories of geomorphology. 3. Discuss development of micro to mega scale landforms. 4. Identify different Materials of the earth crust, rock types, and types of weathering, mass movements and types of slope. 5. Describe importance of latitude, longitude and the reasons why different countries have different time zone and date. 6. Apply knowledge of basic landforms from tectonic, volcanic, fluvial and coastal environments. 7. Evaluate exogenous and endogenous processes in the landscape, their importance in landform development, and distinguish the mechanisms that control these processes. 8. The student who successfully completes this course can able to 9. Explain principal terms, definitions, Concept and theories of geomorphology. 10. Discuss development of micro to mega scale landforms. 11. Identify different Materials of the earth crust, rock types, and types of weathering, mass movements and types of slope 12. Describe importance of latitude, longitude and the reasons why different countries have different time zone and date
Course Gg110 (B): Human Geography	**1.** The student will understand the basic concepts of human geography. **2.** The course will also explain the causes of population growth. **3.** The student will understand the process of urbanization **4.** Increase the knowledge of agriculture and will understand the problems of agriculture.
S. Y. B. A. Geography	1. To create the awareness about dynamic

Course Gg-210 (A): Environment Geography- I, (General - 2)	environment among the student. 2. To acquaint the students with fundamental concepts of environment geography for development in different areas. 3. The students should be able to integrate various factors of Environment and dynamic aspect of Environmental geography. 4. To make aware the students about the problems of environment, their utilization and conservation in the view of sustainable development
Course Gg-210 (B): Environment Geography- II, (General - 2)	1. To create awareness about dynamic environment among the students. 2. To acquaint students with the fundamental concepts of Environment Geography. 3. To acquaint students about the past, presents and future utility and potentials of natural resources. 4. To make aware students about the problems of environment, its utilization and conservation in the view of sustainable development
Course Gg.220 (A): Geography of Maharashtra (S-1)	1.To acquaint students with Geography of our State. 2. To make students aware of the magnitude of problems and prospects in Maharashtra. 3. To help students understand the inter relationship between the subject and the society. 4. To help students understand the recent trends in regional studies.
Gg. 201 (A) Practical Geography-I (S-2	1. To introduce the basic concepts in Practical Geography 2. To enable students to use various Scales and Projection Techniques in Geography. 3. To acquaint students with the utility of various Projections in Geographical knowledge. 4. To explain the elementary and essential principles of practical work in Geography. 5. Develop practical skill and use of map scale and projection. 6. To make students aware of the new techniques, accuracy and skills of map making.
Gg. 201 (B) Practical Geography-I (S-2)	1. To introduce the students to the basic and contemporary concepts in Cartography. 2. To acquaint the students with the utility and applications of various Cartographic Techniques. 3. To introduce the latest concepts regarding the modern cartography in the field of Geography. 4. To explain the elementary and essential principles of practical work in

	Geography. 5. Develop practical knowledge and application of cartographical techniques. 6. To make students aware of the new techniques, accuracy and skills of Map Making
T.Y.B.A. Geography Geography of Disaster Management-I CC1E (G-3)	1. Describe concepts of Disaster and its relations with Geography. 2. Explain terminology and concepts of Disaster Management. 3. Implement concepts of hazards in different areas and its Management. 4. Explain standard operating procedure on government for disaster management
Geography of India -I DSE 1 C (S-3)	1. Explain the importance of geography of our Nation. 2. Make the aware of the magnitude of problems and Prospects at National level. 3. Identify the inter relationship among the subject and the society. 4. Understand the current trends in regional studied 5. Realize about diversity of our nation i.e. Religious, Languages, Tribes etc 6. Acquaint the knowledge about different types of resources and their utility
Practical Geography- I (Techniques of Spatial Analysis) DSE- 2 C (S-4)	1. Interpret and analysis of survey of India's Toposheet/ map 2. Identify different methods of Relief Representation 3. Describe and analysis of Indian Daily weather maps and their applications. 4. Apply Remote Sensing Techniques in Geography

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