### **DEPARTMENT OF MARATHI**

Department of	After successful completion of three year degree program in B.A. a
Marathi	student should be able to;
Duoguamma Outaamag	P.O. 1- युवक वयोगटातील विद्यार्थ्यांची भाषा व वाङ्मयविषयक मनोभूमिका दृढ होते.
<b>Programme Outcomes</b>	P.O. 2- भाषा व संस्कृती आणि साहित्य व संस्कृती यांचा अनुबंध समजून घेता येतो.
	P.O. 3- मातृभाषा व साहित्यातून मानवी जीवनव्यवहार समजून घेता येतो.
	P.O. 4- समाजव्यवहारात भाषेचे यथोचित आकलन व वापर करण्याची क्षमता विकसित होते.
	P.O. 5- व्यक्तिमत्त्व विकास साध्य करता येतो.
	P.O. 6- भाषेवर प्रभुत्व निर्माण करता येते.
	P.O. 7- चौकस वाचनातून शब्दसंग्रह वाढतो.
	P.O. 8- समाजामध्ये वावरण्यासाठीची संवेदनशीलता विकसित होते.
	P.O. 9- नवनिर्मितीक्षमता व अभिव्यक्तिक्षमता विकसित होते.
	P.O. 10- सामाजिक बांधिलकी निर्माण होते.
	P.O. 11- साहित्य व संस्कृतीविषयी ज्ञान संग्रहण, संक्रमण प्रक्रिया गतिमान होते.
	P.O. 12- विशिष्ट समस्येची चिकित्सा करता येते.
	P.O. 13- नोकरी व रोजगाराच्या संधी शोधता येतात.
Dept. of Marathi	P.S.O. 1- साहित्यातील जीवनदर्शन, समकाल, व्यवहार यांची जाणीव होते.
Programme Specific	
Outcome	
	P.S.O.2- साहित्य व भाषाविषयक आकलनक्षमता वाढते.
	P.S.O.3- विविध वाङ्मय प्रकार समजून घेता येतात.
	P.S.O. 4- मराठी साहित्य, भाषा व संस्कृती यांचा जवळून परिचय होतो.
	P.S.O. 5- आधुनिक मराठी साहित्यातील विविध वाङ्मय प्रवाहांचा परिचय होतो.
	P.S.O. 6- मराठी भाषा व साहित्य अवलोकनाची रूची वाढते.
	P.S.O. 7- साहित्यकृतीला मुक्त प्रतिसाद देण्याची क्षमता निर्माण होते.
	P.S.O. 8- मराठी साहित्याच्या परंपरेचे स्थूल ज्ञान मिळते.
	P.S.O. 9 साहित्यप्रकारांचा तात्विक गतीविकासात्मक अभ्यास होतो.
	P.S.O. 10 साहित्यकृतींमधील सांस्कृतिक संदर्भांचे ज्ञान मिळते.
	P.S.O. 11 साहित्यभाषा व व्यवहारभाषा यांचे ज्ञान मिळते.
	P.S.O. 12- साहित्यातून प्रकट होणाऱ्या मानवी मूल्यांचे आकलन होते.
	P.S.O. 13- लेखन, वाचन, संभाषण, आकलन, परीक्षण ई. भाषिक कौशल्यांचा विकास होतो.
Course Outcomes	Course outcomes of Marathi Compulsory subject
B.A.I, II, III	course outcomes of figure comparisory subject
(मृद्गंध भाग १,२,३)	
Unit I – वैचारिक T	C.O. 1-वैचारिक साहित्याचे स्वरूप लक्षात येते.
Т	C.O.2- समाजसुधारकांच्या मौलिक विचारांची माहिती मिळते.
	C.O.3- वैचारिक जाणिवा प्रगल्भ होण्यास मदत होते.
	C.O.1- ललित साहित्यप्रकाराची ओळख होते.

Unit II ललित	C.O.2- व्यक्तिचित्रण, कथा, ललित लेखनाची प्रेरणा मिळते.
	C.O.3- साहित्यातील लालित्याचा आस्वाद घेण्याची क्षमता निर्माण होते.
Unit III कविता	C.O.1- कवितेच्या विविध प्रकारांची माहिती मिळते.
	C.O.2- कवितेच्या विविध कालखंडाचा व प्रवाहाचा अभ्यास होतो.
	C.O.3- विद्यार्थ्यांमधील कविमन विकसित होते.
	C.O.4- कवितेचे चिकित्सक अध्ययन करण्याची दृष्टी प्राप्त होते
Unit IV –	C.O. 1-लेखनविषयक नियमांची ओळख होते.
उपयोजित मराठी	C.O. 2- लेखनामध्ये अधिकाधिक अचूकता येते.
	C.O. 3- मुद्रितशोधन कौशल्याची ओळख होते.
	C.O. 4- मुद्रितशोधक म्हणून रोजगार मिळवता येतो.
	C.O. 5- पत्रलेखनाचे कौशल्य अवगत होते.
	C.O. 6 परिचयपत्राचा आकृतीबंध लक्षात येतो.
	C.O.7- वक्तृत्व कलेचा विकास होतो.
	C.O.8- सूत्रसंचालन कौशल्य विकासाला वाव मिळतो.
	C.O.9- महितीपत्रकाची व्यावहारिक उपयोगिता लक्षात येते.
	C.O.10- निमंत्रण पत्रिका व महितीपत्रिकेचा आकृतीबंध लक्षात येतो.
	C.O.11- अहवाल लेखनकौशल्य विकसित होते
	C.O.12- वृत्तपत्रक्षेत्रात रोजगाराच्या संधी उपलब्ध होतात.
	C.O.13- निवेदन कौशल्य विकसित होते
	C.O.14- जाहिरात क्षेत्रात संधी उपलब्ध होतात.
B.A.I (MLT)	Course outcomes of Marathi Literature Subject
 अर्वाचीन मराठी कविता	C.O. 1- कविता या वाङ्मय प्रकाराची समृद्धता अवगत होते.
	C.O.2- आधुनिक काळातील नामवंत कवि-कवियत्रींचा परिचय होतो॰
(Poetry)	C.O. 3- काव्यलेखनात रूची निर्माण होते.
तहान	C.O. 1- कादंबरी साहित्यप्रकाराची ओळख होते.
(Novel)	C.O.2- कादंबरीचे विविध प्रकार व लेखनपद्धती अवगत होते.
	C.O. 3- कादंबरी अभ्यासाची दृष्टी प्राप्त होते.
आई रिटायर होतेय	C.O.1- नाट्य वाङ्मयाचे स्वरूप लक्षात येते.
(Drama)	C.O.2- नाटकाच्या संहितेचा अभ्यास करता येतो.
B.A.Il (MLT)	C.O.1- कथा वाङ्मयप्रकाराचे स्वरूप लक्षात येते.
निवडक मराठी कथा	C.O.2- कथांमधील मूल्य शोधण्याचे तंत्र अवगत होते.
Short Stories	
संत तुकारामांचे निवडक अभंग	C.O.1- संतांचे अमूल्य संस्कार आत्मसात करता येतात. C.O.2- विविध जीवनमूल्यांचा परिचय होतो.
आठवणींचे पक्षी	C.O.1- आत्मकथन या वाङ्मय प्रकारची ओळख होते
	C.O.1- आत्मकथन या वाङ्मय प्रकारचा आळख हात C.O.2- दलितांच्या दु:खांची जाणीव होते
(Autobiography) लीळाचरित्रातील निवडक	C.O.1- महानुभाव संप्रदायाची ओळख होते .
कथा	C.O.1- महानुमाव सप्रदायाचा आळख हात . C.O.2- कथांमधील नैतिक मूल्ये आंगीकरता येतात.
	C.O.2- कथानघाल नातक मूल्य आगाकरता यतात.  C.O.1 कथालेखकाचा परिचय होतो
B.A.Ill (MLT) मिरासदारी	C.O.2- कथा-कथन तंत्र अवगत करता येते
(Stories)	८.७.४- कथा-कथन तत्र जयगत करता यत
(Stories)	C.O.1- साहित्याचे शास्त्रोक्त स्वरूप अभ्यासता येते.
साहित्यविचार	C.O.2- साहित्याची प्रयोजणे लक्षात येतात.
	C.O3- साहित्याची निर्मितीप्रक्रिया जाणून घेण्याचे कौशल्य प्राप्त होते.
1	C.O. तात्रवाचा मामतात्राक्रमच वान्या वन्याव वमसंख्य प्राचा हात.

एक होता कार्व्हर	C.O.1- चरित्रात्मक साहित्याचा परिचय होतो.
(Biography)	
(Diography)	C.O.2- व्यक्तिमत्व विकासास चालना मिळते.
भाषाविज्ञान परिचय	C.O.1- भाषेचा वैज्ञानिक अंगाने परिचय होतो.
111131111131	C.O.2- भाषेचे स्वरूप व निर्मितीच्या शास्त्रोक्त संकल्पना अवगत होतात.
	PROGRAMME OUTCOMES OF B.COM. MARATHI
	COMPULSORY
B.Com.	P.O.1- प्रमाण मराठीवर प्रभुत्व प्राप्त करता येते.
Marathi Compulsory	P.O.2. समाजव्यवहारात भाषेचे आकलन व वापर करण्याची क्षमता विकसित होते.
	P.O.3. नोकरी व रोजगाराच्या संधी शोधता येतात.
B.Com. I,II, III	PROGRAMME SPECIFIC OUTCOMES
D.Com. 1,11, 111	P.S.O. प्रेरणादायी व्यक्तिचित्रांच्या अभ्यासातून व्यक्तिमत्व विकास साधता येतो.
	P.S.O. व्यावसायिक दृष्टीकोणातून समाजाभिमुखता वाढते
	<u> </u>
D.C. LILIU	P.S.O. विविध व्यावसायिक कौशल्यांचा विकास होतो
B.Com. I,II,III	COURSE OUTCOMES OF B.COM. MARATHI COMPULSORY  C.O. 1-वैचारिक साहित्याचे स्वरूप लक्षात येते.
Unit 1 वैचारिक T	C.O.3- वैचारिक जाणिवा प्रगल्भ होण्यास मदत होते.
Unit II ललित	C.O.3- विचारिक जाणिया प्रगल्म हाण्यास मदत हात. C.O.1- ललित साहित्यप्रकाराची ओळख होते.
Unit II लालत	C.O.1- लालत साहत्यप्रकाराचा जाळख हात. C.O.2- व्यक्तिचित्रण, कथा, ललित लेखनाची प्रेरणा मिळते.
	C.O.3- साहित्यातील लालित्याचा आस्वाद घेण्याची क्षमता निर्माण होते.
11.36 111	C.O.1- कवितेच्या विविध प्रकारांची माहिती मिळते.
Unit III कविता	C.O.2- कवितेच्या विविध कालखंडाचा व प्रवाहाचा अभ्यास होतो.
	C.O.3- विद्यार्थ्यांमधील कविमन विकसित होते.
	C.O.4- कवितेचे चिकित्सक अध्ययन करण्याची दृष्टी प्राप्त होते
Unit IV	C.O. 1-प्रसारमाध्यमांमध्ये नोकरीच्या संधी उपलब्ध होतात.
उपयोजित मराठी	
	C.O.2- सारांशलेखनाचे तंत्र अवगत होते.
	C.O.3 कार्यालयीन कामकाजात पत्रलेखन कौशल्याचे उपयोजन करता येते.
	C.O.4- भाषांतर कौशल्याचा दुभाषक म्हणून नोकरीच्या संधीसाठी फायदा होतो.
	C.O.5- परिचयपत्राचा आकृतीबंध लक्षात येतो
	C.O.6- जाहिरात क्षेत्रात संधी उपलब्ध होतात.
	C.O.7- निविदासूचनाचे तंत्र अवगत होते.
	C.O.8- इतिवृत्त लेखनाच्या शास्त्रोक्त पद्धतीचे ज्ञान मिळते.
	C.O.9- निवेदन क्षेत्रात नोकरीच्या संधी शोधता येतात.
	C.O.10- अहवाल लेखनकौशल्य विकसित होते.
	PROGRAMME OUTCOMES
M.A. Marathi	P.O.1- मराठी भाषा आणि वाङ्मयाचे प्रगत ज्ञान प्राप्त होते.
I & II	P.O.2- विद्यार्थ्यांना आवड असलेल्या क्षेत्रात संशोधन करता येते.
1411	P.O.3- वाङ्मयीन व जीवनविषयक जाणीव प्रगल्भ होते.
	P.O.4- लेखनगुणांना उत्तेजन मिळते.
	P.O.5- चिकित्सक अभ्यासाची क्षमता विकसित होते.
	P.O.6- वाङ्मयीन प्रश्न व चळवळीविषयी विचारप्रवणता वाढते.
	PROGRAMME SPECIFIC OUTCOMES
M.A. MARATHI I & II	P.S.O.1 विशिष्ट कालखंडातील साहित्याच्या व्याप्तीबद्दल माहिती मिळते.

	P.S.O.2- भाषेचे विविध व्यवहार आणि साहित्याच्या संदर्भातील भाषाव्यवहार याविषयीच्या
	आकलनाची क्षमता वाढते.
	P.S.O.लोकसंस्कृतीच्या उज्ज्वल परंपरेचे जतन करण्याची क्षमता विकसित होते.
	P.S.O.4- विविध साहित्यप्रवाहाच्या प्रेरणा समजून घेता येतात.
	P.S.O.5- साहित्य अवलोकनाच्या माध्यमातून सामाजिक बांधिलकी वृद्धिंगत करता येते.
M.A.Marathi I	COURSE OUTCOMES
SEMESTER I	
मराठी वाङ्मयाची सांस्कृतिक	C.O. 1- मराठी वाङ्मयाच्या आधारे संस्कृतीचा अभ्यास होतो॰
पार्श्वभूमी (आरंभ ते १८१८)	
साहित्यविचार	C.O. 2- साहित्याचा शास्त्रोक्त परिचय करून घेता येतो.
लोकसाहित्य	C.O. 3- मौखिक साहित्य परंपरेचा परिचय होतो.
विशेष वाङ्मय प्रकार –	C.O. 4- कवितेचा विशिष्ट दृष्टीकोणातून अभ्यास करता येतो.
कविता	
SEMESTER II	COURSE OUTCOMES
मराठी वाङ्मयाची सांस्कृतिक	C.O. 1- ठराविक कालखंडाच्या आधारे संस्कृतीचा विकास अभ्यासता येतो.
पार्श्वभूमी (१८१८ ते १९६०)	
समीक्षाविचार	C.O. 2- समीक्षेची चिकित्सक दृष्टी प्राप्त होते.
लोकसाहित्य	C.O. 3- लोकजीवन व लोकसंस्कृतीचा अभ्यास करता येतो.
विशेष वाङ्मय प्रकार –नाटक	C.O. 4- नाट्य वाङ्मयाचा विशेषत्वाने परिचय होतो.
M.A.MARATHI II SEMESTER III	COURSE OUTCOMES
उपयोजित मराठी	C.O.1- विविध व्यवहारोपयोगी कौशल्याचे उपयोजन तंत्र अवगत होते.
भाषाविज्ञान	C.O.2- भाषेचा शास्त्रोक्त परिचय होतो.
विशेष ग्रंथकार : संत	C.O.3- एका लेखकाच्या अभ्यासाचे तंत्र अवगत होते.
चोखामेळा	0.0.0 द्वा एवपाञ्चा अन्यासाय सम्बन्धा (त्रस.
दलित साहित्य	C.O.4 – दलित साहित्याच्या प्रेरणा व जाणिवांचे ज्ञान मिळते.
<u> </u>	
SEMESTER IV उपयोजित मराठी	COURSE OUTCOMES  C.O.1- विविध कौशल्यांचे प्रात्यक्षिकाकसह ज्ञान मिळते
भाषाविज्ञान	C.O.2- भाषेचे स्वरूप व उपयोगासह स्वनविज्ञानाची माहिती मिळते.
	·
मराठी वैचारिक साहित्य	C.O.3- वैचारिक जाणिवा प्रगल्भ होतात.
मुस्लिम मराठी साहित्य	C.O.4 – मुस्लिम साहित्यिकांच्या वेदना-संवेदनांचा अभ्यास होतो.

## **DEPARTMENT OF ENGLISH**

Department of	After successful completion of three year degree program in B.A. a	
English	student should be able to;	
Programme	P.O. 1- Understand how cultural, historical, geographical, political,	
Outcomes	linguistic, and environmental forces shape the world.	

	P.O. 2-Recognize the role of the individual within communities to effect change.
	P.O. 3- Reflect on one's cultural identities and values.
	P.O. 4- Demonstrate intercultural awareness and competence.
	P.O. 5- Recognize and appreciate the real-world context of knowledge.
	P.O. 6- Promote active citizenship and community engagement.
	P.O. 7- Analyze, synthesize and integrate knowledge.
	P.O. 8- Critically evaluate the validity of arguments and conclusions.
	P.O. 9- Practice creative thinking and expression.
	P.O. 10- Demonstrate the capacity to argue in innovative directions.
	P.O. 11- Identify, locate, comprehend, and critically evaluate quantitative and qualitative information using visual, numerical, oral, aural, and textual sources.
	P.O. 12- Apply appropriate research methodologies to specific problems.
	P.O. 13- Get the employment and self employment and make him/her able for civil and other examinations.
Dept. of English Programme Specific Outcome	P.S.O. 1- Interpret texts with attention to ambiguity, complexity, and aesthetic value and to read, write, speak and understand English and to learn effective communication skill.
	P.S.O.2- Express themselves effectively in a variety of forms and avail the job opportunities in translation, transformation and media.
	P.S.O.3- Evaluate genres of writing and write in appropriate genres
	and modes for a variety of purposes.  P.S.O. 4-Write with proficiency in one or more creative literary form (poetry, fiction, creative non-fiction);
	P.S.O. 5- Read diverse texts within their historical and cultural contexts, develop a critical understanding of how literature can both uphold and resist existing structures of power.
	P.S.O. 6- Deploy ideas from works of criticism and theory in their own reading and writing.
	P.S.O. 7- Identify topics and formulate questions, identify appropriate
	methods and sources for research, and engage ethically with sources.  P.S.O. 8- Participate in critical conversations and prepare, organize,
	and deliver their work to the public.
	P.S.O. 9 Read a variety of texts critically and proficiently to demonstrate in writing or speech, the comprehension, analysis, and
	interpretation of those texts.

	P.S.O. 10 Demonstrate knowledge and comprehension of major texts and traditions of language and literature written in English as well as their social, cultural, theoretical, and historical contexts.  P.S.O. 11 Analyze and interpret texts written in English, evaluating and assessing the results in written or oral arguments using appropriate support.  P.S.O. 12- Demonstrate knowledge of the major texts and traditions of literature written in English in their social, cultural and historical context.  P.S.O. 13- Demonstrate in written and/or oral form both the comprehension and the analysis of texts (literary, expository, fiction, non-fiction) in terms of their content, purpose, and form; andspeak clearly, effectively, and appropriately in a public forum for a variety of
	audiences and purposes.
<b>Course Outcomes</b>	Course outcomes of English Compulsory subject
B.A.I & II T Unit I - Prose	the passage and grasp its meaning and to read with correct pronunciation, stress, intonation, pause and articulation of voice.
	C.O.3-Learn the English language and to read with comprehensionk to acquire new vocabulary and content words.
Unit II Poetry	C.O.1- Emphasize rhythm and stress patterns, many ESL (English as a Second Language) learners can hone their pronunciation skills by reading poems aloud.
	C.O.2- Read-aloud to provide the requisite practice to increase the confidence of language learners.
	C.O.3- Help to become a good poet and writer.
	C.O.4 Help them to recognize truth, beauty, and goodness.
Unit III Grammar	C.O.1- Begin to transfer their knowledge of structure into effective, concise and grammatically correct longer types of writing.
	C.O.2- write a paragraph with a topic sentence, support, and concluding sentence;
	C.O.3- Use a variety of accurate sentence structures;
	C.O.4- Expand their basic understanding of form, meaning, and use in

	longer discourse settings including academic discourse.
	C.O.5- Use basic grammatical structures in short conversations and discussions.
	C.O.6- Practice the grammar needed to write various types of writing including journals, and personal /academic paragraphs.
B.A.I & III	C.O. 1-Identify the title, characters and setting of the story.
Unit I – Short Stories	C.O. 2-Identify the main problem of the story and the problems in the society.
	C.O. 3-Identify the solution to the problems.
Unit II -Essays	C.O. 1-Develop the language ability of the students and to understand the passage and grasp its meaning and to read with correct pronunciation, stress, intonation, pause and articulation of voice.
	C.O.2- Enable the students to enrich their active and passive vocabulary and express the ideas of the passage orally and in writing to develop their imagination
	C.O.3-Learn the English language and to read with comprehensionk to acquire new vocabulary and content words.
	. C.O.4- Emphasize rhythm and stress patterns, many ESL (English as a Second Language) learners can hone their pronunciation skills by reading poems aloud.
Unit III Poetry	C.O.1- Help to become a good poet and writer.
	C.O.2- Help them to recognize truth, beauty, and goodness
Unit IV Writing	C.O.1- Make them able to write official and unofficial letters.
Skill	C.O.1- Make them able to write paragraphs in English
	C.O.1- Make them able to express in English effectively
B.A.I, II, III	Course outcomes of English Literature Subject
English Literature	C.O.1- Understand the background to the English Literature.
Unit I - Background	C.O.2- Understand the various types of Poetic forms and movement
Duenground	C.O.3- Understand the nuances of poetry.
	C.O.4- Understand the source of novel, essays and types of novels and essays.
Poetry	C.O.1- Understand the structure and nature of poetry.
	C.O.2- Understand to critically appreciate the poems.
Literary Terms	C.O.1- Understand the various literary terms in English Literature.
	C.O.2- Critically evaluate the literary genres on the basis of literary terms.
	C.O.3- Understand the literature at different level.

<b>Literary Theory</b>	C.O.1- Understand the various literary theories in English Literature.
	C.O.2- Critically evaluate the literary genres on the basis of literary terms.
	C.O.3. Understand the literature at different level.
One Act Play	C.O.1 Understand the structure /nature of one act play.
	C.O.2. Understand the message through the one act play
<b>Short Stories</b>	C.O.1 Understand the structure /nature of short story.
	C.O.2- Understand and describe the moral of the story.
Drama/Play	C.O.1- Understand the structure and nature of drama.
	C.O.2- Understand the story of the drama.
	C.O.2- Understand the moral of the drama.
	PROGRAMME OUTCOMES OF B.COM. ENGLISH COMPULSORY
B.Com.	P.O.1- Able to communicate in English.
English	P.O.2. Able to develop language skills.
Compulsory	P.O.3. Able to learn Business Communication.
B.Com. I,II, III	PROGRAMME SPECIFIC OUTCOMES
	P.S.O. Able to understand English and communicate in English.
	P.S.O. Able to learn business communication in English.
	P.S.O. Able to understand prose, poetry and the message in the content.
B.Com. I	COURSE OUTCOMES OF B.COM. ENGLISH COMPULSORY
Unit 1 Prose	C.O. 1-Develop the language ability of the students and to understand the passage and grasp its meaning and to read with correct pronunciation, stress, intonation, pause and articulation of voice.
	C.O.2- Enable the students to enrich their active and passive vocabulary and express the ideas of the passage orally and in writing to develop their imagination.
	C.O.3-Learn the English language and to read with comprehensionk to acquire new vocabulary and content words.
Unit II Poetry	C.O.1- Emphasize rhythm and stress patterns, many ESL (English as a Second Language) learners can hone their pronunciation skills by reading poems aloud.
	C.O.2- Read-aloud to provide the requisite practice to increase the confidence of language learners.
	C.O.3- Help to become a good poet and writer.
	C.O.4- Help them to recognize truth, beauty, and goodness with the help

	of poetry.
Unit III Grammar	C.O.1- Begin to transfer their knowledge of structure into effective, concise and grammatically correct longer types of writing.
	C.O.2- write a paragraph with a topic sentence, support, and concluding sentence;
	C.O.3- Use a variety of accurate sentence structures;
	C.O.4- Expand their basic understanding of form, meaning, and use in longer discourse settings including academic discourse.
B.Com. II, III	COURSE OUTCOMES
Unit I Prose	C.O. 1-Develop the language ability of the students and to understand the passage and grasp its meaning and to read with correct pronunciation, stress, intonation, pause and articulation of voice.
	C.O.2- Enable the students to enrich their active and passive vocabulary and express the ideas of the passage orally and in writing to develop their imagination
	C.O.3-Learn the English language and to read with comprehensionk to acquire new vocabulary and content words.
Unit II Poetry	C.O.1- Emphasize rhythm and stress patterns, many ESL (English as a Second Language) learners can hone their pronunciation skills by reading poems aloud.
	C.O.2- write a paragraph with a topic sentence, support, and concluding sentence;
	C.O.3- Help to become a good poet and writer.
	C.O.4- Help them to recognize truth, beauty, and goodness with the help of poetry.
Unit III-	C.O.1- Develop the communication of the students.
Communication Skills	C.O.1- Develop the writing, and understanding skills in business communication.
M.A. English I& II	PROGRAMME OUTCOMES
	P.O.1- Demonstrate familiarity with a wide range of representative literary and rhetorical texts, including influential criticism of and commentary on those texts;
	P.O.2- Examine the theoretical premises underlying the critical analysis of literature, rhetoric and/or the teaching of reading and writing;
	P.O.3- Analyze the functions of texts and their relations with historical, social and political contexts;
	P.O.4- Analyze how purpose, style and genre function in texts to achieve particular literary, rhetorical and aesthetic effects;

	P.O.5- Locate, evaluate and synthesize the available resources for
	researching a significant scholarly topic;
	P.O.6- Write papers that construct logical and informed arguments; and
	prepare and deliver effective oral presentations and arguments acceptable
	within the English professions.
M.A.ENGLISH I	PROGRAMME SPECIFIC OUTCOMES
& II	
	P.S.O.1 Read with interpretive and analytical proficiency one or more
	creative literary form (poetry, fiction, creative non-fiction);
	P.S.O.2- write with proficiency in one or more creative literary form (poetry, fiction, creative non-fiction);
	P.S.O.3practice the process-oriented approach to writing (i.e., discovering one's material; crafting that material into the most suitable form according to the intended emotional effect upon target audience; revising as often as necessary)
	P.S.O.4- Incorporate useful critical responses to their work into subsequent revisions.
	P.S.O.5- Demonstrate in written and/or oral form both the comprehension and the analysis of texts (literary, expository, fiction, non-fiction) in terms of their content, purpose, and form.
M.A. English I SEMESTER I	COURSE OUTCOMES
English Poetry from Chaucer to	C.O. 1- Able to learn the poetry and poets in the specific era.
Alexander Pope –	
English Drama to	C.O. 2- Able to learn and appreciate the drama in the specific era.
Shakespeare -	
History of English	C.O. 3- Able to learn the history of English Literature.
Literature 1	
Fiction in English 1	C.O. 4- Able to learn prescribed fiction in English.
SEMESTER II	COURSE OUTCOMES
English Poetry from	C.O. 1- Able to learn the poetry and poets in the specific era.
Wordsworth to	
Modern Age.	
English Drama after	C.O. 2- Able to learn and appreciate the drama in the specific era.
Shakespeare	
History of English	C.O. 3- Able to learn the history of English Literature.
Literature 2	
Fiction in English	C.O. 4- Able to learn prescribed fiction in English.
2	

M.A.ENGLISH II	COURSE OUTCOMES
SEMESTER III	
Indian Writing in	C.O.1- Able to learn Indian English Literature.
English	
Critical Theory	C.O.2- Able to learn critical theory in detail.
American Literature	C.O.3- Able to learn the American Literature.
-I	
Shakespearean	C.O.4 – Able to learn Shakespeare's dramas in detail.
Studies	
SEMESTER IV	COURSE OUTCOMES
Indian Writing in	C.O.1- Able to learn Indian English Literature
English	
Critical Theory	C.O.2- Able to learn critical theory in detail.
American Literature	C.O.3- Able to learn the American Literature
-II	
Cultural Studies	C.O.4 – Able to learn Shakespeare's dramas in detail.

## DEPARTMENT OF POLITICAL SCIENCE

Department of Political Science Programme Outcomes	After successful completion of three year degree program in B.A. a student would be able to
	P0- 1 - Understand the nature and developments in national and international politics PO-2 - Analyze the Indian and worldwide constitutional provisions, major legislations and reforms. PO-3- Critically evaluate the social, economic and political variables for a proper understanding of the plurality of Indian society PO4 –Build overall consciousness regarding national political history, international relations and present Indian and Western political thinkers. PO6 - Encourage a comprehensive, comparative understanding of specific world constitutions such as UK, USA, China, Russia, Switzerland and France. PO7 - Develop knowledge of administrative studies with special reference to Indian administrative structures and practices. PO8 - Examine India's foreign relations with her neighbours and great powers. PO9 -Use case study method for analyzing the working of important international and regional organizations like UN, EU, ASEAN etc.
Programme Specific Outcomes	P.S.O. 1- Political Science students will be able to write, read, speak and listen effectively in academic and social contexts.  P.S.O. 2- Political Science students will analyze individual and group political behavior; the political process; public policy and administration; and case law within government  P.S.O. 3- Political Science students will analyze the core intellectual traditions in political thought and apply their central tenets to contemporary political questions and issues  P.S.O. 4- Political Science students will analyze the behavior of state and

	T
	non-state actors and the nature of their interactions.
	P.S.O. 5- Political Science students will compare and contrast the various
	political, social and economic systems that exist across the international
	community and analyze the political consequences of those variations.
	P.S.O. 6- Political Science students will use analytical skills to understand
	civic, social and environmental challenges.
	P.S.O. 7- Political Science students will demonstrate social responsibility
	and ethical reasoning Within a variety of contexts.
	P.S.O. 8- Political Science students will generate a scholarly product that
	demonstrates appropriate knowledge, technical proficiency, information
	collection, synthesis, interpretation, presentation, and reflection.
<b>Course Outcomes</b>	Course outcomes of Political Science subject
B. A. I Semester	C.O. 1- Characteristic of Indian Constitution, Preamble, Fundamental
First Course: Indian	Rights.
Constitutional	C.O.2- Directive Principal of State Policy, Fundamental Duties,
Provisions and	Citizenship
Local Self Government	C.O.3- President, Vice President, Prime minister
Government	C.O.4- Parliament- Loksabha, Rajyasabha
	C.O.5- Judicial System of India-Supreme Court, High Court
B. A. I Semester	C.O.1- Election Commission of India- structure, power and Function
Second Course: Indian	C.O.2- state Executive- Governor, Chief Minister, council of Minister
Constitutional	C.O.3 State Legislature- structure, power and Function
Provisions and	C.O.4- local self Government
Local Self	C.O.5- Women Political Participation in Panchyat raj, Nagpur Pact in
Government	Maharashtra formation, Right to Information Act.
B. A. II Semester	C.O.1- The Constitution of U.K. and Executive
Third	C.O.2- The Constitution of U.S.A. and Executive
Course: Selected Constitutions and	C.O.3- Parliamentary System of U.K., Legislature
International	COA The Legislature of U.S. A. and Supreme Court
Relations	C.O.4- The Legislature of U. S. A. and Supreme Court
D A II Come 4	C.O.5- South Asian Association for Regional Co-operation (SAARC)
B. A. II Semester Fourth	C.O.1- The Constitution of China and Legislature C.O.2- The Executive of China
Course: Selected	C.O.3- United Nations Organization (UNO) – Charter, Aims and Basic
Constitutions and	C.O.4- Security - Council of UNO, Secretary General and International
International	
Relations	Court of Justice – Composition and Powers.
	C.O.5- Indo-China Relations – Major Issues: Tibet Dispute, Role of
	China about India in UNO and Impact of Chinese goods and market on
	Indian Economy.

B. A. III Semester	C.O.1- Meaning of Leadership, Factors of Leadership and Role of
Fifth	Leadership.
Course: Modern	C.O.2- Meaning and Nature of Indian – Reservation Policy, Reservation
Concepts and	in Indian
<b>Policy in Politics</b>	C.O.3- Meaning and Nature of Nationalism, Factors of Nationalism,
	Present Status of Indian Nationalism.
	C.O.4- 4. Meaning of Communalism, Role of Communalism in Indian
	Politics and Present Status of Communalism in India.
	C.O.5- Meaning and Definition of Terrorism, Kinds of Terrorism, The
	Acts for Prevention of Terrorism in India
B. A. III Semester	C.O.1-Concept of State : Aristotle - Classification of State and M.K.
Sixth	Gandhi – Concept of Ramrajya.
Concepts of	C.O.2-Concept of Democracy : Walter Bagehot – Concept of Democracy,
Western and	Abraham Lincoln – Concept of Democracy and Dr. B.R. Ambedkar –
Indian Thinkers	Parliamentary Democracy.
	C.O.3- Concept of Nationalism : Niccolo Machiavelli – Concept of
	Nationalism, Swami Vivekananda – Concept of Nationalism and V.D.
	Sawarkar – Concept of Nationalism
	C.O.4-Socialism : Karl Marx - Concept of Socialism, Pt. Jawaharlal
	Nehru – Concept of Socialism and) Ram Manohar Lohiya – Concept of
	Socialism
	C.O.5- Behaviouralism and Sovereignty : David Eston - Concept of
	Behaviouralism, Gabrial Almond - Concepts of Post Behaviouralism and
	John Austin - Concept of Sovereignty.
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

### **DEPARTMENT OF HISTORY**

## PROGRAMME SPECIFIC OUTCOMES

Department of	After completion the programme of B. A. (Three years) in History
History	students will be able to
Programme Specific Outcome	P.S.O.1- To develop the interest in the study of history and relating activity.
	P.S.O.2- Demonstrate thinking skills by analyzing, synthesizing and evaluating historical information from various sources.
	P.S.O.3- Understand the history of India and modern Europe.
	P.S.O.4- Develop the ability to think critically and historically when discussing the past.
	P.S.O.5- Develop the ability to distinguish between fact and fiction.
	P.S.O.6- Develop an ability to convey verbally their historical knowledge.
	P.S.O.7 Explain what influence the past has on the present.
	P.S.O.8- Understand the importance of communal unity for country.
	P.S.O. 9- Helps for his career as a professional historian.
	P.S.O.10- Work as a teacher in colleges, schools and high schools.
	P.S.O.11- Students can seek the admission in M. A. History, LLB, MSW, MBA.
	P.S.O. 12- Understand the background of our religion, custom and diversity of country.
	P.S.O. 13- Critically recognize the Social, Political, Economic, religious and cultural aspects of History.
	P.S.O.14- Prepare for various types of competitive examinations.
	P.S.O.15- Understand the difference between democracy &dictatorship.
	P.S.O.16- After B.A. in history students can get the opportunities for employment as a history Teacher.
L	P.S.O.17 NGO and Social Welfare Organizations also employ

	History Graduates.
	P.S.O.18 - Nowadays a lot of publishing houses seek subject matter experts for publication of school textbook or supplementary reading materials. The expert of history subject can seek the job as Writer of Subject Expert.
	P.S.O.19 - With an extensive knowledge of history and historical monuments, history graduates can work as a travel expert for tourist spot of historical importance.
<b>Course Outcomes</b>	Course outcomes of History of India from Earliest Times 1205 A.D
B. AI	C.O.1- Understand the difference between Primary and secondary sources and use the sources in writing history.
Semester –I	C.O.2- Understand the history of Indus valley civilization.
	C.O.3- Identify the socio, polity, economy and religious life in pre and post Vedic period.
Т	philosophy of Hinduism, Jainism and Buddhism.
T	C.O.5- Students get information about administration system in ancient India.
	C.O.6- Students get information about administration system in ancient India.
	C.O.7- Understand the History of various dynasties in ancient India.
	C.O.8- Perceive socio-economic, religious situation under the Maurya.
	C.O.9- Clarify the concept of golden age of Gupta period.
	C.O.10- Understand the cultural condition in ancient India.
	C.O.11- Examine the success of Arab Invasions and war of Taraine.
	C.O.12- Understand the condition of religion of Bouddha in ancient India.
<b>Course Outcomes</b>	Course outcomes of History of India From 1206 A.D. to 1525 A.D.
B. AI	C.O.1- Understand the establishment, expansion, consolidation and
Semester –II	decline of Mughal power.
	C.O.2 - Understand the administrative set up of Mugals.
	C.O.3- Identify the socio, economic, religious and political condition in Mugal period.
	C.O.4 Understand the society and status of women in Muagl period.
	C.O.5- Understand the religious movements in Mugal period.

	Mugal.
	C.O.12- Identify the contribution of Chhatrapati Sambhaji, Chhatrapati Rajaram and Maharani Tarabai in Maratha freedom movement against
	C.O.11- Understand the administrative aspect of the Swarajya.
	C.O.10- Understand the Policy of Shivaji about agricultural and farmers.
	rule.
	C.O.9- Undertand the formation of welfare state during the Maratha
	C.O.8- Understand the role of Shivaji in establishment of Swarajya.
	C.O.7- Understand the importance of the Hindavi Swrajya in Hisory.
	C.O.6- Understand the agricultural production, management of water recourses, trade and commerce in Mugal period.
	C.O.5- Understand the religious movements in Mugal period.
	C.O.4- Understand the society and status of women in Muagl period.
	Mugal period.
	C.O.2- Understand the administrative set up of Mugals.  C.O.3 - Identify the socio, economic, religious and political condition
Semester –III	decline of Mughal power
B. AII	C.O.1- Understand the establishment, expansion, consolidation and
<b>Course Outcomes</b>	Course Outcomes of History of India From 1526 A.D. to 1756 A.D.
	C.O.12- Identify the contribution of Chhatrapati Sambhaji, Chhatrapati Rajaram and Maharani Tarabai in Maratha freedom movement against Mugal.
	C.O.11- Understand the administrative aspect of the Swarajya.
	farmers.
	C.O.10- Understand the Policy of Shivaji about agricultural and
	C.O.9- Undertand the formation of welfare state during the Maratha rule.
	C.O.8- Understand the role of Shivaji in establishment of Swarajya.
	C.O.7- Understand the importance of the Hindavi Swrajya in Hisory.
	C.O.6 Understand the agricultural production, management of water recourses, trade and commerce in Mugal period.

B. AII Semester –IV	C.O.1- Understand the formation, expansion and consolidation of British Empire in India under East India Company
Semester –I v	C.O.2- Identify the economic changes in India by British power.
	C.O.3 - Helps to clear the ideas about 1857 revolt.
	C.O.4- Evaluate the renaissance and social reform movement in India.
	C.O.5- Distinguish the detail account of British raj as well as its overall impacts on the Indian society, economy, agriculture and technology.
	C.O.6- Identify the importance of modern education in rise the nationalism in India.
	C.O.7- Identify the major developments in India during the British Power.
	C.O.8- Inculcatesthe nationalist feelings among the students.
	C.O.9- Identify the important persons, their ideas, teachings and its effects in Modern India.
	C.O.10- Acquainted the knowledge of national leaders to create a memory of the national heroes.
	C.O.11- Understand the difference between moderates, extremists and revolutionaries.
	C.O.12- Students will able to understand details of freedom movement under the Mahatma Gandhi's leadership.
	C.O.13- Understand the evolutionary processes of constitutional developments.
<b>Course Outcomes</b>	Course Outcomes of History of Modern Europe: (From 1780 to 1920 AD)
B. AIII	C.O.1- Get information about the French revolution.
Semester –V	C.O.2 - Understand the Europe after the French revolution and political changes in the countries like Prussia, Italy and Russia etc.
	C.O.3- Understand the rise, work and downfall of Nepolean Bonapart.
	C.O.4- Understand the unification of Italy and Germany.
	C.O.5- Understand the Bismark's role in Germanyunder his leadership.
	C.O.6 Understand the Kaisar Willium II's role in 1 <sup>st</sup> world war.
	C.O.7- Understand the Russia revolution and its Effect.

<b>Course Outcomes</b>	Course Outcomes History of Modern Europe: (From 1921 to 1965 AD)
B. AIII	C.O.1- Examine the Nazism and Fascism in German and Italy.
Semester –VI	C.O.2 - Got knowledge regarding Russia under Stalin.
	C.O.3- Students know the causes of Great Depression and its effect on world.
	C.O.4- Understand the causes and results of 2 <sup>nd</sup> world war and the establishment of UNO.
	C.O.5- Illustrate the participation of USA in the World War.
	C.O.6 Understand the effect of military alliances of Russia and America.
	C.O.7- Understand the cold war and its consequences, problem of third world countries, foundation and role of UNO
	C.O.8- Understand the causes and effect of Non-Aligned movementon the world

## **DEPARTMENT OF GEOGRAPHY**

Department of Geography	After successful completion of three year degree program in B.A. students able to;
Programme Outcomes	P.O. 1- Understand the effect of rotation of revolution the Earth P.O. 2- Know the internal structure of the earth know the importance of longitudes & latitudes International time line and Standard Date.
	P.O. 3- Understand the composition of atmosphere P.O. 4- Understand latitudes, longitudes and international dead line.
	P.O. 5- To Understand formation of rocks there types and uses.  P.O. 6- Understand food Security and soil quality.
	P.O. 7- Work in NGOs. 8. Can Prepare for Competitive exams.
	P.O. 8- Serve in cartographer in map making divisions of Government.  P.O. 9- Serve as conservator in forest, Soil, Agri, Departments.
	P.O. 10- Understand human impacts on Ocean.
	P.O. 11- To understand Watershed management and water harvesting Structure.
	P.O. 12- Understand the introduction to Climatology considering weather & climate, role of climate in human life, aims, nature, scope, and some other sub division of the course.
	P.O. 13- Understand the different surviving techniques.
	P.O. 14- Understand the socio economic condition of the village.
	P.O. 15- Acquire knowledge of preparation of drawing of profile with the help of Dumpy level.
	P.O. 16- Get knowledge about Geo Statistical Methods.
Dept. of Geography Programme Specific Outcome	P.S.O. 1- A geographer can avail job opportunities in government departments (like planning and developmental commissions, forestry, environmental, and disaster management departments etc), travel agencies, manufacturing firms, text book and map publishers, media
Specific Outcome	agencies, etc.  P.S.O.2- Work in disaster and water resources management.

P.S.O.3- In recent days even the fields of GIS as well as Remote Sensing are providing job opportunities to people with the educational background in geography and related specialisations. P.S.O. 4- Geographical Survey of India/State and Central government provides job opportunities. P.S.O. 5- Students are made prepare for NET/SET, MPSC/UPSC and other competitive examinations. & Digitizers in GIS company P.S.O. 6- Students are eligible for conducting social survey project which is needed for measuring the status of development of a particular group or section of the society. P.S.O. 7- After the completion of the project they will be efficient in their communication skill as well as power of social interaction. Some of the students are being able to understand and write effective reports and design credentials, make effective demonstrations, and give and receive clear instructions. P.S.O. 8- Identification of different types of rock and minerals. P.S.O. 9 Student will be able to analyse the problems of physical as well as cultural environments of both rural and urban areas. Moreover they will try to find out the possible measures to solve those problems. P.S.O. 10 As a student of Geography Course will be capable to develop their observation power through field experience, and in future will be able to identify the socio environmental problems of a locality. P.S.O. 11 Many people choose to work as a cartographer who is a person with extensive knowledge about maps and is involved in making maps, charts, globes, and models of Earth and other planets. **Course Outcomes** Course outcomes of Geography subject **B.A.I** ( **Sem. I** ) C.O. 1- The students will understand the nature of Geography. They will also understand the meaning and scope of geography. They will learn the branches of geography like Economic Geography, Population Geography C.O.2- The students will understand the Solar System. They will also understand the General Concept of Earth origin: Kant, Laplas, Chembarlen& Jen JemsHerold Jefri, Latitude& Longitude. C.O.3- The students will understand Earth's Rotation and Revolution. They will also understand the Local time & Standard time, International Day Line, and Lunar. They will learn the Solar Eclipse. C.O.4- The students will understand Interior of the Earth. They will learn

	the Forth & Occasional Francis Message of the Forth
	the Earth & Orogenic and Eporgenic Movements of the Earth.
	C.O.5- The students will understand the Earthquake & Volcanoes. They will also understand Causes, Types, Effects & Distribution. They will learn Causes, Types.
	C.O.6 UNIT 1 (Practical)
	The students will understand Contour Maps of Major Land-Forms.
	C.O.7- UNIT 2 (Practical)
	The students will understand Construction of Maps And Diagram. They will learn Shading and Dot Method. They will learn Diagrams: Line, Bar And Divided Circle Method.
B.A.I ( Sem. II )	C.O. 1- The students will understand the Rocks. They will also understand the Origin, Classification and Characteristics. They will also understand the Weathering and Meaning, Causes & Types.
	C.O. 2- The students will understand the Work of Stream. They will learn the Landscape Associated with River.
	C.O. 3- The students will understand work of Glacier. They will also understand Landscape associated with Glacier.
	C.O. 4- The students will understand work of Winds. They will also understand Landscape Associated with Winds. They will learn the Landscape Associated with Under Ground Water.
	C.O. 5- The students will understand the Application of Geomorphology to Human Activities. They will also understand Settlements, Transport. They will learn the Flood & Desertification & Assessment.
	C.O. 6- UNIT 1 (Practical)
	Acquire knowledge of preparation of drawing of profile with the help of Abney level & Chain Survey.
	C.O. 7- UNIT 2 (Practical)
	The students will understand the Mean, Median & Mode.
B.A.I ( Sem. III )	C.O. 1- The students will understand the Definition and significance of climatology. They will learn the Weather and climate, Elements of weathers and climate.
	C.O. 2 – The students will understand the atmosphere and the climate, pressure belts, wind systems, monsoon and their importance, difference between climate and weather.
	C.O. 3- The students will understand Atmospheric pressure. They will also understand vertical, horizontal and seasonal distribution of pressure.

	771 111 4 337 1 1 4 1 1 1
	They will learn the Winds: planetary, periodic and local.
	C.O. 4- The students will understand the Atmospheric moisture. They will also understand humidity, evaporation and condensation, forms of precipitation. They will learn the Types of Rainfall.
	C.O. 5- The students will understand the Atmospheric pollution and global warming. They will learn the consequences and measures of control.
	C.O. 6- UNIT 1 (Practical)
	The students will understand the Construction of Scale. They will learn the Simple Scale & Comparative Scale.
	C.O. 7- UNIT 2 (Practical)
	The students will understand Indian daily Weather reports of three Session.
B.A.I ( Sem. IV )	C.O. 1- The students will understand the nature of Oceanography. They will also understand the meaning and scope of Oceanography. They will learn Significance of Ocean.
	C.O. 2 – The students will understand the Surface configuration of the ocean floor. They will also understand continental shelf, Continental slope, Abyssal Plain, mid-oceanic and oceanic trenches. They will learn Relief of Atlantic, Pacific and Indian Ocean.
	C.O. 3- The students will understand the Distribution of temperature of Oceans and Seas. They will learn Distribution of salinity of Oceans and Seas.
	C.O. 4- The students will understand the Circulation of oceanic water. They will learn waves, tides and currents; currents of the Atlantic, Pacific and Indian Oceans.
	C.O. 5- The students will understand the Marine deposits and coral reefs.
	C.O. 6- C.O. 6- UNIT 1 (Practical)
	They will learn Plain-table survey: Radiation and Inter-Section Resection Method.
	C.O. 7- UNIT 2 (Practical)
	The students will understand the Statistical Method. They will learn Standard Deviation and Correlation of Coefficient.
B.A.I ( Sem. V )	C.O. 1- The students will understand India in the context of world. They will also understand the India a Land of Diversities & Unity within diversities.

	They will learn Physical Division of India.
	C.O. 2 – The students will understand the Drainage System of Indian. They will also understand Indian Climate. They will learn the Monsoon, Western Disturbance, Norwesters.
	C.O. 3- The students will understand the Soil Types of India. They will also understand Soil Types of distribution & Characteristic. They will learn Major Crops in India Wheat, Rice, Cotton & Sugarcane.
	C.O. 4- The students will understand the Spatial distribution of Population and density. They will also understand Population Explotion. They will learn Urbanization & Sex ratio in India.
	C.O. 5- The students will understand the Distribution & Conservation of Minerals. They will also understand Iron, Copper, Bauxite & Power Resource Coal and Mineral Oil. They will learn Industrial regions of India.
	C.O. 6- UNIT 1 (Practical)The students will understand the Mapprojection. They will learn Drawing of following projection by Graphical Method with their properties and uses.
	C.O. 7- UNIT 2 (Practical)The students will understand the Indian Topographical maps. Mountain, Plateau, Plain.
B.A.I ( Sem. VI )	C.O. 1- The students will understand the Physical division of Maharashtra.  They will learn drainage System of Maharashtra.
	C.O. 2 – The students will understand the Climate in Maharashtra. They will also understand distribution of rainfall & Soil Types, Vegetation.
	C.O. 3- The students will understand the Major Crops in Maharashtra. They will learn Wheat, Rice, Jawar, Cotton & Sugarcane.
	C.O. 4-The students will understand the Maharashtra Mineral. Manganese, Bauxite and iron ore. They will learn Major Industries: Cotton Industry & Sugar Industry.
	C.O. 5- The students will understand the Population. They will learn distribution of Population and density
	C.O. 6 UNIT 1 (Practical)The students will understand the Prismatic Compass Survey.
	C.O. 7- UNIT 2 (Practical)The students will understand concept of economic activity, factors affecting location of economic activity. They will also understand the socio economic condition of the villages.

## **DEPARTMENT OF ECONOMICS**

Department of	After successful completion of three year degree programme in
Economics	Economics a student would be able to
Programme	P.O. 1- To understand a well-founded education in Economics.
Outcomes	P.O. 2- To comprehend economic policies.
	P.O.3- To provide the graduates employment and scope for further study as economists
	P.O. 4- To grab the opportunity to pursue courses that emphasize
	quantitative and theoretical aspects of Economics
	P.O. 5- To focus on applied and policy issues in Economics
	P.O. 6- To choose from a wide range of economic specialization
Programme	P.S.O. 1- Identify the basic concepts and theories of Microeconomics
Specific Outcome	as well as Macroeconomics.
	P.S.O.2- Understand how different degrees of competition in a market affect pricing and output.
	P.S.O.3- Understand the efficiency and equity implications of market interference, including government policy.
	P.S.O. 4- Understand characteristics, features, structural changes in Economy of Maharashtra.
	P.S.O. 5- Understand the nature and causes of the agrarian crisis and the problem of farmers' suicides in Maharashtra.
	P.S.O.6 Evaluate the changing role of agriculture, industrial, service sector, and foreign sector in Indian Economy.
	P.S.O.7- Understand the meaning, functions and role of central as well as commercial banks in the economy.
	P.S.O.8- Measure the problems and prospects of economy of Maharashtra as well as Indian Economy.
	P.S.O. 9- Evaluate the changing role of agriculture, industrial, service and foreign sector in Indian Economy.

	P.S.O. 10- Understand the meaning, functions and role of central as well as commercial banks in the economy.
	P.S.O. 11- Measure the problems and prospects of economy of
	Maharashtra as well as Indian Economy.
	P.S.O. 12- Evaluate the changing role of agriculture, industrial and service sector and foreign sector in Indian Economy.
	P.S.O. 13- Develop the knowledge about theories of economic growth
	& Development and issues of economic planning.
Course Outcomes	Course Outcomes of B. A. Economics
B. AI	C.O.1- Understand various definitions of economics.
Semester –I	C.O.2- Analyze the nature and characteristics of economic laws.
	C.O.3 - Understand the meaning and importance microeconomics.
T	
	C.O.5- Realize various production theories.
	C.O.6- Aware of different markets structure.
	C.O.7- Analyze internal & External economies and diseconomies of
	scale.
	C.O. 8- Analyze the factor pricing and national income distribution.
	C.O. 9- Understand nature and characteristics of production factors.
	C.O. 10- Analyze the factor pricing and national income distribution.
B. AI	C.O.1- Understand the historical background of Maharashtra State.
Semester –II	C.O.2- Analyze the basic features of economy of Maharashtra State.
	C.O.3- Analyze the demographic features of economy of Maharashtra State.
Т	C.O. 4- Understand the nature and importance of agriculture sector.
1	C.O.5- Evaluate various land reforms and green revolution in
	Maharashtra.
	C.O.6- Know main features of industrial development in Maharashtra.
	C.O.7- Evaluate the role of MSMEs in the industrial development of
	state.
	C.O. 8- Understand the historical background of Vidarbha region.
	C.O. 9- Realize various special issues in Vidarbha region
	C.O. 10- Analyze the nature and causes of Farmers' suicides in
	Vidarbha
B. AII	C.O.1- Identify the basic concepts and theories of macroeconomics.
Semester –III	C.O.2 - Understand changing macroeconomics policies and theories.
	C.O.3- Understand various concepts in national income accounting.

	C.O.4- Understand the meaning, types and functions of money.
	C.O.5- Analyze the causes and consequences of inflation and disinflation .
	C.O.6 Evaluate various market theories.
	C.O.7- Understand the consumption function and investment function.
	C.O.8- Know the difference between inter-regional and international trade.
	C.O.9 Understand the advantages and disadvantages of international trade.
	C.O.10- Evaluate the comparative advantage theory of international trade.
B. AII	C.O.1- Understand the meaning and types of bank.
Semester –IV	C.O.2- Analyze the functions of commercial bank in Indian economy.
Semester 1	C.O.3- Evaluate the credit creation process of commercial banks.
T	C.O. 4- Analyze the functions of central bank in Indian economy.
	C.O.5- Evaluate the credit control policy of Reserve Bank of India.
	C.O.6- Understand the meaning and types of cooperative bank.
	C.O.7- Analyze the objectives and functions of NABARD.
	C.O. 8- Evaluate the objectives, functions and functions of IMF.
	C.O. 9- Analyze the objectives, functions and functions of World
	Bank.
	C.O. 10- Examine the objectives, functions and functions of WTO
B. AIII	C.O.1- Understand characteristics and structural changes in Indian
Semester –V	Economy.
	C.O.2- Comprehend the nature and impact of new economic reforms.
	C.O.3- Understand the objectives, types and importance of economic planning.
T	Francisco de la constanta de l
	sector.  C.O.5- Understand the concept and causes of fragmentation of land.
	C.O.6- Examine the new industrial policy of 1991
	C.O.7- Evaluate the role of MSMEs in the industrial development in India
	C.O. 8- Analyze various important areas of concern in Indian economy.
	C.O. 9- Understand the concept and types of environmental pollution.

	C.O. 10- Understand the concepts of environment change and global
	warming.
	C.O.1- Understand the meaning and scope of demography.
B. AIII	C.O.2- evaluate various population theories.
Semester –VI	C.O.3 - Analyze various determinants of fertility, birth rate and mortality.
	C.O.4- Examine the concept, types and causes of migration in India.
	C.O.5- Evaluate the factors affecting migration and Urbanization.
	C.O.6- Analyze the pattern, causes and effects of migration in India.
	C.O.7- Discuss the population and human development issues in India.
	C.O.8- Evaluate the population policy in Indian economy.
	C.O.9- Analyze the family planning strategies and their outcomes.
	C.O.10- Evaluate new economic policy 2000.

### **DEPARTMENT OF COMMERCE**

COMMERCE	After successful completion of three year degree program in B.COM. a student should be able to;
Programme Outcomes	P.O. 1 Students would gain a thorough knowledge of fundamentals of Commerce
	P.O. 2- To build a strong foundation of knowledge in different areas of Commerce
	P.O. 3- Students after completing the course can get jobs in banking sector, Insurance company and in industry as accountant.
	P.O. 4- The Commence focused curriculum offers a number of specialization and practical exposures which would equip the student to face the modern day challenges in Commerce and Business
	P.O. 5- Student will be able to demonstrate the progress learning of various tax issue and tax reforms related to individual.
	P.O. 6- Students after completing the course can work as auditor, accountant, and statistical analyzer
	P.O. 7 Student will demonstrate progressive affective domain development of values, the role of Accounting in society and business
	P.O.8- Student will develop the skill of applying concepts and techniques used in Commerce.
	P.O.9- To develop an attitude for working effectively and efficiently in a business environment
	P.O.10- After completion of B.Com students can do the post graduation, C.A., C.S., C.M.A., MBA, ICWA and other professional courses
Programme	P.S.O. 1- Students will be able to demonstrate progressive learning of
Specific Outcome	various tax issues and tax forms related to individuals. Students will be
	able to demonstrate knowledge in setting up a computerized set of

	accounting books.
	P.S.O.2- Students will demonstrate progressive affective domain
	development of values, the role of accounting in society and business.
	P.S.O.3- Students will learn relevant financial accounting career skills,
	applying both quantitative and qualitative knowledge to their future
	careers in business.
	P.S.O. 4- Students will learn relevant managerial accounting career
	skills, applying both quantitative and qualitative knowledge to their future careers in business.
<b>Course Outcomes</b>	Course outcomes of Advanced Accountancy
B. ComI	C.O.1- Understand classification of accounts.
Semester –I	C.O.2- Analyze the rules of debit and credit.
	C.O.3- Understand the rules regarding posting and balancing of ledger
	Account and Trial Balance.
Т	C.O.4- Understand purchase book, sales book, purchase return book,
	sales return book.
T	C.O.5- Aware of final accounts of individual.
	C.O.6- Understand the different methods of depreciation.
	C.O.7- Analyze the straight line method.
	C.O.8- Analyze the reducing balance method.
	C.O.9- Understand meaning, import ants and need of bank
	reconciliation statement.
	C.O.10- Understand difference between cash book and pass book.
	C.O.11- Analyze the bank reconciliation statement.
<b>Course Outcomes</b>	Course outcomes of Financial Accounting
B. ComI	C.O.1- Understand accounts of Non-trading Institutions.
Semester –II	C.O.2 - Analyze Special Accounting Areas Accounts of Co-operative
	Societies.
	C.O.3- Analyze Accounting for Agriculture Farms.
	C.O.4- Understand Hire purchases Accounts.
	C.O.5- Know to Installment purchase Accounts.
	C.O.6 Understand the Laws of insolvency.
	C.O.7- Understand the provision for preferential creditors.
	C.O.8- Understand the meaning of insolvency.
	C.O.9- Realize the Procedure of insolvency.

	C.O.10- Solve the problems on Insolvency Accounts.
<b>Course Outcomes</b>	Course Outcomes of Company Account
B. ComII	C.O.1- Understand the issue , forfeiture and re-issue of shares.
Semester –III	C.O.2- Solve the necessary accounts.
	C.O.3 - Understand how to prepare Trading Account, P and L Account, P and L Appropriation Account and Balance Sheet with the help of adjustments.
	C.O.4- Realize how to compute profit prior to incorporation
	C.O.5- Understand the problems on Amalgamation of Companies
	C.O.6- Understand how to compute the purchase price.
	C.O.7- Understand how to prepared journal entries in the books of vendor Co. and New Co.
	C.O.8- Realize how to prepare necessary accounts in the books of absorption Co.
<b>Course Outcomes</b>	Course Outcomes of Business Statistics
B. ComII	C.O.1- Understand the introduction of statistics
Semester –IV	C.O.2- Understand types of dada collections.
	C.O.3 - Understand the construction of index of number.
	C.O.4- Analyze the construction of frequency.
	C.O.5- Understand and solve the problems on Mean, Median and Mode.
	C.O.6- Understand and solve the problems on absolute and relative measures of dispersion and skewness.
	C.O.7- Analyze and solve the problems on coefficient correlation & P.E
<b>Course Outcomes</b>	Course Outcomes of Corporate Accounting
B. ComIII Semester –V	C.O.1- Understand and solve the problems on final accounts of banking company.
Semester – v	C.O.2 - Understand and solve the problems on final accounts of Fire and accident insurance company.
	C.O.3- Understand and solve the problems on liquidation of company.

	C.O.4- Understand the meaning and need of goodwill.
	C.O.5- Understand and solve the problems on valuation of goodwill.
	C.O.6 Understand the meaning and need of shares.
	C.O.7- Understand and solve the problems on valuation of shares.
<b>Course Outcomes</b>	Course Outcomes Corporate Accounting
B. ComIII	C.O.1- Understand and solve the problems on final accounts of
Semester –VI	banking company.
	C.O.2 - Understand and solve the problems on final accounts of Fire and accident insurance company.
	C.O.3- Understand and solve the problems on liquidation of company.
	C.O.4- Understand the meaning and need of goodwill.
	C.O.5- Understand and solve the problems on valuation of goodwill.
	C.O.6 Understand the meaning and need of shares.
	C.O.7- Understand and solve the problems on valuation of shares.
	Course Outcomes
	B. Com. Final Year (Annual Pattern) Paper: Business Regulatory Framework & Comapany Law
	After completing the course contents students are able to
	C.O.1- Understand the Indian Contract Act 1872.
	C.O.2 - Understand the Special Contract.
Course	C.O.3- Analyze the Sale of Goods Act 1930.
Course	C.O.4- Understand the Negotiable Instrument Act 1881.
	C.O.5- Understand the meaning of Joint Stock Company.
	C.O.6 Understand the meaning of Memorandum of Association & Memorandum of Articles
	C.O.7- Understand the Share Capital, Member, Transfer & Transmission of shares, Company meeting.

### **DEPARTMENT OF COMMERCE**

COMMERCE	After successful completion of three year degree program in B.COM. a student should be able to;
Programme	P.O. 1 After completing three years for Bachelors in Commerce
Outcomes	(B.Com) program, students would gain a thorough grounding in the
	fundamentals of Commerce and Finance.
	P.O. 2- The commerce and finance focused curriculum offers a
	number of specializations and practical exposures which would equip
	the student to face the modern-day challenges in commerce and
	business.
	P.O.3- In advanced accounting courses beyond the introductory level,
	affective development will also progress to the valuing and
	organization levels.
Programme	P.S.O. 1- Students will be able to demonstrate progressive learning of
<b>Specific Outcome</b>	various tax issues and tax forms related to individuals. Students will be
	able to demonstrate knowledge in setting up a computerized set of
	accounting books.
	P.S.O.2- Students will demonstrate progressive affective domain
	development of values, the role of accounting in society and business.
	P.S.O.3- Students will learn relevant financial accounting career skills,
	applying both quantitative and qualitative knowledge to their future
	careers in business.
	P.S.O. 4- Students will learn relevant managerial accounting career
	skills, applying both quantitative and qualitative knowledge to their
<u> </u>	future careers in business.
<b>Course Outcomes</b>	Course outcomes of Principles of Business Organization
B. ComI	C.O.1- Understand meaning, scope and evolution of commerce &
Comment	industry.
Semester –I	C.O.2- Evaluate the industrial revolution and its effects.
	C.O.3- Understand the meaning and importance MNCs in Indian
	1 0.0.0 of actions are meaning and importance in res in findian

	economy
	economy
T	C.O.4- Analyze the various business sectors and its forms.
T	8
	C.O.6- Understand the meaning and nature of E-commerce and online
	trade.
	C.O.7- Analyze the concepts of patents, trademarks and copyrights.
	C.O.8- Differentiate between whole sale and retail trade.
	C.O.9- Evaluate import-export trade procedure.
<b>Course Outcomes</b>	Course outcomes of Principles of Economics
B. ComI	C.O.1- Understand various definitions of economics.
Semester –II	C.O.2 - Analyze the nature and characteristics of economic laws.
	C.O.3- Understand the meaning and importance microeconomics.
	C.O.4- Analyze the theories of demand and supply.
	C.O.5- Realize various production theories.
	C.O.6 Aware of different markets structure.
	C.O.7- Analyze internal & External economies and diseconomies of scale.
	C.O.8- Analyze the meaning and types of cost.
	C.O.9- Analyze the meaning and types of revenue.
<b>Course Outcomes</b>	Course Outcomes of Monetary System
B. ComII	C.O.1- Understand the disadvantages of barter system.
Semester –III	C.O.2- Understand the meaning, types and functions of money.
	C.O.3 - Evaluate the merits and demerits of demonetization.
	C.O.4- Examine the fishers' quantity theory of money.
	C.O.5- Analyze the causes and consequences of inflation and disinflation.
	C.O.6- Understand the nature and features of Indian money market.
	C.O.7- Understand the nature and features of Indian capital market.
	C.O.8- Analyze the structure of Indian money market.
	C.O.9- Analyze the structure of Indian capital market.
	C.O.10- Evaluate the objectives and functions SEBI.

<b>Course Outcomes</b>	Course Outcomes of Indian Financial System
B. ComII	C.O.1- Understand the meaning and types of bank.
Semester –IV	C.O.2- Analyze the functions of commercial bank in Indian economy.
	C.O.3 - Evaluate the credit creation process of commercial banks.
	C.O.4- Analyze the functions of central bank in Indian economy.
	C.O.5- Evaluate the credit control policy of Reserve Bank of India.
	C.O.6- Understand the history, meaning & features of Indian stock exchange.
	C.O.7- Analyze the objectives and functions of Reserve Bank of India.
	C.O.8- Evaluate the role of Reserve Bank of India in Indian economy.
	C.O.9- Understand various banking services of commercial banks.
	C.O.10- Examine the problems and importance of Indian financial system.
<b>Course Outcomes</b>	Course Outcomes of Business Environment
B. ComIII	C.O.1- Understand the nature and scope of Indian business environment.
Semester –V	C.O.2 - Analyze the internal and external components of business environment.
	C.O.3- Evaluate the problems and prospectus of Indian tourism industry.
	C.O.4- Evaluate the changing role and importance of agriculture sector.
	C.O.5- Understand the concept and causes of fragmentation of land.
	C.O.6 Examine the new industrial policy of 1991.
	C.O.7- Evaluate the role of MSMEs in the industrial development in India.
	C.O.8- Analyze the causes of industrial sickness in India.
	C.O.9- Understand the role and importance of service sector in India.
	C.O.10- Understand the present state of IT services in Indian economy.
<b>Course Outcomes</b>	Course Outcomes Economics of Development

B. ComIII	C.O.1- Understand the meaning of economic growth and development.
Semester –VI	C.O.2 - evaluate various economic growth models.
	C.O.3- Evaluate the Harrod-Domar growth model.
	C.O.4- Examine the theory of vicious circle of poverty.
	C.O.5- Evaluate the Lewis theory of unlimited supplies of labor.
	C.O.6 Explain the big push theory of development.
	C.O.7- Evaluate the concepts of balanced and unbalanced growth.
	C.O.8- Evaluate the Special Economic Zones policy in India.
	C.O.9- Analyze the indicators and importance of human resource development.
	C.O.10- Analyze the process of capital formation in India.

#### **DEPARTMENT OF COMMERCE**

COMMERCE	After successful completion of three year degree program in B.COM. a student should be able to;
Programme	P.O. 1 The graduates are expected to develop an ability to apply
Outcomes	knowledge of Computer
	P.O. 2- The department would like to attain recognition teaching and
	research.
	P.O.3-The graduates are expected conduct of experiments.
	P.O. 4- The department also strives to contribute to Business.
	P.O. 5- Analyze, synthesize and integrate knowledge.
	P.O. 6- To be an academic excellence in terms of teaching, curriculum
	development and research
Programme	P.S.O. 1-, To engage in lifelong learning for the advancement of
<b>Specific Outcome</b>	technology and its adaptation in multi-disciplinary environments
	P.S.O.2- Apply appropriate techniques and hardware and software
	tools for the design and integration of computer system and related
	technologies for business.
	P.S.O.3- Apply the fundamentals Business knowledge to understand,
	analyze and develop computer programs in the areas related to
	algorithms.
	P.S.O. 4-Design and develop computer programs/computer-based
	systems in the areas P.S.O. 5- Apply standard Software practices and strategies in real-time
	software project development using open-source programming.
	P.S.O. 6- Demonstrate the Computer Science in the core knowledge
	areas.
<b>Course Outcomes</b>	Course outcomes of Computer Fundamentals and Operating
	System
B. ComI	C.O.1- Understand various definitions of computer and its type.
Semester –I	C.O.2- Analyze the evolution and characteristics of digital computer.
	C.O.3-Understand the computer block diagram and its elements.
Т	C.O. 4- Understand various concepts of software and hardware & its
	type.
T	C.O.5- Aware of different types of computer memory.
	C.O.6- Understand the concepts of input devices and its importance.

	C.O.7- Understand the importance of computer Primary & Secondary
	memory
	C.O.8- Understand the concepts of output devices and its use.
	C.O.9- Understand various definitions of Ms Word and its importance in Official use
	C.O.10-Understand Creating, Opening, Saving and Printing a word Document
	C.O.11-Understand formatting a word Document.
B. ComI Semester –II	C.O.1- Understand the Main Functions, Structure, & Types of Operating System.
	C.O.2 - Analyze the Popular Operating Systems: MS DOS, MS
	WINDOWS, MS Window NT, UNIX, LINUX, MACINTOSH.
	C.O.3- Analyze the Features, Types and Elements of Windows operating system.
	C.O.4- Understand the how to handle windows program screen.
	C.O.5- Know to installing and uninstalling various programs and Accessories.
	C.O.6 Know main functions of operating system.
	C.O.7- Understand the concepts of Modern communications.
	C.O.8- Understand the Network Topologies: Network types LAN, MAN, WAN and their Architecture, Dial up access.
	C.O.9- Realize the Procedure and Application of Mail Merge.
	C.O.10- Using Graphics & Objects; Insert Clip Arts, Links, Shapes, Text Box, WordArt, Drop Cap.
	C.O.11- Realize the Concept of Presentation, creating, formatting and
	Printing presentation file.
B. ComII	C.O.1- Identify the basic concepts and meaning of Audit & Auditing.
Semester –III	C.O.2- Understand the Objectives, Advantages & Types of Audit.
	C.O.3 - Understand the meaning and importance of Internal Check system in Auditing.
	C.O.4- Understand the implementation of Audit Program.

	C.O.5- Analyze the Verification and Valuation of Assets and liabilities.
	C.O.6- Understand the concept of Company Auditor its Appointment, Power, duties and Liabilities.
	C.O.7- Know the Audit of Divisible Profit, Dividend, Audit Report and Types of Report.
	C.O.8- Know how to do the Audit of Banking, Insurance & Educational Institutions.
B. ComII	C.O.1- Understand the meaning and types of Income Tax
Semester –IV	C.O.2- Understand various heads of income tax .
	C.O.3 - Understand how to Compute Income from Salary & Income from House property.
	C.O.4- Realize how to compute Income From Other Source.
	C.O.5- Realize the Deductions to be made from Gross Total Income, reading to resident Individual.
	C.O.6- Know the Income tax Authorities, Power of Income tax Officer & Commissioner
	C.O.7- Understand how to filling of From No.16 & Form No. 10 E.
	C.O.8- Realize how to fill Return of Income Tax and Advance Tax.
B. ComIII  Annual Pattern	C.O.1- Understand the Meaning; Features; Functions; Advantages & Limitations of Cost Accounting.
Annual Fattern	C.O.2 - Understand the Cost; Cost VS Expenses and Losses; Cost Object & Methods of Costing.
	C.O.3- Understand the Historical and Pre-determined Costs.
	C.O.4- Evaluate the cot sheet and cost statement.
	C.O.5- Understand the Labor Cost, Time Keeping & Wage Payment Methods.
	C.O.6 Analyze Reconciliation of Cost Accounts with Financial Account.
	C.O.7- Understand the concept and types Process Costing.
	C.O.8- Understand the Procedure of Computation of Process Cost Accounts.
	C.O.9- Understand the Meaning; Features; Advantages; Limitations;

	Scope and Functions of Management Accounting.
	C.O.10- Identify the difference Between Management Accounting and Financial Accounting
	C.O.11- Understand the Concept, Uses and Limitations of Break-Even Analysis
	C.O.12- Understand the Use of P/V ratio for decision making
	C.O.13- Realize the importance of Break Even Analysis in industrial sector.
	C.O.14- Know the Meaning of Ratio Analysis, Advantages and Limitations of Ratio Analysis.
	C.O.15- Evaluate Meaning and Definition of Budget; Characteristics of Budget; Types of Budget
	C.O.16- Know the role of Flexible Budget in development of Business.
B. ComIII  Annual Pattern	C.O.1- Understand the Meaning; basic concepts and ground rules of Internet and the various services
Annual I attern	C.O.2 - Understand the Distributed computing; Client-Server computing; Internet Protocol Suite; Protocol stack;
	C.O.3- Evaluate the Open system interconnection reference model
	C.O.4- Evaluate the cot sheet and cost statement.
	C.O.5- Understand the Mechanism transmitting the message across the network and function of each layer of OSIRM.
	C.O.6 Understand the Mechanism to log on to the network
	C.O.7- Understand the Internet Enabled Services: Usenet, Goofier, Newsgroup,
	C.O.8- Understand the Use Exploring the world wide web.
	C.O.9- Understand the Architecture of world wide web.
	C.O.10- Identify the Naming scheme for HTML documents; HTML editor; Explanation of structure of the home page; Elements in HTM documents.
	C.O.11- Understand the WWW operations; Web standards.
	C.O.12- Understand the Meaning of Browsers; Basic functions of web browsers.
	C.O.13- Realize the importance Internet Explorer; Netscape Navigator;

Netscape Communicator in internet world.
C.O.14 - Know the Meaning of search engines, General features of the
search engine; Approaches to website selection; Major search engines;
Specialization search engines; Popular search engines.

### **DEPARTMENT OF CHEMISTRY**

Science	After successful completion of three year degree program in B.Sc.
	a student should be able to;
Programme Outcomes	P.O. 1 They will acquire the knowledge with facts and figures related to various subjects in pure sciences such as Physics, Chemistry, Botany, Zoology, Mathematics, Microbiology etc.
	P.O. 2- To develop scientific outlook not only with respect to science
	subjects but also in all aspects related to life.
	P.O.3- Understood the basic concepts, fundamental principles, and the
	scientific theories related to various scientific phenomena and their
	relevancies in the day-to-day life.
	P.O. 4- Acquire the skills in handling scientific instruments, planning
	and performing in laboratory experiments.
	P.O. 5- The will acquire the skills of observations and drawing logical
	inferences from the scientific experiments.
	P.O.6- They will able to think creatively (divergently and convergent)
	to propose novel ideas in explaining facts and figures or providing new solution to the problems.
	P.O.7- Understand how the development in any science subject helps
	in the development of other science subjects and vice-versa and how
	interdisciplinary approach helps in providing better solutions and new ideas for the sustainable developments.
	P.O.8- Develop ethical, moral and social values in personal and social
	life leading to highly cultured and civilized personality.
	P.O.9- Develop various communication skills such as reading,
	listening, speaking, etc., which we will help in expressing ideas and
	views clearly and effectively.
	P.O.10- Develop research aptitude by participating in research project.
	P.O.11- Develop teamwork and leadership abilities by working

	effectively the other members of team.
	P.O.12- Make the students more equipped to appear the various Competitive Examinations for Banking, Civil and other services.
Programme Specific Outcome	P.S.O. 1- Develop the ability to demonstrate knowledge and understanding of essential facts, concepts, principles and theories related to the subject areas.
	P.S.O.2- Understand basic facts and concepts in Chemistry while retaining the exiting aspects of Chemistry so as to develop interest in the study of chemistry as a discipline.
	P.S.O.3- Develop the ability to apply the principles of Chemistry.
	P.S.O. 4- Know the achievements in Chemistry and the role of Chemistry in nature and in society.
	P.S.O. 5- Develop problem solving skills.
	P.S.O. 6- Familiarized with the emerging areas of Chemistry, research and their applications in various spheres of Chemical sciences and to apprise the students of its relevance in future studies.
	P.S.O. 7- Learn the different processes used in industries and their application.
<b>Course Outcomes</b>	Course outcomes of Chemistry
B.ScI	C.O.1- To enable the students to learn basics of chemistry like periodic table and periodic properties, also Ionic bonding.
Semester –I	C.O.2- To learn electronic displacement and reactive intermediate in organic reactions, also acquire knowledge of Aliphatic and aromatic hydrocarbon.
	C.O.3- To understand about thermodynamics, Gaseous state and phase rule.
B. ScI Semester –II	C.O.1- To enable the students to learn some basic concepts of polarization, covalent bonding, about acid and bases, periodic properties of P block elements and properties of non aqueous solvent.
	C.O.2 - To learn preparation and chemical properties of alkyl halide, aryl halide, alcohols, phenols, ethers and epoxides.
	C.O.3- To understand physical properties like electrical properties and magnetic properties and their relation with molecular structure of compound and chemical kinetics of reactions.
B. ScII Semester –III	C.O.1- To enable students to learn in detail about covalent bonding, metallic bonding, VSEPR theory and theory of inorganic quantitative analysis of acid- base titration, redox titration and gravimetric analysis.

	C.O.2- To learn preparation and chemical properties of aldehydes,
	ketones, carboxylic acids and stereochemistry of carbon compounds.
	C.O.3 - To understand thermodynamics and equilibrium, phase equilibrium, liquid state and electrochemistry.
B. ScII Semester –IV	C.O.1- To enable the students to learn chemistry of transition elements, inner transition element, extraction method of elements, principle of metallurgy.
	C.O.2- To learn Polynuclear hydrocarbons, Reactive methylene compounds, Carbohydrates, Aromatic nitro compounds, Amino Compounds, Diazonium Salts, Amino acids and Proteins.
	C.O.3 - To understand the Colligative Properties of Dilute Solutions and Crystalline state.
B. ScIII Semester –V	C.O.1- To enable the students to learn about coordination compounds, chelates, crystal field theory, electronic spectra of transition metal complex.
	C.O.2 - To understand heterocyclic compounds, organometallic compound, dyes, drugs and pesticides.
	C.O.3- To learn about photochemistry and molecular spectroscopy.
B. ScIII	C.O.1- To enable the students to learn about Kinetic Aspects of Metal Complexes, Spectrophotometry, Colorimetry, Paper Chromatography,
Semester –VI	Organometallic Chemistry, Inorganic Polymers, Bio-inorganic Chemistry.
	C.O.2 - To understand the spectroscopic techniques like, Electronic spectroscopy, Infrared spectroscopy, NMR spectroscopy, Mass spectroscopy.
	C.O.3- To learn about Elementary Quantum Mechanics, Electrochemistry and Nuclear Chemistry.

Course	Outcomes
Chemistry Paper I	To enable students to perform qualitative analysis of inorganic salt mixture to identify acidic and basic radicals. To understand various reactions like Acetylation, Benzoylation, Bromination, Nitration, Hydrolysis, Sulphonation, Oxidation, Diazotization by preparing respective compound.
Chemistry Paper II	To enable the students to perform analysis of organic compounds containing one or two functional group. To understand various physical parameters like viscosity and surface tension and their application, also to handle the instruments like stalagnometer and viscometer.
Chemistry Paper III	To enable the students to perform volumetric analysis acid- base titration, redox titration and gravimetric analysis. To understand various physical properties like refractive index, solubility, kinetics of hydrolysis and partition coefficient.
Chemistry Paper IV	To enable the students to perform inorganic estimation, chromatographic estimation, colorimetric estimation, estimation and isolation of organic compounds.
Chemistry Paper V	To enable the students to prepare the inorganic compounds. To handle the instruments like conductometer, potentiometer and polarimeter.
Chemistry Paper VI	To enable the students to estimate the organic compounds and chromatographic separation of organic compound. To perform the physical chemistry practical using instruments like pH meter, potentiometer and colorimeter.

#### **DEPARTMENT OF BOTANY**

Department of	After successful completion of three year degree program in B.Sc.
BOTANY	a student should be able to;
Programme	P.O. 1- Knowledge and understanding of: 1. The range of plant
Outcomes	diversity in terms of structure, function and environmental
	relationships. 2. The evaluation of plant diversity. 3. Plant
	classification and the flora of Maharashtra. 4. The role of plants in the
	functioning of the global ecosystem. 5. A selection of more
	specialized, optional topics. 6. Statistics as applied to biological data.
	P.O. 2- Intellectual skills – able to: 1. Think logically and organize
	tasks into a structured form. 2. Assimilate knowledge and ideas based
	on wide reading and through the internet. 3. Transfer of appropriate
	knowledge and methods from one topic to another within the subject.
	4. Understand the evolving state of knowledge in a rapidly developing
	field. 5. Construct and test hypothesis. 6. Plan, conduct and write a
	report on an independent term project.
	P.O. 3- Practical skills: Students learn to carry out practical work, in
	the field and in the laboratory, with minimal risk. They gain
	introductory experience in applying each of the following skills and
	gain greater proficiency in a selection of them depending on their
	choice of optional modules. 1. Interpreting plant morphology and
	anatomy. 2. Plant identification. 3. Vegetation analysis techniques. 4.
	A range of physiochemical analyses of plant materials in the context of
	plant physiology and biochemistry. 5. Analyze data using appropriate
	statistical methods and computer packages. 6. Plant pathology to be
	added for sharing of field and lab data abstained.
	P.O. 4- Transferable skills: 1. Use of IT (word-processing, use of
	internet, statistical packages and databases). 2. Communication of
	scientific ideas in writing and orally. 3. Ability to work as part of a
	team. 4. Ability to use library resources. 5. Time management. 6.
	Career planning.
	P.O. 5- Scientific Knowledge: Apply the knowledge of basic science,
	life sciences and fundamental process of plants to study and analyze
	any plant form.
	P.O. 6- Problem analysis: Identify the taxonomic position of plants,

- formulate the research literature, and analyze non reported plants with substantiated conclusions using first principles and methods of nomenclature and classification in Botany.
- P.O. 7- Design/development of solutions: Design solutions from medicinal plants for health problems, disorders and disease of human beings and estimate the photochemical content of plants which meet the specified needs to appropriate consideration for the public health
- P.O. 8- Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and development of the information to provide valid conclusions.
- P.O. 9- Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern instruments and equipments for Biochemical estimation, Molecular Biology, Biotechnology, Plant Tissue culture experiments, cellular and physiological activities of plants with an understanding of the application and limitations.
- P.O. 10- The Botanist and society: Apply reasoning informed by the contextual knowledge to assess plant diversity, its importance for society, health, safety, legal and environmental issues and the consequent responsibilities relevant to the biodiversity conservation practice.
- P.O. 11- Environment and sustainability: Understand the impact of the plant diversity in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- P.O. 12- Ethics: Apply ethical principles and commit to environmental ethics and responsibilities and norms of the biodiversity conservation. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- P.O. 13- Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- P.O. 14- Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- P.O. 15- Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- P.O. 16- Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Dept. of Botany	P.S.O.1- Diversity & Applications of Microbes and Cryptogams
Programme	On completion of the course, students are able to: 1. Understand the
Specific Outcome	diversity among Algae. 2. Know the systematic, morphology and
Specific Outcome	structure, of Algae. Understand the life cycle pattern of Algae. 3.
	Understand the useful and harmful activities of Algae. 4. Understand
	the Biodiversity of Fungi 5. Know the Economic Importance of Fungi
	6. Understand the morphological diversity of Bryophytes. 7.
	Understand the economic importance of the Bryophytes.
	P.S.O.2-Gymnosperm, Pteridophytes, Morphology of Angiosperms
	and Utilization of Plants:
	On completion of the course, students are able to:
	1. Understand the morphological diversity of Bryophytes and
	Pteridophytes and Gymnosperms. 2. Understand the economic
	importance of the Bryophytes and Pteridophytes and Gymnosperms. 3.
	Know the evolution of Bryophytes and Pteridophytes and
	Gymnosperms.
	4. Understand the habit of the angiosperm plant body.
	5. Know the vegetative characteristics of the plant.
	6. Learn about the reproductive characteristics of the plant.
	7. Understand the plant morphology and basic taxonomy.
	, residence and plant merpheregy and each amienemy.
	P.S.O.3- Physiology and Ecology On completion of the course,
	students are able to: 1. Understand the Biochemical nature of cell. 2.
	Know the chemical nature of biomolecules. 3. Understand the different
	types of interaction in Biomolecules. 4. Structure and general features
	of enzymes. 5. Concept of enzyme activity and enzyme inhibition. 6.
	Learn about the movement of sap and absorption of water in plant
	body. 6. Understand the plant movements. 7) Learn and understand
	about mineral nutrition in plants. 8) Understand the growth and
	developmental processes in plants. 9) Know about Photosynthesis and
	Respiration in plants. 10) Understand the process of translocation of
	solutes in plants 11) Know the nitrogen metabolism and its
	importance.
	P.S.O. 4- Gymnosperm, Morphology of Angiosperms and Utilization
	of Plants On completion of the course, students are able to: 1)
	Understand the diversity of Gymnosperms in India 2) Know the
	evolutionary trends and affinities of living gymnosperms with respect
	to external and internal features 3) Know the conceptual development
	of "taxonomy" and "systematics" 4) Understand the Phylogeny of
	angiosperms -A general account of the origin of Angiosperms. 5)
	Understand the general range of variations in the group of
	angiosperms. 6) Trace the history of development of systems of

classification emphasizing angiospermic taxa. 7) To learn the wide activities in angiosperm and trends in classification. 8) Learn about the characters of biologically important families of angiosperms. 9) Know the floral variations in angiospermic families, their phylogeny and evolution. 10) Understand various rules, principles and recommendations of plant nomenclature produces in plant identification. 11) Understand major evolutionary trends in various parts of angiospermic plants 12) Know the methods of pollination and fertilization. 13) Know fertilization, endosperm and embryogeny. 14) Understand the scope & importance of Anatomy. 15) Know various tissue systems. 16) Understand the normal and anomalous secondary growth in plants and their causes. 17) Perform the techniques in anatomy. 18) With respect to recent knowledge students should know about the different tools in the taxonomy so as to relocate the phylogenetic position of plant or taxa. 19) Understand major evolutionary trends in various parts of angiospermic plants 20) Know the methods of pollination and fertilization.

P.S.O. 5- Cell biology, Genetics and Biochemistry The eukaryotic cell cycle and mitotic and meiotic cell division 2. Structure and organization of cell membrane 3. Process of membrane transport and membrane models 4. Mendelian and Neo-mendelian genetics 5. To study the phenomenon of dominance, laws of segregation, independent assortment of genes. 6. To understand the different types of genetic interaction, incomplete dominance, codominance, inter allelic genetic interactions, multiple alleles and quantitative inheritance etc.7. Understand the properties of Monosaccharides, Oligosaccharides and Polysaccharides. 8) They will learn about the Significance of Carbohydrates. 9) Understand the Properties of saturated fatty acids, and unsaturated fatty acids. 4) Understand lipid metabolism in plants. 10) Understand the Beta Oxidation, Gluconeogenesis and its role in mobilization of fatty acids during germination. 11) They will learn about the Significance of lipids. 12) They will be able to understand Brief outline of biosynthesis of amino acid. 13) Understand the protein - structure and classification and protein biosynthesis in prokaryotes and eukaryotes. 14) They will learn about the nucleic acid metabolism.

P.S.O. 6- Plant Physiology and Ecology On completion of the course, students are able to:1)Learn and understand about mineral nutrition in plants. 2) Understand the growth and developmental processes in plants. 3) Know about Photosynthesis and Respiration in plants. 4) Understand the process of translocation of solutes in plants 5) Know the nitrogen metabolism and its importance. 6. Know importance and scope of plant physiology.7. 2Understand the plants and plant cells in relation to water.8. Understand the process of photosynthesis in higher

	plants with particular emphasis on light and dark reactions, C3 and C4 pathways. 9. Understand the respiration in higher plants with particular
	emphasis on aerobic and anaerobic respiration. 10. Learn about the
	movement of sap and absorption of water in plant body. 11.
	Understand the plant movements.
	P.S.O. 7- Molecular Biology and Biotechnology:
	On completion of the course, students are able to Understand
	1) Know about the genomic organization or living organisms, study of
	genes genome, chromosome etc. 2) Gain knowledge about the
	mechanism and essential component required for prokaryotic DNA
	replication. 3) Understand the fundamentals of Recombinant DNA
	Technology. 4) Know about the Genetic Engineering. 5) Understand
	the principle and basic protocols for Plant Tissue Culture.
<b>Course Outcomes</b>	Course outcomes of English Compulsory subject
	C.O. 1- Critically evaluation of ideas and arguments by collection
	relevant information about the plants, so as recognize the position of
	plant in the broad classification and phylogenetic level.
	C.O.2- Students will be able to demonstrate proficiency in the
	experimental techniques and methods of analysis appropriate for their
	area of specialization within biology.
	C.O.3- Accurately interpretation of collected information and use
	taxonomical information to evaluate and formulate a position of plant
	in taxonomy.
	C.O.4- Students will be able to apply the scientific method to questions
	in botany by formulating testable hypotheses, collecting data that
	address these hypotheses, and analyzing those data to assess the degree
	to which their scientific work supports their hypotheses.
	C.O.5- Students will be able to present scientific hypotheses and data
	both orally and in writing in the formats that are used by practicing
	scientists.
	C.O.6- Students will be able to access the primary literature, identify
	relevant works for a particular topic, and evaluate the scientific content
	of these works.
	C.O.7- Students will be able to apply fundamental mathematical tools
	(statistics, calculus) and physical principles (physics, chemistry) to the
	analysis of relevant biological situations.
	C.O.8- Students will be able to identify the major groups of organisms
	with an emphasis on plants and be able to classify them within a
	phylogenetic framework. Students will be able to compare and contrast
	the characteristics of plants, algae, and fungi that differentiate them
	from each other and from other forms of life.
	C.O.9- Students will be able to use the evidence of comparative
	biology to explain how the theory of evolution offers the only

scientific explanation for the unity and diversity of life on earth. They will be able to use specific examples to explicate how descent with modification has shaped plant morphology, physiology, and life history.

C.O.10-Students will be able to explain how Plants function at the level of the gene, genome, cell, tissue, Flower development. Drawing upon this knowledge, they will be able to give specific examples of the physiological adaptations, development, reproduction and mode of life cycle followed by different forms of plants.

C.O.11-Students will be able to explain the ecological interconnectedness of life on earth by tracing energy and nutrient flow through the environment. They will be able to relate the physical features of the environment to the structure of populations, communities, and ecosystems.

#### **DEPARTMENT OF ZOOLOGY**

Department of	After successful completion of three year degree programme in
Zoology	Zoology a student should be able to;
Programme	P.O. 1 Gain knowledge and skill in the fundamentals of animal
Outcomes	sciences, understands the complex interactions among various living organisms.
	P.O. 2- Understands complex interactions among the various animals of different phyla, their distribution and their relationship with the environment
	P.O.3- Understands the complex evolutionary processes and behavior of animals.
	P.O. 4- Understanding of environmental conservation processes and it's Importance.
	P.O. 5- Aware about the economic importance of sericulture and apiculture.
	P.O. 6- Use modern techniques, equipments and Zoology software's
	P.O. 7- Develops sympathy and love towards the animals.
Programme	P.S.O. 1- Understand the nature and basic concepts of Taxonomy, Cell
Specific Outcome	& Molecular biology, Genetics, Ecology, Physiology and Applied Zoology
	P.S.O.2- Gain the knowledge of Zoology through theory and practical's.
	P.S.O.3- Understand the applications of biological sciences in
	Apiculture, Aquaculture, Agriculture and Medicine
	P.S.O. 4- Use modern Zoological tools, Models, Charts and Equipments.
	P.S.O. 5- Contributes the knowledge for Nation building.
<b>Course Outcomes</b>	Course Outcomes of B. Sc Zoology
B.ScI	C.O.1- Understand the classification of animal kingdom.

Semester –I	C.O.2- Understand about the Non Chordate animals.
	C.O.3 To study the external as well as internal characters of non chordates.
	T C.O. 4- To study various system of non chordates
B.ScI	C.O.1- Understand the structure and function of the cell and its organelles.
Semester –II	C.O.2- Understand the various processes like cell cycle and cell signaling.
	C.O.3- Basic concepts of developmental biology.  C.O. 4- Understand the terms: Gametogenesis, Fertilization and early
	development.
B.ScI	C.O. 5- Understand the Morphogenesis and Organogenesis in animals.  C.O.1- Understand the Classification various classes of phylum
Semester –III	Chordate i.e. Pisces, Reptiles, Aves and Mammals.
	C.O.2 Imparts conceptual knowledge of vertebrates, their adaptations and associations in relation to their environment
	C.O.3- Gains knowledge of functional anatomy of vertebrates from fishes to mammals .
	C.O.4- Imparts knowledge regarding the various theories of evolution, evolutionary process such as variation, speciation, natural selection, origin of primates and man .
B.ScII	C.O.1- Understanding of origin and salient features and adaptive radiation of Amphibians, Reptiles, birds and Mammals
Semester –IV	C.O.2- Mendelian and non mendielian inheritance
	C.O.3- Understood the theories of classical genetics and blood group inheritance in man
	C.O.4- Described the genetic variation through linkage and crossing over, chromosomal aberrations and sex determination
	C.O.5 Provides students insight into maintaining healthy relationships with their opposite gender and allows them to make right choice about their life partner thus preventing congenital/consanguial diseases.
	C.O.6- Understand the concept and scope of ecology.
B.ScIII	C.O.1- Described the mechanism of circulation and composition of blood.
Semester – V	C.O.2- Knowledge of neuromuscular coordination and the mechanism of osmoregulation in animals and endocrine system and their function is attained.

	C.O.3 - Understood the menstrual cycle and the role of contraceptive in population control.  C.O.4- Gives knowledge of silk worm rearing, mulberry cultivation,
	pests and diseases associated with silk worm, mulberry and various process involved in silk production.
	C.O.5- To aware the students and provides the economical importance of Apiculture.
B.Sc. –III Semester –VI	C.O.1- Understands concepts of fisheries, fishing tools and site selection, Aqua culture systems, induced breeding techniques, post
Semester –v i	harvesting techniques  C.O.2- Understanding central dogma of molecular biology
	C.O.3- Types of immunity, antigens-antibodies and their properties
	C.O.4- Application of DNA technology and molecular biology for research
	C.O.5- Understanding the applications of biotechnology.

Course	Outcomes
	Observed the preserved specimen.  To study and understand the classification of whole phyla includes in Non
	chordates with the help of specimens/charts/models/picture.
Zoology	Understand the various internal systems like Digestive system, nervous
Paper I	system and reproductive system with the help of charts/slides/computer aided technique.
	Understand the process of Mounting.
	Prepare the culture of Paramecium
	Understand the Principle, parts, and its application of Microscopic
	techniques Students can able to handle the microscope.
Zoology	Understand the Animal cells and various cell organelles by using
Paper II	microphotographs and slides.
rapern	Understand the concept vital staining, distinguishing points between nuclear
	stain and cytoplasmic stain.
	Prepare stained slides of mitosis.  Prepare temporary slide of chick embryo to identify the stage and age
	To study and understand the classification of whole phyla includes in
	Chordates with the help of specimens/charts/models/picture.
Zoology	Understand the various internal systems like Digestive system, nervous
D III	system and reproductive system with the help of charts/slides/computer
Paper III	aided technique. Understand the Study of Fossils of different animals
	Understand the application of Hardy Weinberg's law.
	Study of histological slide.

	Identify the human genetic trait.
Zoology	Study of different syndrome from chromosome spread pictures.
Zoology	Examine the zooplankton under Microscope.
Paper IV	Demonstrate physical and chemical properties of water and soil sample.
Tuperiv	Understand the chemical conditions of water: dissolved oxygen and carbon-
	di-oxide, hardness etc.
	Collect and identify freshwater planktons.
	Identify the own Blood group.
	Estimate the Hb level in blood samples.
Zoology	Understand the methods how to measure the blood pressure.
200108)	Understand the techniques of preparation of Haemin crystals.
Paper V	Understand and study of histological slides of different organs.
	Study of life cycle (Honey Bees, Lac Insect, Silkworm).
	Describe External features and economic importance of locally available
	fishes.
	Study and understand the microtechnique.
Zoology	Students can able to handle the microtome.
	Draw exact figures of structures/organism using camera lucida
Paper VI	Measure the cell/organism dimensions.
	Study and understand the applications of various biological tools &
	technique.

### **DEPARTMENT OF MICROBIOLOGY**

Department of	After successful completion of three year degree program in B.Sc. a
Microbiology	student should be able to;
Programme	P.O. 1- Graduate Students will be able to acquire, articulate, retain and
Outcomes	apply specialized knowledge relevant to microbiology.
	P.O. 2- Graduate students will acquire and demonstrate competency in
	laboratory safety and in routine and specialized microbiological
	laboratory skills applicable to microbiological research or clinical
	methods, including accurate reporting observations and analysis
	P.O. 3- Graduate Students will communicate scientific concepts,
	experimental results and analytical arguments clearly and concisely,
	both verbally and in writing.
	P.O.4-Graduate students will demonstrate engagement in the
	Microbiology discipline through involvement in research or internship
	activities and outreach or mentoring activities specific to microbiology.
	P.O. 5- Employable candidates in careers related to clinical practices in
	medical microbiology, especially in pathological laboratory.
	P.O. 6- Persons having innovative ideas and necessary training to
	initiate unique start-ups.
P.O.	P.O. 7-Individuals with aptitude and skill in research in different
	branches of Microbiology as well as related braches.
	P.O. 8- This discipline has potential to graduate with knowledge and
	abilities to further develop various skills of microbiology stream.
	P.O. 9- Young leaders inoculated with the attitude have community
	orientation and civic responsibilities in the student through social
	activity. Understand how cultural, historical, geographical, political, linguistic, and environmental forces shape the world.

Dept. of Specific Outcome	P.S.O. 1- In first Semester covers History of Microbiology, Microscopy Microbial Nutrition, Pure Culture Techniques, Reproduction and Growth of Bacteria, Bacterial cell structure and characterization of microorganisms were discussed along with Practical's.
	P.S.O.2- In Second Semester deals with Viruses, microbial control, Applied aspects of microorganisms, basic biochemistry, biostatistics importance & application computer concepts.
	P.S.O.3- The third Semester deals with Gene multiplication and expression, Regulation and Mutation, Genetic recombination, Tools, Techniques, Applications of genetic engineering.
	P.S.O. 4- In fourth Semester deals with Immunology, Epidemiology, Serology, Pathogenic Bacteria, and Antimicrobial chemotherapy.
	P.S.O. 5- In fifth Semester deals with Environmental Microbiology and Bioinstrumentation, Microbial Associations and Air Microbiology, Microbiology of Soil, Water Microbiology, Assessment of Water Quality and Treatment, Water Treatment, Waste Water Treatment.
	P.S.O. 6- In sixth Semester deals with Industrial Fermentation, Microbiology of Milk, Food Microbiology, Enzymology and Metabolism.
P.	P.S.O. 7 - Graduate students will acquire and demonstrate competency in laboratory safety and in routine and specialized microbiological laboratory skills applicable to microbiological research or clinical methods, including accurate reporting observations and analysis.
	P.S.O. 8- Students earning the B. Sc. Degree will be able to complete a substantial research project and employ insights from others in implementing the project; evaluate a significant challenge or, methods or assumptions in microbiology; and describe the effects of learning outside the classroom on his or her research or practical skills.
<b>Course Outcomes</b>	Course outcomes of Microbiology subject
Semester I- Fundamentals of Microbiology and	C.O.1- Know the various Physical and Chemical growth requirements of bacteria and get equipped with various methods of bacterial growth measurement
Microbial	C.O.2- Know various culture media and their applications and also understand various physical and chemical means of sterilization
physiology	C.O.3- Know general bacteriology and microbial techniques for isolation of pure cultures of bacterin, fungi and algae.
	C.O.4- Understand the microbial transport systems and modes and mechanism of Energy conservation, in microbial metabolism - Autotrophy and heterotrophy
Semester II-	C.O.1- Know how viruses are classification, architecture of viruses,

Virology,	replication strategies of representative viruses, interaction between
Biochemistry and	viruses and host cells, interactions between viruses and the host immune
Biostatistics	system.  C.O.2- Microbial Biochemistry is a branch of science which combines biological, chemical and physical principles and its application to living systems pertaining to both macro and microorganisms  C. O. 3 This course provides learning opportunities of Importance & application computer concepts.
Semester III-	C.O.1- Know the terms and terminologies related to molecular biology
Molecular Biology	and Genetic Engineering.
and Genetic	C.O.2Understand the properties, structure and function of genes in
Engineering	living organisms at the molecular level.  C.O.3- Explain the significance of central dogma of gene action.
	C.O.4- Have a conceptual knowledge about DNA as a genetic material,
	enzymology, and replication strategies.
	C.O.5- Understand the molecular mechanisms involved in transcription
	and translation.
	C.O.6Describe the importance of genetic code and wobble hypothesis.
	C.O.7- Discuss the molecular mechanisms underlying mutations,
	detection of mutations and DNA damage and repair mechanisms.
	C.O.8- Explain the concept of recombination, linkage mapping and
	clucidate the gene transfer mechanisms, in prokaryotes and eukaryotes.
Semester IV-	C.O.1- This course provides learning opportunities in the basic principles of medical microbiology and infectious disease.
Immunology and Medical Microbiology	C.O.2 - It covers mechanisms of infectious disease transmission, principles of aseptic practice, and the role of the human body's normal microflora.
	C.O.3- Solve problems in the context of this understanding the immune response and disease - causing microorganisms, including aspects of the humoral, cell-mediated and non-specific immune responses, as well as the molecular basis for pathogenesis.
	C.O.4-Explain the methods of microorganism's control e. g. Chemotherapy & vaccines.
	C.O.4 Demonstrate an understanding of key concepts in immunology, the immune system, response to antigenic stimulus, autoimmunity,

	,
	immune prophylaxis and immune therapy, antigen antibody reaction & its uses in diagnostics and various other studies.
Semester V:	C.O.1-Appreciate the diversity of microorganism and microbial
	communities inhabiting a multitude of habitats and occupying a wide
Environmental	range of ecological habitats, originating, abundance and distribution of
Microbiology and	microorganism in the environment and their role in the environment.
Bioinstrumentation	
	C.O.2-Understand various biogeochemical cycles - Carbon. Nitrogen,
	Sulfur, Phosphonus cycles ete, and microbes involved.
	C.O.3-Understand the basic principles of environment microbiology and
	he able to apply these principles to understanding and solving
	environmental problems.
	C.O.4-Also understand waste water treatment and bioremediation, Water
	borne pathogenic microorganisms and their transmission.
	C.O.5Know the sewage treatment and waste water treatment.
	C.O.6-On successful completion of this subject the students should have
	knowledge on bioinstrumentation and their application and usages.
Semester VI	C.O.1- Understand the general strategies of metabolism; EMP pathway,
Industrial	TCA cycle, oxidative phosphorylation and electron transport chain.
Fermentation, Food	C.O.2-Know about design of bioreactors, factors affecting growth and
Microbiology,	production, heat transfer, oxygen transfer.
Enzymology and	C.O.3-understand the rationale in medium formulation & design for
microbial	microbial fermentation, sterilization of medium and air.
metabolism	C.O.4Understand the beneficial role of microorganisms in fermented
	foods and in food processing and the microbiology of different types of
	fermented food products - dairy, pickles, legume and cereal based food
	products.
	C.O.5-Understand the sources of contamination, spoilage mechanisms,
	control, deterioration and spoilage, various methods of food
	preservation.
	C.O.6-Understand Enzymology and microbial metabolism understood
	the classification and nomenclature of enzymes, terminologies used in
	enzymology.

Course	Outcomes
Semester I-	Students can improve the practical skills in microscopy and their
Fundamentals of	handling techniques and staining procedures, basic microbial
Microbiology and	structure, and differences among various physiological groups of bacteria / archaea.
Microbial physiology	Students become Master in aseptic techniques and be able to perform routine culture handling tasks safely.
	Also students can effectively Comprehend the various methods for identification of unknown microorganisms.
Semester II-Virology,	In this course students know how to cultivate viruses <i>in vitro</i> by
Biochemistry and	plaque formation and Chick embryo method, anaerobic bacterial cultivation.
Biostatistics	This course help to student in hands practical concepts related to computer.
	Application of Biostatistics statistical tools and hypothesis testing to practical skills in the design and execution of experiments
Semester III-	Enable the students to handle and independently practical work on
Molecular Biology and	lab protocols involving molecular techniques.
Genetic Engineering	After completion of the course the students will be able to elucidate
	the molecular techniques involved in gene manipulation and rDNA
G 4 TV	technology.
Semester IV-	Students get practical skill about isolation, identification and
Immunology and	antibiotic sensitivity of various pathogenic bacteria
Medical Microbiology	It also provides opportunities to develop informatics and diagnostic skills, including the use and interpretation of laboratory tests in the diagnosis of infectious diseases. The diagnostic tests like Widal ,blood grouping, VDRL
Semester V: Environmental	Students enable to practical knowledge of collection, handling and bacteriological quality analysis of water.
Microbiology and	
Bioinstrumentation	Students gain practical skill to determine BOD, Chlorine demand and residual chlorine.
	Enable the student to get sufficient practical skill and applications of
	bio instruments like spectroscopy, SDS PAGE, Agarose gel
	electrophoresis, chromatography and isotopic tracer techniques
Semester VI	Students get equipped with a practical understanding of applied in
Industrial	manufacture of industrial products, downstream processing

Fermentation, Food	biochemical pathways and regulatory mechanisms, types or
Microbiology,	fermentation processes.
Enzymology and	Students can examine the microbiological quality of milk when
microbial metabolism	completed this course.
	Students can also acquire practical knowledge to produce Ethyl alcohol, Citric Acid, Amylase and Cheese at laboratory scale

#### **DEPARTMENT OF PHYSICS**

After successful completion of three year degree program in B.Sc. a student should be able to;
P.O. 1- Physics deals with a wide variety of systems, certain theories are used by all physicists.  P.O. 2- Each of these theories were experimentally tested numerous times and found to be an adequate approximation of nature.  P.O. 3- Physics uses mathematics to organize and formulate experimental results.
P.O. 4- From those results, precise or estimated solutions, quantitative results from which new predictions can be made and experimentally confirmed or negated.
P.O. 5- The results from physics experiments are numerical measurements. Technologies based on mathematics, like computation has made computational physics an active area of research.
P.S.O. 1- The main outcome of this course is to acquaint students with some basic concepts in Physics. They will be introduced to some elementary methods of analysis of physical quantities and at the end of this course students are expected to be able
P.S.O.2- Students are expected to acquire a core knowledge in physics, including the major premises of Newtonian Mechanics, quantum mechanics, electromagnetic theory, electronics, optics, fiber optics, Laser technology, special theory of relativity and modern physics.
P.S.O.3- Students are also expected to develop written and oral communication skillsin communicating physics-related topics.  P.S.O. 4- Students will realize and develop an understanding of the impact of physics and science on society.
P.S.O. 5- Apply conceptual understanding of the physics to general real-world situations.  P.S.O. 6- Discover of physics concepts in other disciplines such as mathematics, computer Science and chemistry.  P.S.O. 7- Students should learn how to design and conduct an experiment (or series of experiments) demonstrating their understanding of the scientific method and processes. Not only that they are expected to have an understanding of the analytical methods

	required to interpret and analyze results and draw conclusions
	assupported by their data.
	P.S.O. 8- Students learn how to minimize error and recognize the
	limitations of equipment.
Course	Course outcomes of Mechanics, Properties of Matter, Waves and
Outcomes	Oscillations
B.Sc. I	C.O. 1- Acquire basic knowledge of mechanics, properties of matter
Semester I	and gravitation.
	C.O.2- To gain the knowledge the students in order to learn motion of
	bodies, SHM, Elasticity, Kinematics of moving fluids.
	CO2 Vnovy hovy to apply the concernation of rotational motion
Course	C.O.3- Know how to apply the conservation of rotational motion.  Course outcomes of Kinetic theory of Gases, Thermodynamics
Outcomes	and electric currents.
B.Sc. I	C.O. 1- The aims is to provide the students knowledge about ideal gas,
Semester II	real gas, kinetic theory of gas.
	CO2 Understand the begin minerals and levels of Thermodynamics
	C.O.2- Understand the basic principle and laws of Thermodynamics, understand the concepts of Entropy.
	understand the concepts of Entropy.
	C.O.3- To understand knowledge about networks theorems &
	alternating currents.
<u>C</u>	
Course	Course outcomes of Mathematical background, Electrostatics &
Outcomes	Magnetostaics, special theory of relativity.
B.Sc. II	C.O.1- To acquire knowledge and apply it to various physical
Semester III	problems
Semester III	C.O.2- To develop the problem solving ability.
Semester III	C.O.3-To give the basic laws about electric field and magnetic field.
Semester III	C.O.3-To give the basic laws about electric field and magnetic field. C.O.4- To get knowledge about electronic circuit.
	C.O.3-To give the basic laws about electric field and magnetic field.  C.O.4- To get knowledge about electronic circuit.  C.O.5- To know the special theory of relativity
Course	C.O.3-To give the basic laws about electric field and magnetic field. C.O.4- To get knowledge about electronic circuit. C.O.5- To know the special theory of relativity  Course outcomes ofGeometrical Optics, Laser, fiber optics,
Course Outcomes	C.O.3-To give the basic laws about electric field and magnetic field. C.O.4- To get knowledge about electronic circuit. C.O.5- To know the special theory of relativity  Course outcomes of Geometrical Optics, Laser, fiber optics, renewable energy Sources
Course Outcomes B.Sc. II	C.O.3-To give the basic laws about electric field and magnetic field. C.O.4- To get knowledge about electronic circuit. C.O.5- To know the special theory of relativity  Course outcomes ofGeometrical Optics, Laser, fiber optics, renewable energy Sources  C.O.1- To provide a good foundation in optics.
Course Outcomes	C.O.3-To give the basic laws about electric field and magnetic field. C.O.4- To get knowledge about electronic circuit. C.O.5- To know the special theory of relativity  Course outcomes ofGeometrical Optics, Laser, fiber optics, renewable energy Sources  C.O.1- To provide a good foundation in optics. C.O.2- To provide a knowledge of the behavior of light.
Course Outcomes B.Sc. II	C.O.3-To give the basic laws about electric field and magnetic field. C.O.4- To get knowledge about electronic circuit. C.O.5- To know the special theory of relativity  Course outcomes of Geometrical Optics, Laser, fiber optics, renewable energy Sources  C.O.1- To provide a good foundation in optics. C.O.2- To provide a knowledge of the behavior of light. C.O.3- To provide the knowledge about interference, diffraction.
Course Outcomes B.Sc. II Semester IV	C.O.3-To give the basic laws about electric field and magnetic field. C.O.4- To get knowledge about electronic circuit. C.O.5- To know the special theory of relativity  Course outcomes ofGeometrical Optics, Laser, fiber optics, renewable energy Sources  C.O.1- To provide a good foundation in optics. C.O.2- To provide a knowledge of the behavior of light. C.O.3- To provide the knowledge about interference, diffraction. C.O.4- To know the linear optics.
Course Outcomes B.Sc. II Semester IV Course	<ul> <li>C.O.3-To give the basic laws about electric field and magnetic field.</li> <li>C.O.4- To get knowledge about electronic circuit.</li> <li>C.O.5- To know the special theory of relativity</li> <li>Course outcomes of Geometrical Optics, Laser, fiber optics, renewable energy Sources</li> <li>C.O.1- To provide a good foundation in optics.</li> <li>C.O.2- To provide a knowledge of the behavior of light.</li> <li>C.O.3- To provide the knowledge about interference, diffraction.</li> <li>C.O.4- To know the linear optics.</li> <li>Course outcomes of Quantum Mechanic, Atomic Physics, Nuclear</li> </ul>
Course Outcomes B.Sc. II Semester IV  Course Outcomes	<ul> <li>C.O.3-To give the basic laws about electric field and magnetic field.</li> <li>C.O.4- To get knowledge about electronic circuit.</li> <li>C.O.5- To know the special theory of relativity</li> <li>Course outcomes of Geometrical Optics, Laser, fiber optics, renewable energy Sources</li> <li>C.O.1- To provide a good foundation in optics.</li> <li>C.O.2- To provide a knowledge of the behavior of light.</li> <li>C.O.3- To provide the knowledge about interference, diffraction.</li> <li>C.O.4- To know the linear optics.</li> <li>Course outcomes of Quantum Mechanic, Atomic Physics, Nuclear Physics</li> </ul>
Course Outcomes B.Sc. II Semester IV  Course Outcomes B.Sc. III	C.O.3-To give the basic laws about electric field and magnetic field. C.O.4- To get knowledge about electronic circuit. C.O.5- To know the special theory of relativity  Course outcomes of Geometrical Optics, Laser, fiber optics, renewable energy Sources  C.O.1- To provide a good foundation in optics. C.O.2- To provide a knowledge of the behavior of light. C.O.3- To provide the knowledge about interference, diffraction. C.O.4- To know the linear optics.  Course outcomes of Quantum Mechanic, Atomic Physics, Nuclear Physics  C.O.1- Develop the concepts of modern physics: basic knowledge of
Course Outcomes B.Sc. II Semester IV  Course Outcomes	C.O.3-To give the basic laws about electric field and magnetic field. C.O.4- To get knowledge about electronic circuit. C.O.5- To know the special theory of relativity  Course outcomes of Geometrical Optics, Laser, fiber optics, renewable energy Sources  C.O.1- To provide a good foundation in optics. C.O.2- To provide a knowledge of the behavior of light. C.O.3- To provide the knowledge about interference, diffraction. C.O.4- To know the linear optics.  Course outcomes of Quantum Mechanic, Atomic Physics, Nuclear Physics
Course Outcomes B.Sc. II Semester IV  Course Outcomes B.Sc. III	C.O.3-To give the basic laws about electric field and magnetic field. C.O.4- To get knowledge about electronic circuit. C.O.5- To know the special theory of relativity  Course outcomes ofGeometrical Optics, Laser, fiber optics, renewable energy Sources  C.O.1- To provide a good foundation in optics. C.O.2- To provide a knowledge of the behavior of light. C.O.3- To provide the knowledge about interference, diffraction. C.O.4- To know the linear optics.  Course outcomes of Quantum Mechanic, Atomic Physics, Nuclear Physics  C.O.1- Develop the concepts of modern physics: basic knowledge of classical mechanics, elementary quantum mechanics, and the
Course Outcomes B.Sc. II Semester IV  Course Outcomes B.Sc. III	C.O.3-To give the basic laws about electric field and magnetic field. C.O.4- To get knowledge about electronic circuit. C.O.5- To know the special theory of relativity  Course outcomes of Geometrical Optics, Laser, fiber optics, renewable energy Sources  C.O.1- To provide a good foundation in optics. C.O.2- To provide a knowledge of the behavior of light. C.O.3- To provide the knowledge about interference, diffraction. C.O.4- To know the linear optics.  Course outcomes of Quantum Mechanic, Atomic Physics, Nuclear Physics  C.O.1- Develop the concepts of modern physics: basic knowledge of classical mechanics, elementary quantum mechanics, and the Schrodinger equation.
Course Outcomes B.Sc. II Semester IV  Course Outcomes B.Sc. III	C.O.3-To give the basic laws about electric field and magnetic field.  C.O.4- To get knowledge about electronic circuit.  C.O.5- To know the special theory of relativity  Course outcomes ofGeometrical Optics, Laser, fiber optics, renewable energy Sources  C.O.1- To provide a good foundation in optics.  C.O.2- To provide a knowledge of the behavior of light.  C.O.3- To provide the knowledge about interference, diffraction.  C.O.4- To know the linear optics.  Course outcomes of Quantum Mechanic, Atomic Physics, Nuclear Physics  C.O.1- Develop the concepts of modern physics: basic knowledge of classical mechanics, elementary quantum mechanics, and the Schrodinger equation.  C.O.2- To provide a detailed study of atom, also to learn the impact of

	C.O.4- Study of the structure of nucleus.
	C.O.5- Know the formation of nucleus and their binding energy.
	C.O.6- To motivate the students and analyze the energy released by the nucleus during the fission and fusion process
Course	Course outcomes of Statistical Mechanics & Solid state physics.
Outcomes	
B.Sc. III	C.O.1- Understand how statistics of the microscopic world can be
Semester VI	used to explain the thermal features of the macroscopic world.
	C.O.2- Understand basic concepts of various crystals structural.
	C.O.3- Study of Superconductivity and Nano-technology.

Солисс	Outcomes
Course	Outcomes
	In order to know the theoretical concept through practically, the syllabi includes
D1 :	the practicals. This paper consist of basic physics practicals of S.H.M., Moment
Physics	of Inertia, laws of Elasticity, different modulus using Pendulums, viscosity,
	surface tension, laws of parallel and perpendicular axes theorem for M.I.,
Paper I	calculating acceleration due to gravity by using Keter's pendulum etc.
	From above practicals basic definitions, various laws, theorems, constant values
	are to be calculated. These are very important for understanding of physics.
	This paper includes electrical practicals consist of Ballistic galvanometer,
	Carey-foster Bridge, potentiometer, Kirchoff's law, Maximum power transfer
Physics	theorem, Thevenin's theorem, Norton's theorem, Milliman's theorem, C1 / C2
	by De-Sauty's method, L-R, L-C, R-L-C circuits, thermal conductivity by Lee's
Paper II	disc method etc.
	From above practicals helps to solve problems in regular uses of electrical
	circuits in our daily life.
	This Paper includes electronics practicals consist of P-N junction diode, Zener
Physics	diode, PNP & NPN transistor, JFET transistor, oscillator, rectifiers, operations
,	Op-Amp's, phototransistors, practicals of on electrical and magnetic fields etc.
Paper III	From above practicals the students know the uses of electronic circuits for
- wp	various applications such as LED's, amplifiers, computer arithmetic and logic
	units, security systems, also in solenoid and toroid.
	In this paper study the properties of light such as interference, diffraction,
	polarization, resolving power of grating's, telescope, prism, R.I. of prism,
Physics	Newton's ring, I-V Characteristics of solar cell, frequency & phase of CRO, half
	wave & full wave rectifier etc.
Paper IV	From above practicals we study laws and phenomena related to light, different
	uses and handling of telescope, CRO, gratings. Also know how to calculate
	solar constant & study of I-V characteristics of solar cell.
Physics	In this paper study the Phase shift oscillator, Wein bridge oscillator, Hartley
	oscillator, Colpits oscillator, Rydberg's constant, Raman spectrum, hybrid
Paper V	parameters, multivibrators, absorption coefficient, Characteristics laser,
	feedback amplifiers, Planks constant using LED.

	Above practicals are helpful for student to understand various uses of oscillators, spectra of various materials, handling & uses of multivibrators, characteristics and applications of lasers in various field.
Physics Paper VI	In order to give a deep knowledge about Crystallography, GM counter, Four probe method, Hall effect, thermocouple, photo-cell, photo-diode, Mini projects for students.  These experiments are useful to determine the various crystal structure, lattice parameters, dislocation density of solids, GM counter used to half life time of radioactive substances, Hall effects are useful for knowing magnetic susceptibility of materials, thermocouple are used to study thermo-emf of the materials. Mini research project for B.Sc. III year student to develop his scientific ideas about in various field like communication system, robotics, telescope, basic electronic kits, thermal energy storage, wireless communications etc. to helpful doing M.Sc. and getting jobs on the basis of project.

### **DEPARTMENT OF MATHEMATICS**

Department of	After successful completion of three year degree program in B.Sc.
Mathematics	a student should be able to;
Dept. of	P.O. 1Demonstrate basic manipulative skills in algebra, geometry,
Mathematics	trigonometry, and beginning calculus.
Programme Outcomes	P.O. 2-Apply the underlying unifying structures of mathematics (i.e. sets, relations and functions, logical structure) and the relationships among them.
	P.O.3-Demonstrate proficiency in writing proofs.
	P.O. 4- Communicate mathematical ideas both orally and in writing.
	P.O. 5- Analyze, synthesize and integrate knowledge.
	P.O. 6- Investigate and apply mathematical problems and solutions in a variety of contexts related to science, technology, business and industry, and illustrate these solutions using symbolic, numeric, or graphical methods.
	P.O. 7- be able to clear exams in mathematical aptitude.
	P.O. 8- skillful in logical thinking and reasoning.
Dept. of Mathematics Programme Specific Outcome	P.S.O. 1- Understand the basic concepts of Algebra , Trigonometric and calculus.
	P.S.O.2- Solve Geometry, Differential Equations, Vector Calculus and Improper Integrals.
	P.S.O.3. Define Advanced calculus, sequence & series and differential Equations .
	P.S.O. 4- Perform a partial differential equations and its importance.

	P.S.O. 5-Understand the study of Spaces.
	P.S.O. 6- Describe the law of Group theory .
	P.S.O. 7 Understand the special theory of Relativity.
<b>Course Outcomes</b>	Course outcomes of Algebra and Trigonometry
B.Sc. I Semester I	C.O.1-Perform matrix in homogeneous and non-homogeneous linear equation.
Paper-I	C.O.2-Solve theory of equation.
	C.O.3-Write expansion of trigonometric functions.
	C.O.4-Find circle, radius and center of curvature.
	C.O.5-Expand $\sin^n \theta$ , $\cos^n \theta$ and $\tan^n \theta$ by using Demoivre's theorem.
	C.O.6-Expand $\cos^n \theta$ , $\sin^n \theta$ and $\tan^n \theta$ in terms of $\theta$ .
	C.O.7-Define hyperbolic functions.
	C.O.8-Define inverse hyperbolic functions.
<b>Course Outcomes</b>	Course outcomes of Differential and Integral Calculus
B.Sc. I	C.O.1-Understand the basic properties of limit.
Semester I	
Paper-II	C.O.2-Understand successive differentiation, L-Hospital Rule
	C.O.3-State the Leibnitz Theorem
	C.O.4-Understand the uses of Maclaurin and Taylor series expansion.
	C.O.5-State the Rolle's Theorem, Lagrange's Mean Value Theorem, Cauchy Mean Value Theorem.
	C.O.6-Understand the concept of definite integrals.
<b>Course Outcomes</b>	Course outcomes of Differential Equation
B.Sc. I Semester II	C.O.1-Write the solutions of ordinary differential equations with constant and variable coefficient.
Paper-III	C.O.2-Differentiate between exact, linear, Bernoulli's and higher order differential equations.
	C.O.3-Find the unknown solution by using known solution of higher order differential Equations
	C.O.4-Find the unknown solution by using known solution of higher order differential Equations
	C.O.5-Understand the formation of difference equation
	C.O.6-Formation of partial differential equations by eliminating arbitrary function and constant.

	C.O.7-Understand the method of Lagrange's equation
	C.O.8-Solve the partial differential equation of second and higher order.
<b>Course Outcomes</b>	Course outcomes of Vector Analysis and Solid Geometry
	C.O.1-Understand Vector differential, radiant, divergence and curve.
B.Sc.I Semester II	C.O.2-Compute the angle between a line and a plane, length of perpendicular from a point to a line.
Paper-IV	C.O.3-Describe surface integral, volume, Green's and Stoke's Theorem
	C.O.4-Understand the theory of sphere, cone and cylinder.
	C.O.5-Find the angle between planes, Bisector planes, Perpendicular distance from a point to a plane, Image of a line on a plane,
	C.O.6-Intersection of two lines.
	C.O.7-Define coplanar lines and illustrate
	C.O.8-Define skew lines & Calculate the Shortest distance between two skew lines.
<b>Course Outcomes</b>	Course outcomes of Advanced calculus
B.Sc. II Semester III	C.O.1-Calculate maxima and minima and saddle points of functions.
Paper-V	C.O.2-Understand the uses of mean value theorems.
	C.O.3-Describe sequences.
	C.O.4-Describe series and how to apply test of series
	C.O.5-Evaluation of double and triple integration.
	C.O.6-Prove Cauchy's first limit theorem, Cesaro's theorem, Cauchy's Second limit theorem.
	C.O.7-Give examples for convergence, divergence and oscillating series.
<b>Course Outcomes</b>	Course outcomes of Elementary Number Theory
B.Sc. II	C.O.1-Illustrate the Division and Euclidean Algorithm.
Semester III Paper -VI	C.O.2-Describe the properties of prime numbers.
	C.O.3-Show that every positive integer can be expressed as product of prime power in unique way.
	C.O.4-Write a formula for the number of positive integers less than n that are relatively prime to n.

	C.O.5-Define congruences and describe the properties of congruences.
	C.O.6-Find the Sum, product of all the divisor's of N.
	-
	C.O.7-Find the smallest number with N divisors.
	C.O.8-Solve the system of linear congruence's.
	C.O.9-State Chinese Remainder Theorem, Fermat's and Wilson's theorem.
<b>Course Outcomes</b>	Course outcomes of Group & Ring Theory
B.Sc. II Semester IV	C.O.1-Understand the group theory.
Paper VII	C.O.2-Describe Ring Theory.
	C.O.3-Understand the theorems on group and subgroup
	C.O.4-Understand the concept cosets, Normal subgroup, Homomorphism of a Group, isomorphism, Quotient Group.
	C.O.5-Understand the concept of ideal, types of ideal, integral domain, Field.
<b>Course Outcomes</b>	Course outcomes of Mechanics
B.Sc. II	C.O.1-Describe analytical condition of equilibrium of coplanar forces.
Semester IV Paper-VIII	C.O.2-Find out velocities and accelerations along radial and transverse directions
	C.O.3-Understand constraints D' Alembert's Principle and Lagrange's equations.
	C.O.4-Solve the one-body problem and central orbits and equations of motion.
	C.O.5-Perform calculus of variation.
<b>Course Outcomes</b>	Course outcomes of Mathematical Analysis
B.Sc. III	C.O.1-Define the Riemann-setting
Semester V	C.O.2-Describe Differentiability of complex function.
Paper-IX	C.O.3-Solve the mapping of elementary function.
	C.O.4-Define metric space
	C.O.5-Understand basic concepts of completeness, compactness and connectedness.
	C.O.6-Use Cauchy's integral theorem and formula to compute line integrals.
	C.O.7-Represent functions as Taylor, power and Laurent series.
	C.O.8-Classify singularities and poles.

	C.O.9-Define and recognize the concept of metric spaces, open sets, closed sets, limit points, interior point.
<b>Course Outcomes</b>	Course outcomes of Mathematical Methods
B.Sc. III	C.O.1-Classify Bessel's and Legendre's equations.
Semester V Paper-X	C.O.2-Understand the concept of Laplace transform and their applications.
	C.O.3-Understand to solve problems on Fourier series
	C.O.4-Solve beta and gamma functions.
	C.O.5-Solve the strum Liouville Problemes.
<b>Course Outcomes</b>	Course outcomes of Linear Algebra
B.Sc. III	C.O.1-Define the Vector-spaces and sub-spaces.
Semester VI Paper-XI	C.O.2-Understand the concept of Algebra of linear transformation
1 apc1-2X1	C.O.3-Describe Gram-Schmidt Orthogonalization process.
	C.O.4-Understand the Automorphisms.
	C.O.5-Calculate the Rank and nullity of linear transformation and matrix.
	C.O.6-Define and find the eigen value and eigen vector
	C.O.7-Understand dual space.
	C.O.8-Define Vector Space, Quotient space Direct sum, linear span and linear independence, basis and inner product.
<b>Course Outcomes</b>	Course outcomes of Special Theory of Relativity
B.Sc. III	C.O.1-Understand the concept of Newton relativity.
Semester VI Paper-XII	C.O.2-Determine the Lorentz contraction Factor.
Tuper 2311	C.O.3-Analyse the tensors.
	C.O.4-Understand the concept of E=MC <sup>2</sup> .

### DEPARTMENT OF COMPUTER SCIENCE

Department of	After successful completion of three year degree program in B.Sc.
<b>Computer Science</b>	a student should be able to;
Dept. of Computer	P.O. 1 The graduates are expected to develop an ability to apply
Science	knowledge of Computer science
Programme	P.O. 2- The department would like to attain recognition teaching and
Outcomes	research.
	P.O.3-The graduates are expected to apply algorithmic
	principles and computer science theory in modeling, design and
	conduct of experiments.
	P.O. 4- The department also strives to contribute to industry.
	P.O. 5- Analyze, synthesize and integrate knowledge.
	P.O. 6- To be an academic excellence in terms of teaching, curriculum
	development and research
	•
	P.O. 7- The graduates should be able to recognize the need for lifelong
	learning and are expected to apply the techniques, skills and modern
	Computer tools necessary for practice.
	P.O. 8- Apply computer science theory and software development
	fundamentals to produce computing-based solutions
	P.O. 9- An ability to analyze impacts of computing on
	individuals, organizations, and society.
	P.O. 10- Modern tool usage: Create, select, and apply appropriate
	techniques, resources, and modern Computer Science tools with an
	understanding of the limitations.
Don't of C	_
Dept. of Computer	P.S.O. 1-, To engage in lifelong learning for the advancement of
Science	technology and its adaptation in multi-disciplinary environments
Programme Specific Outcome	
Specific Outcome	P.S.O.2- Apply appropriate techniques and hardware and software
	tools for the design and integration of computer system and related
	technologies.
	P.S.O.3- Apply the fundamentals of mathematics, science knowledge
	to understand, analyze and develop computer programs in the areas
	related to algorithms.
	related to algorithms.

		C.O.4-Explain the difference between static and dynamic binding.
		of information, the implementation of non linear data structures such as trees, searching and sorting.
		C.O.3- In particular, the emphasis of this course is on the organization
		of information, the implementation of linear data structures such as arrays, lists, stacks, queues, and techniques of data abstraction, including searching and sorting.
		C.O.2 - In particular, the emphasis of this course is on the organization
Semester III		refine their programming skills.
B.Sc. I		C.O.1- This course provides students an opportunity to develop and
Course Outcome	es	Course outcomes of Data structure and XML
		C.O.5-Illustrates the various operations performed on different types of files.
		statements and its syntax.
		C.O.4-Explain about the basic concepts of program development
		2) Write programs using pointers, file handling.
		1) Learn some advance features of C language.
		simple C programs using conditional statements, loops and arrays.  C.O.3- After working through this paper the students should be able to
	T	C.O.2- Introduce students to learn basic features, Create, execute
Semester II		and impart moderate skills in programming using C Language.
B.Sc. I		-
Course Outcome	es	Course outcomes of Computer Science subject
		systems and its features. Also to study about process states, scheduling, Memory and I/O Management techniques.
		C.O.3 To introduce students the basic functioning of operating
		flowchart as well as different type of software.
		C.O.2-Basic introduction of fundamental about algorithms and
Semester I		computer numbering, how the CPU works,
B.Sc. I		C.O.1- Basic introduction to computer hardware components,
Course Outcome	es	methods and sources for research, and engage ethically with sources.  Course outcomes of Computer Science subject
		P.S.O. 7- Identify topics and formulate questions, identify appropriate
		knowledge areas Data Structures and Programming Languages, Databases, Web designing
		P.S.O. 6- Demonstrate the Computer Science in the following core
		software project development using open-source programming.
		systems in the areas related to algorithms, web design, Java, VB.NET P.S.O. 5- Apply standard Software practices and strategies in real-time
		P.S.O. 4-Design and develop computer programs/computer-based

	Apply both techniques to solve problems.
	C.O.5-Describe the concept of inheritance and apply real world problems.
l	C.O.6 Discuss the data type for the data type independent programming which relate it to reusability.
	C.O.7- Explain to design of handling large data set using File I/O.
<b>Course Outcomes</b>	Course outcomes of Database Mgt. system
B.Sc. II Semester IV	C.O.1 -Describe the concepts of markup languages, un order list, table, formatting, liking and frames.
	C.O.2-Discuss about the creation of cascading style sheets, backgrounds, media types and building a dropdown menu.
	C.O.3-Describe the functions, objects, entity.
	C.O.4- Discuss the events and XML.
	C.O.5- Describe the fundamentals of File processing and database processing system.
	C.O.6- Explain the various data model and its application.
	C.O.7- Explain the various normal forms and its role in DBMS.
	C.O.8- Explain the fundamental concepts of SQL programs.
l	C.O.9- Describe the concepts of function, procedure, package, trigger and exception handling.
<b>Course Outcomes</b>	Course outcomes of VB .NET and JAVA
B.Sc. III Semester V	C.O.1- Explain the basic Concepts of Program building block control statements and VB .NET frame work , Features, CLS,CTS etc
	C.O.2-Describe the functionality and properties of GUI based ActiveX Control with example programs, Data types , Operators
	C.O.3 -Discuss about graphics handling related control and properties, Console application.
	C.O.4- Explain about basic Java language syntax and semantics to write Java programs.
	C.O.5-Describe the concepts of variables, conditional and iterative execution methods etc.
	_
Course Outcomes	execution methods etc.  C.O.6- Discuss the fundamentals of object-oriented programming in
Course Outcomes  B.Sc. III Semester VI	execution methods etc.  C.O.6- Discuss the fundamentals of object-oriented programming in Java, including defining classes, objects, invoking methods

	C.O.3- Describe the concepts of database handling using DAO, ADO and RDO control with data report concepts.
	C.O.4-Explain the various methodologies to handle the exception mechanisms and the principles of inheritance, packages and interfaces
	C.O.5-Demonstrate the programming concepts for applet and graphics.

Course	Outcomes
Computer Science	To impart the student hands on practice so that students should be able to: Create, Save, Copy, Delete, Organize various types of files and manage the desk top in general, use a standard word and spread-sheet processing package exploiting popular features.
Paper I	Students can compile the basic program of C language. Students can also compile and run the programs of loops, decision making statements, array.
Computer Science Paper II	Students can compile the fundamental tags used in HTML. Students can develop the web page in various applications. Students can develop the web page using various ordered and unordered listing commands. Students can develop the web page using frame concepts with multi-media handling. Students can create the web page of table, image, C.S.S etc. Students can also compile and run the programs of structure and union, file Handling. Students can also compile and run the programs of Pointer and file Handling.
Computer	Students can compile the program of searching; sorting in Data Structure .Students can compile the program of searching, sorting in Data Structure. Students can also compile the program of arrays, memory location, de allocation etc.
Science Paper III	Students can compile the basic program of C++ language. Students can also compile and run the programs of loops, decision making statements, array and structure. Students can also compile and run the programs of Pointer and file Handling. Students can also run the program of inheritance ,Object oriented programming, Class, Operating overloading ,templates, file handling etc.
Computer Science Paper IV	Students can run the DDL commands and DML commands, Students can compile the mathematical function, Character function, Miscellaneous function. Students can execute the commands of cursor, PL/SQL Commands
Computer Science Paper V	Students can compile the console application program of VB.NET. Students can also compile and run the programs of loops, decision making statements, in VB.NET .Students can also compile and run the programs of Arrays in VB.NET.
	Students can compile the basic program of JAVA language. Students can also compile and run the programs of loops, decision making statements, and array. Students can run the program of class ,object in JAVA