

Course Objectives and Course Outcomes for NAAC

DEPARTMENT OF ECONOMICS

Class/ Course code	Course Name	Course Objectives	Course Outcome
FYBA- ECO101,201	Micro Economics	1.Explain the nature and structure of Economics. 2.To identify and explain economic concepts and theories related to behavior of economic agents, markets, industry, legal institutions and NGOs.	1.Students will get knowledge of market activities and behaviour: production, distribution, selling, purchasing etc.
SYBA- ECO301,302	Micro and Macro Economics	1.Establish co-relation of Economics with other subjects. 2.Students will apply the basic theories of Economics in critical thinking and problem solving.	1.Students will get knowledge about the benefits of saving, investment and profit- making techniques.
SYBA- ECO401,402	Indian Economy	1.Students will be able to evaluate the consequences of economic activities on institution, individual and social welfare. 2.To make awareness among the students about various economic issues in India. 3.Organizing social and economic activities such as business club, exhibitions, effective salesmanship, and business fair for development of commercial attitude among the students.	1.Students will aware about recent economic affairs such as demonetization, universal basic income, cashless economy, skill and training development schemes, make in India etc. 2.Students will get benefit about various economic issues at local, national and global level. 3. Students will get knowledge about various business ideas such as mall, e- commerce, event management.
TYBA- ECO501,601	Micro and Macro Economics	1.Establish co-relation of Economics with other subjects. 2.Students will apply the basic theories of Economics in critical thinking and problem solving.	1.Students will get knowledge about the benefits of saving, investment and profit- making techniques.
TYBA- ECO601,602	Growth and Development	1.To prepare for the students for understanding the various models of growth and	1.Students will get benefit of conceptual approach of growth models which are applied for the

		development. 2.To understand the several parameters of development of the nation.	actual development of the nation. 2.Students can aware about the process of national development and requirements for it.
TYBA-ECO503,603	Economics of Agriculture and Co-operation	1.To study the significance of agriculture in economic development. 2.To provide information to students about various modern technology and ideas adopted in the agriculture sector.	1.Students will obtain information regarding various agricultural issues in India and remedies for it. 2.Students also can get information about co-operative movement in India and its performance and role in rural development. 3.Making awareness about self-employment through various local business like agro-tourism, travel agents, horticulture, floriculture, fishery and animal husbandry.
TYBA-ECO504,604	Research Methodology	1.To promote economic research and knowledge among the students. 2.To encourage the exchange of ideas and application of results of economic research.	1.Students will get ideas about application of various research methods and mathematical tools for analyzing and presenting economic issues and theories.
TYBA-ECO505,605	Environmental Economics	1.To demonstrate an awareness of their role in global economic environment and local environment issues. 2.To create awareness among the students about environmental conservation and policy implications by the Government.	1.Students will get information about various environmental acts. 2.Students will aware about the impact of industrialization and economic activities on environment.
TYBA-ECO506,606	History of Economic Thought	1.To provide information about the biography and contribution of various economic thinkers. 2.To know transitions occurred in development of Economic Science.	1.Students will get information about the genesis of Economics and its modern scenario. 1.Establish co-relation of Economics with other subjects.

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मराठी विभाग

मराठी भाषा आणि साहित्याचा अभ्यास

- ❖ अभ्यासण्यामागील उद्देश आणि फलनिष्पत्ति
 - १. प्रथम वर्ष कला - आवश्यक मराठी (UAMAR - 1 C1,2)
- ❖ कथा : एक साहित्यप्रकार म्हणून कथेच्या इंग्रजी आणि साहित्यप्रकार म्हणून कथेच्या इंग्रजी आणि मराठी अभ्यासकांनी केलेल्या विविध व्याख्यांच्या आधारे या साहित्य प्रकाराचे विशेष स्पष्ट करणे.
- ❖ कथा लेखन तंत्रांचा अभ्यास करणे यामध्ये - i) कथासूत्र ii) कथानक iii) संघर्ष iv) व्यक्तिचित्रणे v) कथनपद्धती vi) भाषाशैली vii) शीर्षक विचार इ. घटकांचा अभ्यास.
- ❖ आधुनिक मराठी कथालेखनाचा इतिहास अभ्यासणे (इ. स. १८८५ ते २०१०) कालिक संदर्भ व कथा प्रकारांसह.
- ❖ निवडक मराठी कथांच्या सहाय्याने मराठी कथालेखनाचे विशेष समजून घेणे.
- ❖ व्यावहारिक मराठी भाषालेखन कौशल्ये आत्मसात करणे.
 - i) कार्यालयीन पत्र लेखन
 - ii) बातमी लेखन (वर्तमानपत्रासाठी)
 - iii) इतिवृत्त लेखन
 - iv) अहवाल इतिवृत्त लेखन
 - v) वृत्तांत लेखन
 - vi) भाषांतर (इंग्रजीचे मराठीत)
 - vii) उतान्यावर विचारलेल्या प्रश्नांची उत्तरे
 - viii) सारांश लेखन
 - ix) निबंध लेखन
 - x) प्रसार माध्यमांसाठी जाहिरात मसुदा लेखन

२. प्रथम वर्ष कला : मराठी पेपर क्र. I (UAMAR 101, 201)

- ❖ नाटक : एक साहित्य व कलाप्रकार म्हणून काही निवडक व्याख्यांच्या आधारे नाटकाचे वेगळेपण स्पष्ट करणे.
- ❖ नाटक एक प्रयोगधर्मी कला म्हणून त्यासाठी लागणाऱ्या गोष्टींचा तपशील समजून घेणे. यामध्ये
 - i) नाट्य सहित ii) रंगमंच iii) नट - नटी iv) प्रेक्षक v) नेपथ्य vi) केशभूषा, वेशभूषा vii) रंगमंच सजावट viii) प्रकाश योजना ix) ध्वनीक्षेपण यंत्रणा x) संगीत संयोजन xi) दिग्दर्शक xii) निर्माता xiii) पडद्यामागाचे कलाकार इत्यादींचा परिचय देणे.
- ❖ नाटक : एक वाङ्मयप्रकार म्हणून अभ्यास करणे. यामध्ये
 - i) कथासूत्र ii) संविधानक (कथानक) iii) अंक व प्रवेशांची रचना. iv) कथानकाचा प्रारंभ - सुरुवात- मध्य - शेवट v) कथानकातील संघर्षाचे प्रकार vi) पात्रांचा परिचय - मुख्य पात्रे - गौण पात्रे vii) मनोविश्लेषण viii) स्थळ - काल - परिस्थितीचे चित्रण ix) भाषाशैली आणि संवाद भाषेचे विशेष x) शीर्षक इ.
- ❖ शोक्नाट्य आणि सुखनाट्य साहित्य रूपांचा अभ्यास करणे.
- ❖ मराठी नाट्यलेखनाचा विकास आणि नाट्यप्रयोगाच्या तंत्राचा अभ्यास करणे.
- ❖ ललित गद्य लेखनाचा तात्विक अभ्यास करणे. यामध्ये -
 - 1) लघु निबंध ते मुक्त गद्य यांच्या निवडक व्याख्या.
 - 2) ललित गद्य लेखनाचे वाङ्मयीन विशेष
 - 3) आधुनिक मराठीतील ललित गद्य लेखनाचा आढावा घेणे.
 - 4) निवडक ललित लेख संग्रहांच्या आधारे या साहित्य प्रकारचे विशेष समजून घेणे.
- ❖ कविता या साहित्य प्रकारचा तात्विक अभ्यास करणे. यामध्ये -
 - १) कवितेच्या विविध व्याख्यांचा अभ्यास.
 - २) कवितेच्या आशय आणि रचनाबंधाचा अभ्यास.
 - ३) आशयानुरूप काव्यप्रकारांचा अभ्यास.
 - ४) रचनातंत्रानुसार काव्यप्रकारांचा अभ्यास.
 - ५) आधुनिक मराठी कवितेच्या इतिहासाचा अभ्यास.
 - ६) निवडक कवितांच्या सहाय्याने कविता या साहित्यप्रकारचा अभ्यास करणे.

३) द्वितीय वर्ष कला - मराठी पेपर क्र. II (UAMAR 301,302)

❖ कादंबरी या साहित्यप्रकाराचा तात्विक अभ्यास :-

- i) कादंबरीच्या व्याख्या ii) कादंबरी : शब्द संकल्पना iii) कथासूत्रे iv) कथानक v) कथानकातील संघर्षाचे प्रकार vi) स्वभाव दर्शन vii) मनोविश्लेषण viii) वातावरणनिर्मिती ix) कथनाच्या पद्धती x) शीर्षक विचार

❖ आधुनिक मराठी कादंबरीचा विकास : आढावा (इ. स. १८५४ ते २०१० पर्यंत)

❖ अभ्यासक्रमात समाविष्ट झालेल्या कादंबऱ्यांचा अभ्यासातून कादंबरी या साहित्य प्रकारचे स्वरूपविशेष समजून घेणे.

❖ प्रवासवर्णनप्र साहित्याचा तात्विक अभ्यास करणे.

- i) प्रवासी ii) प्रवास iii) प्रदेश अभ्यास iv) प्रवास्कर्ता 'मी' आणि लेखक 'मी' v) प्रवासवर्णनपर साहित्याचा वाडमयीन अभ्यास.

❖ मराठीतील प्रवासवर्णनपर लेखनाचा आढावा

❖ अभ्यासक्रमात समाविष्ट झालेल्या प्रवासवर्णनपर पुस्तकांच्या आधारे या लेखनप्रकारच्या स्वरूपविशेषांचा अभ्यास करणे.

❖ आत्मचरित्र व आत्मकथन या साहित्यप्रकारांचा तात्विक अभ्यास

- i) व्याख्या ii) चरित्र आणि आत्मचरित्र साम्यभेद iii) आत्मचरित्र आणि आत्मचरित्रप्रधान कादंबरी iv) आत्मचरित्र आणि आत्मकथन साम्यभेद विचार v) आत्मचरित्र वाडमयविशेष vi) आत्मकथन वाडमयविशेषांचा अभ्यास.

❖ आधुनिक मराठीतील आत्मचरित्रपर वाडमय लेखनाचा आढावा (इ. स. १९१० ते २०१० पर्यंत).

❖ मराठीतील दलित आत्मकथनांच्या लेखनाचा आढावा.

❖ अभ्यासक्रमात समाविष्ट झालेल्या आत्मचरित्रपर आणि आत्मकथनपर लेखनाच्या स्वरूप विशेषांचा अभ्यास.

४) द्वितीय वर्ष कला - मराठी पेपर क्र. III (UAMAR 401, 402)

❖ भाषाशास्त्र आणि भाषा व बोलींचा अभ्यास

- i) भाषेच्या व्याख्या ii) भाषेचे प्रकार iii) मानवेतर प्राण्यांची भाषा iv) मानव निर्मिती भाषेचे स्वरूप विशेष v) भाषाभ्यासाचे प्रकार vi) मराठी भाषेची उत्पत्ती आणि विकास vii) मराठीचे

वर्णनात्मक भाषाशास्त्र viii) मराठीचे ऐतहासिक भाषाशास्त्र ix) मराठीचे समाजवैज्ञानिक भाषाशास्त्र x) मराठी भाषा आणि तिच्या बोली. xi) बोलीचा भाषाशास्त्रीय अभ्यास इ.

- ❖ मालवणी बोलीचा अभ्यास
- ❖ मालवणी बोलीचा भूगोल
- ❖ मालवणी बोली आणि समाज संस्कृती
- ❖ मालवणी बोलीचे मराठी साहित्यातील उपयोजन
- ❖ मालवणी बोलीतील निवडक कवितांचा अभ्यास.
- ❖ मालवणी बोलीतील नाटकाचा अभ्यास.

५) टी. वाय. बी. ए. मराठी - पेपर नं. iv (UAMAR 501,601)

- ❖ मध्ययुगीन मराठी साहित्याचा इतिहास (प्ररंभ ते इ. स. १८१८)
 - i) महाराष्ट्र आणि मराठी भाषा ii) मराठीच्या लिखित रूपांचे संशोधन iii) मराठी भाषेतील आद्यग्रंथ- विवेकसिंधु इत्यादींचा परिचय
- ❖ महानुभाव संप्रदाय व त्यांच्या साहित्याचा परिचय देणे.
- ❖ वारकरी संप्रदाय व त्यांच्या वाङ्मयाचा परिचय देणे.
- ❖ नाथ, दत्त, समर्थ आणि लिंगायत संप्रदाय व त्यांच्या साहित्याचा परिचय देणे.
- ❖ वरील सर्व पंथांचे धार्मिक आणि सामाजिक कार्य समजून घेणे.
- ❖ इस्लाम धार्मिक व ख्रिस्त धर्मियांचे कार्य आणि साहित्याचा परिचय करून घेणे.
- ❖ पंडित साहित्याचा परिचय करून देणे. (प्रमुख पंडित कवि)
- ❖ शाहिरी काव्याचा परिचय करून देणे. (प्रमुख शाहीर कवी)
- ❖ बखरगद्य आणि आज्ञापत्र यांचा परिचय करून देणे.
- ❖ वरील सर्व घटकांच्या आधारे मध्ययुगीन मराठीतील प्रमुख पंथ, निवडक लेखक, कवी विचार प्रवाह, अन्य धर्मियांचे कार्य त्या त्या काळातील धार्मिक, राजकीय, सांस्कृतिक परिस्थिती यांचा अभ्यास करणे हा उद्देश आहे.

६) काव्यशास्त्र आणि साहित्य समिक्षा अभ्यास टी. वाय. बी. ए. मराठी - पेपर नं.

(UAMAR 502,503)

- ❖ भारतीय साहित्य शास्त्राचा अभ्यास करणे यामध्ये -
 - i) काव्याची लक्षणे ii) काव्याची प्रयोजने iii) काव्याची निर्मिती iv) काव्याची भाषा जनक करणे.
 - v) भरतमुर्नीचा रसविचार vi) करुणरस विचार vii) साहित्यवादाचा परिणाम इत्यादींच्या आधारे भारतीय साहित्य शास्त्राचा अभ्यास करणे.
- ❖ पाश्चात्य साहित्य विचार (पाश्चात्य समीक्षा विचार)

- i) पाश्चात्यांनी सांगितलेल्या काव्याच्या व्याख्या
- ii) प्लेटो आणि अॅरिस्टॉटलच्या अनुकृतीचा सिद्धांत
- iii) काव्याची भाषा a) रूपक b) प्रतिमा c) मुक्तछंद
- iv) काव्याची भाषा a) अपरिचितकरण b) नियामोल्लंघन c) अनेकार्थता
- v) कोलरीजचा चमत्कृती सिद्धांत
- vi) रिचर्ड्सचा समधाततेचा सिद्धांत
- vii) अॅरिस्टॉटलचा कॅथर्सीसचा सिद्धांत
- viii) पाश्चात्यांनी सांगितलेली साहित्याची प्रयोजने
- ❖ वरील घटकांच्या आधारे १) लेखक कवी त्यांनी २) त्यांनी लिहिलेले गद्य - पद्य वाङ्मय ३) रसिक वाचक ४) समीक्षक ५) समीक्षा इत्यादींचा शास्त्रीय अभ्यास करणे हा उद्देश आहे.
- ❖ ललित साहित्य एक सौंदर्यजनक शब्दकला म्हणून भारतीय विचारवंतानी मांडलेल्या विविध मतांचा आणि त्यांच्या समीक्षा ग्रंथलेखनाचा परिचय देणे असा उद्देश आहे तसेच.
- ❖ पाश्चात्य देशांमध्ये ललित साहित्याविषयी विविध विचारवंतांनी मांडलेल्या मतांचा आणि त्यांनी लिहिलेल्या समीक्षाविषयक ग्रंथांचा परिचय देणे हा उद्देश आहे.

७) **पेपर क्र. vi साहित्य आणि समाज (UAMAR - A 503, A 603)**

- i) मानवी संस्कृतीचा विकास ii) संस्कृतीची संकल्पना iii) मानवी संस्कृतीची मूल्य व्यवस्था
- iv) संस्कृती आणि विकृती संकल्पनांचे स्पष्टीकरण v) मानवी संस्कृती विषयी विचारवंतांनी केलेल्या विश्लेषणाचा आढावा घेणे यामध्ये प्रामुख्याने a) इम्पोलीयन तेन b) कार्ल मार्क्स c) महात्मा फुले d) डॉ. आंबेडकर e) दी. के. बोडेकर f) रा. ग. जाधव इ.
- ❖ या अभ्यासक्रमात महाराष्ट्रातील प्रमुख चार प्रकारचे समाज त्या समाजांत चाललेल्या सामाजिक चळवळी आणि त्यांचे सामाजिकजीवन प्रतिबिंबित झालेल्या साहित्यकृतींच्या आधारे ते ते समाज आणि त्यांचे साहित्य यांचा अभ्यास करणे हा उद्देश आहे. यामध्ये प्रामुख्याने-
 - 1) महानगरीय जीवन आणि महानगरीय साहित्य म्हणून प्रतिबद्ध- वसंत आबाजी डहाळे यांची कादंबरी अभ्यासणे.
 - 2) स्त्रियांचे जीवन आणि विशेषतः सुरक्षित स्त्रीयांच्या प्रश्नांची स्त्रीवादी समीक्षा सिद्धांताच्या आधारे सोनाटा या महेश एलकुचांवार यांच्या नाटकाचा अभ्यास करणे.
 - 3) महाराष्ट्रातील पारंपारिक ग्रामजीवन, कृषीसंस्कृती आणि आधुनिकीकरण व शहरीकरण यांच्या अभ्यासक्रमामुळे ग्रामीण संस्कृतीवर झालेल्या परिणामांचा अभ्यास 'कापूसकाळा' (कैलास दौंड) या कादंबरीच्या अभ्यासातून करणे.

- 4) तसेच दलित समाज जीवन आणि विविध सामाजिक आंतवर्तुळातील आंतरक्रिया, अस्पृश्यता, दलितांच्या वेदना आणि शोषण व्यवस्थेविरुद्ध विद्रोह व शोषणरहित मानव समाजाचे स्वप्न इ. दलित साहित्य समीक्षेच्या आधारे हिरा बनसोडे यांच्या फिर्याद या काव्यसंग्रहाचा अभ्यास करणे असे उद्देश आहेत.

अपेक्षित फलानिष्पत्ती

विद्यार्थी

- ❖ ललितसाहित्याच्या गद्य आणि पद्याविभागातील विविध साहित्यप्रकारांचा आस्वाद, अर्थानिर्णयन व विश्लेषणाबाबत डोळस व चिकित्सक अभ्यासक निर्माण होणे.
- ❖ साहित्याच्या समीक्षकांची निर्मिती.
- ❖ कवी-लेखक-नाटककारांची निर्मिती.
- ❖ वार्ताहर निर्माण होवू शकतात.
- ❖ मराठीभाषात जमून नकार्य रत होवू शकतात.
- ❖ विद्यार्थी दशत विविध कार्यलयीन कामकाजाची माहिती होते.
- ❖ इंग्रजी-मराठीभाषांतरकार होवू शकतात.
- ❖ जाहिरात मराठी मसुदा लेखक होवू शकतील.
- ❖ भाषाशास्त्राचे अभ्यासक होवू शकतात.
- ❖ मराठीच्या बोलींचे अभ्यासक होवू शकतात.
- ❖ मराठीभाषा आणि साहित्याच्या इतिहासाचे चांगले ज्ञान होते.
- ❖ पदवीनंतर M.P.S.C, U.P.S.C वतसमस्पर्धा पारिक्षेत यशस्वी होऊ शकतील.
- ❖ पदवीनंतरचे विविध पदांसाठी/ नोकऱ्यांसाठीचे कोर्स पूर्ण करून विविध क्षेत्रात नोकरी करू शकतील.

Department of English

1. Knowledge of the various genres of literature
2. Knowledge of foundational texts of literatures in English
3. Understanding of the historical and cultural range of literature written in English
4. Understanding of the development of the English language as used in works of literature
5. Understanding of strategies of textual interpretation appropriate to different literary genres.
6. Understanding the basic and advanced grammar of English and grasp basic linguistic skills
7. Ability to conduct and use literary research, to the point of achieving:
 - a. an overall thesis that pushes the argument beyond summary
 - b. accurate and sufficient evidence presented in a scholarly manner
 - c. proper disciplinary and inter-disciplinary research tools
 - d. clear and appropriate writing for a research paper
8. Ability to write clearly and effectively

Department of English

Class	Course/Course Code/Title	Course Objective	Course Outcome
F.Y.B.A.	Communication Skills in English UACS101/201 (Core Paper)	<p>To enhance language proficiency by providing adequate exposure to reading and writing skills.</p> <p>To orient the learners towards the functional aspects of language.</p> <p>To increase the range of lexical resource through a variety of exercises.</p>	<p>Proficiency in the Communication skills.</p> <p>Knowledge of basic English language.</p> <p>Skills regarding comprehension and Expression.</p> <p>Knowledge of various types of correspondence.</p>
	English UAENG101/201 Introduction to Literature	<p>To acquaint students with the characteristics of various literary genres</p> <p>To develop analytical skills and critical thinking through close reading of literary texts</p> <p>To cultivate appreciation of language as an artistic medium and to help them understand the importance of forms, elements and style that shape literary works</p> <p>To enable students to understand that</p>	<p>To write clearly, coherently and effectively about various genres of literature.</p> <p>To recognize the culture and context of the work of literature</p>

		literature is an expression of human values within a historical and social context.	To develop sensitivity to nature and fellow human beings
S.Y.B.A.	English UAENG301/401 Indian Literature in English	To introduce learners to the uniqueness of Indian Literature in English. To acquaint learners to the pluralistic dimensions of Indian Literature in English. To help them understand the different genres of Indian Literature in English. To familiarise learners with different perspectives of approaching this literature. To make learners aware of prominent Indian Writers in English	Students will be acknowledged with Indian writing in English and translation. Knowledge of various modern social, political and literary movements in India. Understanding and interpreting literature of India
	English UAENG302/402 Twentieth Century American Literature	To acquaint the learners of literature with the various genres and literary terms of twentieth century American Literature To sensitize them to the themes and styles of American Literature To introduce them to the socio-cultural milieu of twentieth century America through literary texts To enhance their understanding of American, African American and Multicultural sensibilities by introducing them to the literary works representing them To facilitate cross-cultural perspectives and discussions on American Literature	Students will be introduced with the political, social and literary history of America. Impact of America on the global literature and other aspects of life. Acknowledgements of the concepts of multiculturalism, modernism in America. Understanding of Theatre, feminism and other movements of 20th century.
T.Y.B.A.	English UAENG501/601 Elizabethan and Jacobean Literature Restoration and	To introduce the students to English Literature of the 16, 17 and 18 centuries. To show them how background influences shaped the writer's thinking. To introduce them to literary masters who	Students will have knowledge of Elizabethan Era. Knowledge of the development of poetry and drama

	Neoclassical Period	<p>dominated the scene.</p> <p>To familiarize the students with the different writing styles that each age adopted.</p>	<p>in the Era.</p> <p>Knowledge aesthetics in literature</p>
	<p>English UAENG502/602</p> <p>Literary Criticism</p>	<p>To introduce the learners of literature to the basics of literary criticism.</p> <p>To sensitize them to critical approaches and literary theories</p> <p>To impart the technique of close reading of literary texts.</p> <p>To enable the learners to analyze, interpret, explicate and evaluate literary texts.</p> <p>To familiarize the learners with the tenets of practical criticism.</p>	<p>Acknowledgement of the basic concept of literature.</p> <p>Knowledge of various social movements and impact on literature.</p> <p>Theory and practice of criticism.</p> <p>Knowledge of Practical Criticism.</p>
	<p>English UAENG503/603</p> <p>Grammar and Art of Writing</p>	<p>To develop among students an insight in the process of word formation and transformation.</p> <p>To develop among students an insight into the structure of English language and develop their skills of grammatical analysis and description.</p> <p>To provide knowledge of the underlying 'rules' of grammar.</p> <p>To introduce rhetorical structures for effective writing.</p>	<p>Students will know the basic concepts of English grammar.</p> <p>Knowledge of word, sentence formation.</p> <p>Knowledge of discourse analysis.</p> <p>Various writing skills for students.</p>
	<p>English UAENG504/604</p> <p>The Romantic Revival and The Victorian Age</p>	<p>To introduce the students to English Literature of the 19th century – of the Romantic Revival and the Victorian period.</p> <p>To show them how background influences shaped the writer's thinking.</p> <p>To introduce them to literary masters who dominated the scene</p> <p>To familiarize the students with the different writing styles that each age adopted.</p>	<p>Knowing the difference between Classicism and Romanticism.</p> <p>Development of English literature in 17th and 18th century literature.</p> <p>Knowledge of the development of prose literature.</p>

	<p>English UAENG505/605</p> <p>Twentieth Century British Literature</p>	<p>To familiarize the learners with the twentieth century literary movements</p> <p>To introduce them to modernist and postcolonial literary texts</p>	<p>Students will know the concept of Modernism.</p> <p>Impact of various political, social and technological changes on society.</p> <p>Various experiment in literature.</p>
	<p>English UAENG506/606</p> <p>Drama and Theatre</p>	<p>To acquaint the learners of literature with various types of drama</p> <p>To sensitize them to the techniques and types of theatre</p> <p>To introduce them to drama as a performing art</p> <p>To enhance their understanding of the elements of theatre</p> <p>To enable the learners to critically watch a play, write a review and to put up a play</p>	<p>Students will know the difference between drama and theatre.</p> <p>Various theories of Drama.</p> <p>History and development of Drama.</p>
<p>F.Y.B. Com.</p>	<p>Business Communication</p>	<p>To develop awareness of the complexity of the communication process.</p> <p>To develop effective listening skills in students so as to enable them to comprehend instructions and become a critical listener.</p> <p>To develop effective oral skills so as to enable students to speak confidently interpersonally as well as in large groups.</p> <p>To develop effective writing skills so as enable students to write in clear, concise, persuasive and audience centered manner.</p> <p>To demonstrate effective use of communication technology.</p>	<p>After successful completion of the course the learner should be able to enhance his Listening, Speaking, Reading and Writing skills to meet the challenges of the world</p>

Department of History

Object and Outcome

1. Knowledge of the various events in History.
2. Students are trained to write unknown authentic historical facts to help the society in terms of progress, growth and possible areas of improvement.
3. Students do understand the importance of copyrights, patents and also awareness about plagiarism issues to learn the ethics in research.
4. Students shall be able to think critically and explore new ideas, interpretations about the Historical Sources.
5. Students shall be able to interact with the people staying near historical places.
6. Students shall be able to understand their responsibilities about higher education and inculcating the values, ethics etc. as a responsible citizen.
7. Students are motivated through the inspiration of Historical personalities.

FYBA	History of Modern India	<ol style="list-style-type: none">1) To study the colonial impact on India2) To comprehend the socio economic reforms in pre and post independence.3) To examine the forces & growth of Nationalism4) To Introduce Government of India Act-1935 and Constitutional development in India5) To give knowledge about development in communication and transport system.6) To acquaint the student with the principles of foreign policy.	Knowledge of Modern Indian History. Knowledge of Freedom Movement in India. Development of Nationalism among the student. Awareness about social reforms among the student. Student will eligible for government service, can attempt competitive exams. E.g. IBPS, SSC, UPSC, MPSC, Railway recruitment and many others.
SYBA	Landmarks in World History, 1300 A.D.-1945	<ol style="list-style-type: none">1) To enable the students to comprehend the transition of Europe from medieval to Modern times and its impact on the world.2) To provide accurate knowledge of the most significant events and personalities of the period under study and encourage understanding of the making of the modern world3) To introduce American, French and Industrial revolution and its impact on world.	Knowledge of various political devolvement of World from Medieval to Modern time. Understanding Freedom Movement of neighbouring countries. Knowledge of 1 st and 2 nd world war. Knowledge about

	A.D.	<p>4) To introduce west Asian political development, oil politics and its impact to world politics.</p> <p>5) To provide knowledge about work of League of Nation and UNO for world peace.</p>	International agencies like League of Nation and UNO for peace.
SYBA	Ancient India from Earliest Times to 1000 A.D	<p>1) To acquaint the students with different sources of Ancient Indian History.</p> <p>2) To enable the students to understand the political, socio-economic and cultural developments in the period under study and appreciate the rich cultural heritage in India.</p> <p>3) Understand the developments in the history of Ancient India from Indus Valley Civilisation to 1000 A.D.</p> <p>4) Examine the Social and Religious developments in ancient India</p> <p>5) Analyse the cultural changes that took place and how the Indians reacted to the fresh challenges.</p> <p>6) Place the socio-cultural history of India in proper historical perspective.</p> <p>7) Understand the rise and fall of different dynasties in North India, Deccan and South India during ancient period</p> <p>8) Examine the concept of Classical Age</p> <p>9) Analyse the political annexations of the early Islamic invaders</p> <p>10) Place the role of India in the history of South- east Asia during ancient period</p>	<p>Student has encouraged to study sources of Ancient Indian History.</p> <p>Knowledge of the reach Indian culture.</p> <p>Knowledge of the Indian various dynasties.</p> <p>Student has encouraged visiting Ancient Indian Heritage.</p> <p>Students are Eager about Ancient Indian Literature.</p> <p>Knowledge of the history of South-east Asia during ancient period</p>
TYBA	History of Medieval India (1000A.D – 1707A.D.	<p>1) To acquaint the student with the history of Turkish (Muslim) rule that systematically began from the 13th century A.D. in India.</p> <p>2) The course also tries to highlight on the development of Socio-Economic, administrative and Cultural trends during the period of the Sultan’s rule.</p> <p>3) To highlight on the development of education and Literature during the period of the Sultan’s rule.</p> <p>4) Tries to highlight on the development of</p>	<p>Student got knowledge of Turkish rule in India</p> <p>Students are aware the development of Socio-Economic, administrative and Cultural trends during the period of the Sultan’s rule.</p> <p>Student got knowledge about</p>

		<p>Socio-Economic, administrative and Cultural trends, education and Literature during the period of the Vijaynagar and Bahamani Kingdoms.</p> <p>5) Tracing the history of India till the foundation of the Mughal's rule.</p> <p>6) To make the students aware of the History of Mughal rulers since 1526 A.D.</p> <p>7) The course also tries to highlight on the development of Socio-Economic, administrative and Cultural trends during the period of the Mughal Rule.</p> <p>8) To highlight on the development of education and Literature during the period of the Mughal rule.</p> <p>9) To study the rise of Maratha power.</p> <p>10) To study the Din-I-ilahi and Sikhism as a new religion.</p>	<p>History of South India and Deccan region.</p> <p>Students aware of the History of Mughal rulers.</p> <p>Nationalism develop among the students by studying rise of Maratha power.</p> <p>Students aware about religious tolerance of Mughal Period.</p>
TYBA	Modern India (1857 – 1964)	<p>1) To study the colonial impact on India.</p> <p>2) To examine the forces & growth of Nationalism.</p> <p>3) To Introduce Constitutional development in India from 1858.</p> <p>4) To acquaint the students with the principles of foreign policy.</p> <p>5) To comprehend the socio economic reforms in pre and post independence</p>	<p>Knowledge of Modern Indian History.</p> <p>Knowledge of Freedom Movement in India.</p> <p>Development of Nationalism among the student.</p> <p>Awareness about social reforms among the student.</p> <p>Student will eligible for government service, can attempt competitive exams. E.g. IBPS, SSC, UPSC, MPSC, Railway recruitment and many others.</p>
TYBA	Archaeology, Heritage Tourism Museology, Archival And Library Sciences.	<p>1) Understand the basics of Archaeology</p> <p>2) Understand the meaning and Significance of epigraphy in historical studies.</p> <p>3) Make students know the evolution of coinage and its significance as the Sources of History.</p> <p>4) Make students aware about the basics of heritage tourism</p> <p>5) Make students aware of career options.</p> <p>6) Make students aware about Museology as an allied branch of history.</p> <p>7) Inform the students about role of Museums</p>	<p>Knowledge of Archaeology, heritage tourism, Museology, Library Sciences.</p> <p>Awareness about Carrier as a Historical Researcher.</p> <p>Awareness about</p>

		<p>in preservation of heritage.</p> <p>8) Understand the meaning, significance, scope and value of archival Science in the study of history.</p> <p>9) Understand the role of library in academic and research career.</p> <p>10) Know the management of library.</p>	<p>Carrier as a Librarian After passing graduation. They are entitled to admissions to B. Lib, M. Lib and NET/SET and thus are eligible for the post of Librarian in any Degree College/s.</p> <p>Awareness about Carrier as a Archaeologist after passing M.A. (Archaeology) and could contest the post of Archaeologist with the department of Archaeological Survey of India (ASI).</p> <p>Students are encouraged to visit modern Archives sites and use internet and digital libraries as modern tool of usage.</p> <p>Students are trained to write unknown authentic historical facts to help the society in terms of progress, growth and possible areas of improvement</p>
TYBA	History of the Marathas	<ol style="list-style-type: none"> 1. To introduce the students to the regional history of Maharashtra 2. To familiarize students with the literary sources of the history of the Marathas 3. To help students to understand the forces leading to the establishment of Swarajya under Shivaji Maharaj 4. To encourage students to undertake research in Maratha history. 	<p>Develop nationalist approach among student.</p> <p>Knowledge of regional and local history.</p> <p>Knowledge of</p>

		<p>5) To enable the students to understand the processes that led to the expansion of the Maratha power in the 18th century</p> <p>6) To appreciate the contribution of the Marathas in the national politics of the 18th century</p> <p>7) To analyze the forces that led to the fall of the Maratha power and the rise of the European power</p> <p>8) To develop an understanding of the society and culture in Maharashtra in the 18th century</p>	<p>sources of Maratha History.</p> <p>Knowledge of society and culture in Maharashtra in the 18th century.</p>
TYBA	History of Contemporary World (excluding Asia) (1945 -2000 A.D)	<p>1. The developments in the world after Second World War.</p> <p>2. The birth of international organizations and their role in contemporary world.</p> <p>3. To make the student aware of the background, scope and various trends in U.S. Foreign Policy with a view to interpreting and analyzing it and examining its effect on world politics</p> <p>4. The origins of cold war and its impact on world politics in the latter half of the 20th Century.</p> <p>5. The events of world in the last decade.</p>	<p>Knowledge of political condition after Second World war.</p> <p>Understanding concept of cold war.</p> <p>Knowledge of U.S. Foreign Policy.</p>
TYBA	History of Asia (1945 A.D. – 2000 A.D.)	<p>1) The developments in the world after Second World War.</p> <p>2) The birth of international organizations and their role in contemporary world.</p> <p>3) The origins of cold war and its impact on world politics in the latter half of the 20th Century.</p> <p>4) The events of world in the last decade.</p>	<p>Knowledge of international organization and their work.</p> <p>Understanding cold war with special reference with Asian countries.</p>
TYBA	General Knowledge and Current Affairs	<p>1) To study the History of India.</p> <p>2) To create awareness about General knowledge and Current affairs.</p> <p>3) To prepare the student for competitive exams including UPSC, MPSC and other exams.</p>	<p>awareness about General knowledge and Current affairs</p> <p>Students are eligible for government service, can attempt competitive exams. e.g. IBPS, SSC, UPSC, MPSC, Railway recruitment and many others.</p>

DEPARTMENT OF GEOGRAPHY

Curriculum designed for the B. A. degree in Geography, would allow students to develop a strong footing in the fundamentals and specialize in the disciplines of his/her liking and abilities. The students pursuing this course would have to develop in depth understanding of various aspects of the subject. The working principles, design guidelines and experimental skills associated with different fields of Geography such as Geomorphology, Climatology, oceanography, Environmental Geography, Agricultural Geography, Tourism Geography, Economic Geography, Population Geography, Settlement Geography, Political Geography, Remote Sensing and GIS, etc.

Class	Course/Course Code/Title	Course Objective	Course Outcome
F.Y.B.A.	Geography-I Geomorphology UAGEO101	<ul style="list-style-type: none"> • To introduce basic concepts of Geomorphology. • To explain various processes and various landscape forming in Geomorphology • To familiarize the students with various techniques and interpretation in Geomorphology. 	<ul style="list-style-type: none"> • Understanding the various processes and associated landforms. Students acquire Knowledge about protection and conservation of different landforms. • Students learn various techniques application of geomorphological knowledge to solve the challenging issues of man environmental relationships.
	Geography-I Human Geography UAGEO201	<ul style="list-style-type: none"> • To familiarizes the students with basic concepts of Human Geography. • To make aware the students with the nature of man-environment relationship and human capability. • To acquaint the students with the spatial and structural characteristics of human settlement under varied environmental conditions. • To familiarize the students with spatial and structural 	<ul style="list-style-type: none"> • Students learn about man-environment relationship and related issues. • Understanding basic concept and characteristics of human settlement and their environmental relationship. • Know about recent trends of global population and their problems. • Understanding basic concepts of Migration and global new trend of migration. • Students learn the

		dimensions of global population and their problems as well as concept and trend of migration.	techniques of application of Human Geography knowledge to solve the challenging issues of man environmental relationships.
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Class	Course/Course Code/Title	Course Objective	Course Outcome
S.Y.B.A.	Geography-II An Introduction to Climatology UAGEO301	<ul style="list-style-type: none"> • To introduce basic principles and concepts in Climatology to students. • To help them understand the atmospheric circulation, global Weather phenomena. • To acquaint the students with Humidity and Precipitation and their distribution. • To help them understand the To enable the student to use techniques of maps and statistical techniques in Agriculture Geography. 	<ul style="list-style-type: none"> • Students understand the weather phenomena and their characteristics. Students learn Global problems related to climate. and its impact. • Students aware with vqarious phenomenon of hydrologocal cycle. • Students learn to use techniques of weather related maps and statistical methods and their interpretation to solve the climatic problems.
	Geography- Physical Geography of India UAGEO 302	<ul style="list-style-type: none"> • To be aware of physical phenomenon, climate, drainage system in India. • To acquaint the students with soils and natural vegetation and their associated problems. • To acquaint the learners with distribution of minerals and power resources of India. • To enable the student to use techniques of maps. 	<ul style="list-style-type: none"> • Students familiar with physiographic divisions of India and their characteristics, drainage system and climate of India and their importance for particular region. • Students learn the classification of soils and natural vegetation and how to conserve soils and natural vegetation of India. • Students learn the distribution of minerals and power resources and how to conserve minerals and power resources. Students learn to use techniques of maps and their interpretation.
	Geography- Introduction to Oceanography	<ul style="list-style-type: none"> • To introduce the students to the basic principles and concepts in Oceanography. 	<ul style="list-style-type: none"> • Knowledge of basic concept of Oceanography. • Students learn the

	UAGEO402	<ul style="list-style-type: none"> • To acquaint the students with characteristics of Ocean floor and Ocean water, movement of ocean water and their effects • To acquaint the students with man and ocean relationship. • To enable the student to use techniques of maps and their interpretation in Oceanography 	<p>characteristics of ocean floor and water, ocean water movement and their effects.</p> <ul style="list-style-type: none"> • Understanding the man-ocean relationships and their recent global problems. • Students learn the techniques of maps and their interpretation in Oceanography to solve the challenging issues of man-ocean relationships.
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Class	Course/Course Code/Title	Course Objective	Course Outcome
S.Y.B.A	Geography-Agriculture Geography of India UAGEO401	<ul style="list-style-type: none"> • To introduce the students to the basic principles and concepts in Agriculture Geography. • To introduce them to the characteristics of Indian Agriculture. • To acquaint the students with Green revolution in India and their impacts on Indian economy. • To help them understand the recent trend in Agriculture • To enable the student to use techniques of maps and statistical techniques and their interpretation in Agriculture geography. 	<ul style="list-style-type: none"> • Knowledge of characteristics of Indian Agriculture and their various problems. • Understanding the green revolution and their impacts on Indian economy. • Students will have knowledge of new challenging types of agriculture to support sustainable development of agriculture in India. • Students learn the new modern technical methods and their applications to solve the agricultural problems.
T.Y.B.A. Geography	Geography-UAGEO501 Geography of Rural Settlement	<ul style="list-style-type: none"> • To introduce the students to Geography of rural settlement and structural characteristics of human settlement • To acquaint the learners with affecting factors on rural settlement and their properties. • To help them understand the hierarchy of rural settlement and its pattern. • To enable the student to 	<ul style="list-style-type: none"> • Students will know the rural house structure and their regional variation in India. • Knowing the relation of geographical factors and rural settlement in particular region and their properties. • Students will know the hierarchy of rural settlement and its pattern. • Students will have knowledge changing pattern of rural land use and support

		<p>changing pattern of rural land use in local village.</p> <ul style="list-style-type: none"> • To acquaint the students with rural development programme and its implementation. 	<p>sustainable development of rural settlement.</p> <ul style="list-style-type: none"> • Students learn the rural development programme and their implementation.
	<p>Geography- UAGEO502 Environmental Geography</p>	<ul style="list-style-type: none"> • To introduce them to environmental geography. • To introduce the students to Ecosystem. • To acquaint the students with natural resources and biodiversity. • To help them understand the various types of pollution. • To acquaint the students with concept of sustainable development. • To enable the student to natural and manmade issues 	<ul style="list-style-type: none"> • Students will know the man-environment relationship and importance of environmental geography. Understanding importance of ecosystem. • Knowing the how to conserve natural resources and biodiversity to support sustainable use of them. • Understanding impacts of various pollutions and how to control pollution and need of sustainable development in various areas. • Understanding environmental issues and their measures.
Class	Course/Course Code/Title	Course Objective	Course Outcome
<p>T.Y.B.A. Geography</p>	<p>Geography- UAGEO503 Topo map and Thematic map Interpretation</p>	<ul style="list-style-type: none"> • To introduce them to basic concept of maps. • To enable the students to use of various Projections and Cartographic Techniques. • To Introduce the Students with SOI Toposheet and to acquire the Knowledge of Toposheet Interpretation. • To acquaint the students with techniques of thematic maps interpretation in Geography • To acquaint the students with IMD weather maps and to gain the knowledge of weather map interpretation. 	<ul style="list-style-type: none"> • Knowledge of basic of maps. • Students will know the map projections and its importance and utility in the geographical study. • Knowing the how to read Geographical phenomena on SOI Toposheet. • Knowing the how to read thematic maps for geographical analysis. • Knowing the how to read weather phenomena on Weather maps and which techniques use for weather analysis.

	<p>Geography- UAGEO504 Population Geography</p>	<ul style="list-style-type: none"> • To introduce the students with population geography. • To acquaint the students with population characteristics. • To help them understand the various demographic theories. • To acquaint the students with basic concept and recent trend of migration. • To acquaint the students with population characteristics and policy in India. 	<ul style="list-style-type: none"> • Knowledge of basic of population geography. • Understanding the population characteristics and their effects in India and world. • Understand the demographic theories. • Understanding basic concepts of Migration and recent trend of migration in India. • Understanding the structural dimensions of population, and equips the Indian population situation through population policies in India.
	<p>Geography- UAGEO505 Agriculture Geography</p>	<ul style="list-style-type: none"> • To introduce the students with origin of agriculture and affected factors • To introduce them to the major agricultural types and crops in world. • To acquaint the students with characteristics of Indian agriculture and Green revolution in India • To help them understand the agricultural trade • To enable the student with applicability of models in Indian agriculture and new modern farming techniques. 	<ul style="list-style-type: none"> • Knowledge of origin of agriculture and relation of geographical factors. • Knowledge of agricultural types and distribution of crops in the world. • Knowledge of characteristics of Indian Agriculture and solve the agriculture problems to support of national agricultural problems. • Students learn the role of WTO in agricultural trade and impact of LPG on agricultural market. • Students will have knowledge of new challenging techniques of agriculture to support sustainable development of agriculture in India.

Class	Course/Course Code/Title	Course Objective	Course Outcome
T.Y.B.A. Geography	Geography- UAGEO506 Research Methodology	<ul style="list-style-type: none"> • Students should understand a general definition of research design and their characteristics and 	<ul style="list-style-type: none"> • Knowledge of concept of research and its problems. • Students learn the how to design research.

		<p>issues.</p> <ul style="list-style-type: none"> • Students should be able to identify the overall process of designing a research study from its inception to its report. • To enable the student with sources and processes of data collection and use various techniques for analysis of data. • To help them understand the preparation of research report 	<ul style="list-style-type: none"> • Students learn the how to collect research data and use various techniques for analysis and representation of data. • Students learn the how to write research report.
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Objectives

- 1) To introduce students with the basic concept of rural development.
- 2) To acquaint students with the concept of nature and characteristics of rural society.
- 3) To make aware about rural social institution, its function and changing nature.
- 4) To understand concept, factors and obstacles in bringing social change and role of NGOs in bringing social change.
- 5) To expose the students to the critical analysis and evaluation of those programmes aiming to bring desired change in Indian society.
- 6) To create practical approach among the students.

OBJECTIVES

- 1) To introduce students with the basic concepts of Rural Development
- 2) To acquaint students with the concepts, nature and characteristics of Rural Society.
- 3) To make aware about rural social institutions, its functions and changing nature.
- 4) To understand concepts, factors and obstacles in bringing social change and role of NGOs in bringing social change.

Class	Course /Course Code Title	Course Objective	Course outcome
F.Y.B.A.	Introduction to Rural Development	To introduce students with the basic concept of Rural Development to acquaint students with the concept nature and characteristics of rural	Aware about social problems Knowledge about rural society

		society. To Make aware about rural social institution ,its functions and changing nature	
F.Y.B.A.	Issues related to rural development	To understand concept factors and obstructs in bringing social change and roles of NGOs in bringing social changes. How to communicate in rural social institutions	Aware about social problems, traditions, obstacles in development Awareness about Grampanchayat
S.Y.B.A	Rural administration Code - BARD04	To make the students to understand some basic concepts and theoretical approaches related towards Rural social structure to expose the students to the critical analysis and evaluation of those program	Understand Rural Development Govt. Machinery
S.Y.B.A	Laws related to rural development Code- BARD06	To create general awareness about laws and empowerment among the students	Understand different land laws
S.Y.B.A	Rural Society Code- BARD03	To create practical approach among the students	Understand rural society
S.Y.B.A	Rural Development strategies Code- BARD05	To expose the Indian society	
T.Y.B.A.	Agriculture and its significances in rural development Code- UARD501	To understand rural agriculture To understand efforts of agriculture development	Awareness about agriculture problems Knowledge about different Govt. machinery of agriculture
T.Y.B.A.	Rural Marketing and Finance Code - UARD502	To understand rural marketing agriculture marketing To understand rural ineptness To Understand self help groups	Knowledge about rural marketing agriculture marketing Develop local leadership How democracy is grown
T.Y.B.A.	Applied Agriculture Code - UARD503	To understand horticulture, forestry To understand Goat, poultry , fisheries	Awareness about horticulture Awareness about goat, poultry, fisheries
T.Y.B.A.	Voluntary Social work	To Understand voluntary social work, significance of voluntary	Knowledge about professional social

	Code - UARD506	sectors, principle, people participation	work Skills and techniques of social work
T.Y.B.A.	Professional social work	To understand professional social work, field of social work To know about principle and method of social work	Awareness about social work Social welfare case work, group work, social research etc
T.Y.B.A.	Rural resource management Code -UARD504	To understand rural resource, land, water resources To understand human	Awareness about rural research
T.Y.B.A.	Emerging issues in rural development	To understand rural urban imbalance To understand land pollution, division of land of migration, LPG	Knowledge about rural imbalance Set, pollution

COURSE OBJECTIVES

F.Y.B.COM

Semester I

Accountancy and Financial Management I

1. To enable and to equip the students with the basic functions and tools of accountancy and financial management.
2. To develop knowledge and understanding of manufacturing concern.

Commerce I (Introduction to Business)

1. To familiarize the students with basic concepts of business.
2. To develop knowledge and understanding of business.
3. To make students aware of current trends in business.

Business Economics I

1. To facilitate the students with the basic concepts of microeconomics and its application to business situations.
2. To guide the students in understanding the real-world market situations and business application.

Business Communication I

1. To develop awareness of the complexity of the communication process
2. To develop effective listening skills in students so as to enable them to comprehend instructions and become a critical listener.
3. To develop effective oral skills so as to enable students to speak confidently interpersonally as well as in large groups

Environmental Studies I

1. To develop awareness about sustainable development of environment among the student.
2. To familiarise the students with the basic concepts of environment.

Foundation Course I

1. Understand the multi-cultural diversity of Indian society through its demographic composition: population distribution according to religion, caste, and gender.
2. Understand the concept of disparity as arising out of stratification and inequality.
3. Understand inter-group conflicts arising out of communalism

Mathematical and Statistical Techniques I

1. To introduce mathematics and statistics to undergraduate students so that they can use them in the field of commerce and industry to solve the real life problems.
2. To understand mathematics in shares in mutual funds.
3. To understand the basic concept of permutation, combination and linear programming problems.

Semester II

Accountancy and Financial Management II

1. To familiarize the students with accounting from incomplete records.
2. To understand the concept and its application of Consignment & Branch account.
3. To understand the concept, Computation of loss and, claim settlement of fire insurance.

Commerce II (Service Sector)

1. To familiarize the students with basic concepts of services.
2. To develop knowledge and understanding of services.
3. To make students aware of current trends in Services Sector.

Business Economics II

1. To understand the Market Structure in perfect competition and monopoly.
2. To make aware to student about pricing and output decision under imperfect Competition.
3. To understand the concept of Pricing Practices and Evaluating Capital projects.

Business Communication II

1. To develop the different communication skills among the students.
2. To understand the concept of different types of group communication.
3. To develop effective writing skills so as enable students to write in a clear,concise, persuasive and audience centred manner.
4. To develop ability to communicate effectively with the help of electronic media.

Environmental Studies II

1. To make aware solid waste for management for sustainable society.
2. To familiarise the environmental problems in agriculture and industrial development.
3. To understand the scope of tourism development and its positive and negative impact on environment.

Foundation Course II

1. To familiarise the students with the basic concepts of liberalization, privatization and globalization.
2. To make aware students of human rights.
3. To make aware significance of values, ethics and prejudices in developing the individual.

Mathematical and Statistical Techniques II

1. To Understand the concept of Functions, Derivatives and their Application.
4. To understand the Various statistical technique.
5. To understand the concept and application of Elementary Probability Distribution.

S.Y.B.COM

Semester III

Accountancy and Financial Management III

1. To understand the simple partnership final accounts related with reconstitution of partnership firm.
2. To understand the process of amalgamation, conversion and sale of partnership firm into limited company.

Financial Accounting and Auditing – Introduction to Management Accounting

1. To familiarise the learners with proforma of vertical balance sheet and income statement and practical implementation for analysis.
2. To make aware the learners with the computation of various budget.
3. To understand various ratios and learn actual implementation of decision making in business.

Commerce III (Management: Functions and Challenges)

1. To make the learners aware about conceptual knowledge and evolution of management.
2. To familiarize the learners with the functions in Management.

Business Economics III (Elements of Macro-economics)

1. An overall approach to macroeconomics is to examine the economy as a whole.
2. This course is an introduction to the basic analytical tools of macro economics to evaluate macro-economic conditions such as inflation, unemployment and growth.
3. It is designed to make system of overall economy understandable and relevant.
4. The aim is to provide a clear explanation of many aspects of aggregate economic variables to inspire a consistent way of thinking about key macroeconomic phenomena.
5. It intends to familiarize the commerce students with basic concepts of macroeconomics and with certain common features of economic occurrence in the real world.

Advertising I

1. To highlight the role of advertising for the success of brands and its importance within the marketing function of a company.
2. It aims to orient learners towards the practical aspects and techniques of advertising.
3. It is expected that this course will prepare learners to lay down a foundation for advanced post-graduate courses in advertising.

Foundation Course – Contemporary Issues III

1. To understand human rights, violations and redressal.
2. To understand co-relation between science and technology.
3. To make aware a dealing with environmental concerns related with disaster management.

Business Law

1. To provide a conceptual study about the framework of Indian Business Laws.
2. To orient students about the legal aspects of business
3. To familiarize the students with case law studies related to Business Laws.

Semester IV

Accountancy and Financial Management IV

1. To understand the simple partnership final accounts related with reconstitution of partnership firm.
2. To understand the process of amalgamation, conversion and sale of partnership firm into limited company.

Financial Accounting and Auditing – Auditing

1. To understand the basic concepts of auditing.
2. To understand need and significance of audit planning, procedure and documentation.
3. To familiarise the techniques of auditing.

Commerce IV (Management: Production & Finance)

1. To acquaint the learners with the basic concepts of Production Management, Inventory Management & Quality Management.
2. To provide basic knowledge about Indian Financial Systems.
3. To update the learners with the recent trends in Finance.

Business Economics (Foundation of Public Finance)

1. Public Finance Issues are central to economic and Political discourse worldwide, as one of the primary functions of government is to generate resources from its people to spend money for improving the lives of its people.
2. The primary objective of this course is to provide students with the tools to understand the underlying concepts and practical trade-offs entailed in Public finance policy alternatives.
3. It is strongly recommended to analyse Union budget of ongoing financial year in the class room.

Advertising II

1. To highlight the role of advertising for the success of brands and its importance within the marketing function of a company.
2. It aims to orient learners towards the practical aspects and techniques of advertising.
3. It is expected that this course will prepare learners to lay down a foundation for advanced post-graduate courses in advertising.

Foundation Course – Contemporary Issues IV

1. To make aware among the student the value system and gender sensitivity and human empowerment.
2. To understand the environment and energy conservation programme.

3. To make aware the concepts of disaster management and preparedness among the students.

Business law

1. To provide a conceptual study about the framework of Indian Business Laws.
2. To orient students about the legal aspects of business
3. To familiarize the students with case law studies related to Business Laws.

T.Y.B.Com Semester V

Financial Accounting and Auditing VII - Financial Accounting

1. To familiarise the learner with knowledge and comprehension on the particular conditions relevant for public sector accounting.
2. To improve the ability to identify and analyse financial accounting problems and opportunities in real life situations.
3. To familiarise emerging trends in accounting.

Financial Accounting and Auditing VIII - Cost Accounting

1. To familiarise basic terminology of cost accounting.
2. To ascertain the profitability of each of the products and advice management as to how the profit can be maximise.
3. To reveal sources of economy by installing and implementing a system of cost control for material, labour and overheads.

Commerce V(Marketing)

1. To Identify core concepts of marketing and the role of marketing in business and society.
2. To develop Knowledge of social, legal, ethical and technological forces on marketing decision-making.
3. To enhance ability to develop marketing strategies based on product, price, place and promotion objectives.
4. To Increase ability to communicate the unique marketing mixes and selling propositions for specific product offerings.

Business Economics V

1. To understand the basic concepts of macro-economic aspects in India.
2. To familiarise Recent trends, issues and challenges in Banking and Insurance Industry.
3. To understand the history of Industry and Service Sector During Post Reform Period

Direct & Indirect Taxation Paper – I

1. To familiarise basic terminology of direct tax.
2. To understand computation of net taxable total income of the individual.

Purchasing & Store keeping Paper – I

1. To make the syllabus of Purchasing subject to be useful academic tool to enhance one's career and to attract attention of learner towards developing area of business.

Semester VI

Financial Accounting and Auditing IX - Financial Accounting

1. To enable the students to combine practice and theoretical knowledge of financial accounting.
2. To develop awareness of emerging trends in financial accounting.
3. To provide decision making skills to the students in the financial analysis context.

Financial Accounting and Auditing X - Cost Accounting

1. To provide a correct analysis of cost both by process or operations and by different elements of cost.
2. To exercise effective control in stock of raw material, WIP, consumable stores and finished goods in order to minimise the capital locked up in this stock.
3. To familiarise the learner about the accounting of contracts.

Commerce V (Human Resource Management)

1. To Contribute to the development, implementation, and evaluation of employee recruitment, selection, and retention plans and processes.
2. Administer and contribute to the design and evaluation of the performance management program.
3. Research and support the development and communication of the organization's total compensation plan.
4. Research and analyse information needs and apply current and emerging information technologies to support the human resources function.

Business Economics VI

1. To make aware the learners about international trade.
2. to understand the role of Central Bank in foreign exchange rate management, Managed flexible exchange rate system of India.

Direct & Indirect Taxation Paper – II

1. To understand the basic concepts related to GST
2. To acquaint with the latest amendments made in connection with indirect taxation
3. To update the procedural part of GST

Purchasing & Store keeping Paper – II

1. To make the syllabus of Store Keeping subject to be useful academic tool to enhance one's career and to attract attention of learner towards developing area of business.

Department of Botany CO/PSO

Class	Course/ Course Code/Title	Course Objective	Course Outcome
F.Y.B.Sc. Semester I	USBO101 PLANT DIVERSITY I (Algae, Fungi and Bryophyte)	On completion of the course, students are able to: 1. Understand the diversity among Algae. 2. Know the systematic, morphology and 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.	<ol style="list-style-type: none"> 1. To get knowledge about the plant diversity with respect to non flowering plants. 2. To apply the knowledge for economic use.
	USBO102 FORM AND FUNCTION II (Cell Biology, Ecology and Genetics)	On completion of the course, students are able to: 1. Understand the Biochemical nature of cell. 2. To understand structure of plant cell and cell organelles. 3. To know energy pyramids and energy flow in an ecosystem. 4. To understand types of ecosystem and interactions between ecosystems and organisms. 5. To know about different terms in genetics and Mendelian genetics. 6. Mendelian and Neo-mendelian genetics 7. To study the phenomenon of dominance, laws of segregation, independent assortment of genes. 8. To understand the different types of genetic interaction, incomplete dominance, codominance, inter allelic genetic interactions, multiple alleles and quantitative inheritance etc.	<ol style="list-style-type: none"> 1. To get the knowledge about plant body functioning through various cell organelles. 2. To get the knowledge of ecosystems 3. To get knowledge of Mendelian and post Mendelian genetics.
F.Y.B.Sc. Semester II	USBO201 PLANT DIVERSITY I (Pteridophytes, Gymnosperms and Angiosperms)	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.	<ol style="list-style-type: none"> 1. To get knowledge about the plant diversity with respect to vascular plants and non - vascular plants.

		<p>6. Learn about the reproductive characteristics of the plant.</p> <p>7. Understand the plant morphology and basic taxonomy.</p>	<p>2. To get knowledge about leaf and inflorescence diversity</p>
	<p>USBO202 FORM AND FUNCTION II (Anatomy, Physiology and Medicinal Botany)</p>	<p>On completion of the course, students are able to understand</p> <ol style="list-style-type: none"> 1. To study structure of different tissues. 2. To understand difference between monocot and dicot plants on the basis of anatomy. 3. To understand epidermal outgrowth. 4. To understand process of photosynthesis. 5. To understand primary and secondary metabolites from plants. 6. To understand some medicinal plants used in Grandma's pouch. 	<ol style="list-style-type: none"> 1. To get the knowledge about primary structures of plant tissues, plant organs and epidermal outgrowth. 2. To get knowledge of photosynthesis. 3. To get knowledge of different metabolites and plants used in medicines.
<p>S.Y.B.Sc. Semester III</p>	<p>USBO301 PLANT DIVERSITY II (Algae and Bryophytes, Angiosperms and Modern technique to study plant diversity)</p>	<p>On completion of the course, students are able to:</p> <ol style="list-style-type: none"> 1) Understand the diversity among Algae and general characters of Phaeophyta. 2) Know the systematic, morphology and structure, of Algae. 3) Understand the life cycle pattern of Algae. 4) Understand the useful and harmful activities of Algae. 5) Understand the morphological diversity of Bryophytes. 6) Understand the economic importance of the Bryophytes. 7) Know the taxonomic position, occurrence, thallus structure, reproduction of Bryophytes. 8) To understand the system of plant identification nomenclature and classification. 9) To study taxonomy in relation to anatomy, palynology, chemical constituents, embryology, cytology and ecology. 10) To understand microscopy, chromatography 	<ol style="list-style-type: none"> 1. To get knowledge about the plant diversity and variation. 2. To get the knowledge of various techniques used to study plant diversity, preservation of plants.

		<p>and electrophoresis. 11) To equip the students with skills related to plant preservation method in laboratory as well as industries based studies.</p>	
	<p>USBO302 FORM AND FUNCTION II (Cell Biology, Cytogenetics and Molecular Biology)</p>	<p>1) To understand the ultra structure and functions of the cell organelles. 2) To study cell division and its significance. 3) To Study the types of nucleic acids. 4) To understand variation in chromosome structure. 5) To understand methods of sex determination, sex linked, sex influence and sex limited traits. 6) To study the extra nuclear genetics. 7) To understand DNA replication and protein synthesis.</p>	<ol style="list-style-type: none"> 1. To get the knowledge about plant body functioning through various cell organelles. 2. To create awareness about the natural genetic factors, there causes and effects. 3. To get the knowledge about process of DNA replication and protein synthesis.

**USBO303
CURRENT
TRENDS IN
PLANT
SCIENCES I
(Pharmacognosy, Forestry and economic botany and Industry based on plant products)**

On completion of the course, students are able to:

- 1) Know the scope and importance of pharmacognosy and photochemistry.
- 2) Understand Indian Pharmacopoeia.
- 3) Know the concept of secondary metabolites.
- 4) Learn about adulterants.
- 5) To understand types of forestry in India.
- 6) To understand types fiber, fiber industries, spices and condiments and markets for spices.
- 7) To get knowledge about aroma therapy, nutraceutical, enzyme industry.
- 8) To get knowledge about biofuels.

1. To get knowledge about history of Indian medicine, pharmacopoeia, monographs, secondary metabolites used in medicine and adulterants.
2. To develop interest in various forest products, spices condiments, their marketing and to create awareness regarding self employment and to protect the forest land.
3. To get the knowledge about plant based industrial products and industries such as-enzyme industry, nutraceuticals etc

S.Y.B.Sc. Semester IV	<p>USBO401PLANT DIVERSITY II (Thallophyta, Paleobotany and Gymnosperms)</p>	<p>On completion of the course, students are able to:</p> <ol style="list-style-type: none"> 1) Know the diversity, scope and importance of thallophyta. 2) Understand the geological timescale. 3) Learn about formation and types of fossils. 5) Understand salient feature of Gymnosperms. 6) Know the classification of Gymnosperm up to the order by Chamberlain's systems. 	<ol style="list-style-type: none"> 1. To get knowledge about the plant diversity and variation of current and fossil plants. 2. To get the knowledge of plant health. 3. To get knowledge about lichens.
	<p>USBO402FORM AND FUNCTION II (Anatomy, Plant Physiology, Biochemistry, Ecology and Environmental Botany)</p>	<p>On completion of the course, students are able to:</p> <ol style="list-style-type: none"> 2. Gain knowledge about "Cell Science". 3. Understand normal secondary growth in dicot and monocot. 4. Learn the mechanical tissue system and conducting tissue system. 5. Understand physiological processes like respiration, photorespiration, photoperiodism and vernalization. 6. Understand the biogeochemical cycles, ecological factors and community ecology. 7. Understand the role plants in human welfare. 7. Know about the utility of plant resources. 	<ol style="list-style-type: none"> 1. To get the knowledge about plant structural components and physiological processes. 2. To create awareness about the environmental factors and community study.
	<p>USBO403 CURRENT TRENDS IN PLANT</p>	<p>On completion of the course, students are able to:</p> <ol style="list-style-type: none"> 1) Get knowledge about horticulture and its branches. 2) To create awareness about gardening and its 	<ol style="list-style-type: none"> 1. To get the knowledge of applications

	<p>SCIENCES I (Horticulture and gardening, Biotechnology, Biostatistics and Bioinformatics)</p>	<p>location. 3) Understand the techniques of plant tissue culture and r-DNA technology. 4)To understand bio statistics. 5. To understand the knowledge about information technology related bioinformatics.</p>	<p>of plant sciences garden development, plant tissue culture, etc. 2. To get knowledge of statistical techniques of analysis of biological data and to use the soft tools for data analysis and interpretation. 3. To get the knowledge about bioinformatics.</p>
<p>Semester V T.Y.B.Sc.</p>	<p>USBO501 PLANT DIVERSITY III (Algae, Fungi, Plant pathology and Microbiology)</p>	<p>On completion of the course, students are able to: 1) Understand the diversity among Algae and Fungi. 2) Know the systematic, morphology and structure, of Algae and Fungi. 3) Understand the life cycle pattern of Algae and Fungi. 4) Understand the useful and harmful activities of Algae and Fungi. 5) Know the Economic Importance of Fungi. 6) To understand plant diseases with respect to causative organism, symptoms and control measures. 7) To understand types of microbes, culturing of microbes and role of microbes in fermentation process.</p>	<p>1. To get knowledge about the plant diversity with respect to non flowering plants and microbial flora. 2. Study of plant health and remedies. 3. To apply the knowledge for economic use of microbes and algae.</p>

**USBO502
PLANT
DIVERSITY IV
(Paleobotany,
Angiosperms I,
Anatomy I and
Plynology)**

- 1) To understand the Paleobotany with respect to fossil plants.
- 2) To know the contribution of Birbal Sahani, Birbal Sahani Institute of Paleobotany, Lucknow.
- 3) To study the characters of taxonomic importance.
- 4) To study the Bentham and Hooker's system of classification with different plant families.
- 5) To understand the internal structure of root and stem.
- 6) To understand the anomalous secondary growth in stems and roots.
- 7) To study structure of stomata and types of stomata.
- 8) To understand palynology with respect to pollen morphology, pollen viability and germination and growth of pollen.
- 9) To know the applications palynology.

1. To get knowledge about the plant diversity with respect to vascular plants.
2. To get knowledge of structural variations with respect to tissues and pollen grains.
3. To get the knowledge about structure and types of stomata.
4. To apply the knowledge of palynology.

	<p>USBO503 FORM AND FUNCTION III (Cytology and Molecular Biology, Physiology I, Environmental Botany and Biostatistics)</p>	<p>On completion of the course, students are able to:</p> <ol style="list-style-type: none"> 1) To understand the structure and functions of nucleus and vacuole. 2) Learn and understand about mineral nutrition in plants. 3) To understand the process of translation in prokaryotes and eukaryotes. 4) Understand the growth and developmental processes in plants. 5) Know about importance of water and minerals, and transport of water and minerals. 6) Understand the process of translocation of solutes in plants. 7) To study the role of growth regulating substances in plants. 8) To understand the concepts of bioremediation, biomagnifications, bioaccumulation and biotransformation. 9) To know about phytoremediation. 10) To understand the biostatistics. 	<ol style="list-style-type: none"> 1. To get the knowledge of cell organelles and genetic code at molecular level. 2. To study the importance of water and minerals, transport of water and food. 3. To get knowledge of plant growth and factors affecting the growth. 4. To study effect of pollution on environment and its control measures. 5. To get knowledge of statistical techniques of analysis of biological data.
	<p>USBO504 CURRENT TRENDS IN PLANT SCIENCES II</p> <p>(Food as Medicine and Nutrition and the Mushroom Industry, Plant Tissue Culture,</p>	<ol style="list-style-type: none"> 1) Understand the concept of antioxidant and dietary antioxidants. 2) To learn about the role of food as a medicine. 3) To know about different practices in mushroom industries. 4) To study technique of plant tissue culture with respect to floriculture and production of secondary metabolites. 5) To learn about somatic embryogenesis and artificial seeds. 6) To study the protoplast fusion and somatic hybridization. 	<ol style="list-style-type: none"> 1. To acquire the knowledge of nutritional factor and its role as medicine in different disorders. 2. Application of plant science in

	Instrumentation and Pharmacognosy and Medicinal Botany)	<p>7) To understand the working, principle and applications of Colorimetry and Spectrophotometry.</p> <p>8) To study the technique of Column , Ion – Exchange and HPLC Chromatography.</p> <p>9) To study the cultivation practices of medicinal plants.</p> <p>10) To study the monographs of drugs.</p>	<p>mushroom industry.</p> <ol style="list-style-type: none"> 3. Application of tissue culture in different industries. 4. To get the knowledge of various techniques and instruments used in plant analysis. 5. To acquire knowledge of commercial cultivation of different medicinal plants and monographs of drugs.
Semester VI T.Y.B.Sc.	USBO601PLANT DIVERSITY III (Bryophyta, Pteridophyta, Plant Biotechnology I and Plant Biotechnology II)	<ol style="list-style-type: none"> 1)To study the life cycle of <i>Marchantia</i> bryophyta. 2) To study the evolution of sporophyte and gametophyte in bryophyta. 3) To study the construction of genomic, Chromosome and c-DNA libraries. 4) To study the analysis of gene and gene transcripts and hybridization technique 5) to understand the DNA sequence analysis, Polymerase chain reaction and DNA barcoding. 	<ol style="list-style-type: none"> 1. To get knowledge of plant diversity with respect to cryptogams. 2. To acquire knowledge of recent advances in molecular genetics.
	USBO602PLANT DIVERSITY IV (Gymnosperms, Angiosperms, Anatomy and Embryology)	<p>On completion of the course, students are able to:</p> <ol style="list-style-type: none"> 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 systematic. 	<ol style="list-style-type: none"> 1. To get knowledge of plant diversity with respect to flowering plants and taxonomic

	<p>4) Understand the Phylogeny of angiosperms -A general account of the origin of Angiosperms.</p> <p>5) Understand the general range of variations in the group of angiosperms.</p> <p>6) Trace the history of development of systems of classification emphasizing angiospermic taxa.</p> <p>7) To learn the wide activities in angiosperm and trends in classification.</p> <p>8) Learn about the characters of biologically important families of angiosperms.</p> <p>9) Know the floral variations in angiospermic families, their phylogeny and evolution.</p> <p>10) Understand various rules, principles and recommendations of plant nomenclature produces in plant identification.</p> <p>11) Understand major evolutionary trends in various parts of angiospermic plants</p> <p>12) Know the methods of pollination and fertilization.</p> <p>13) Know fertilization, endosperm and embryogeny.</p> <p>14) Understand the Anatomy of plant with, respect to ecology.</p> <p>15) To study Mispороgenesis, megasporogenesis and types of ovules.</p> <p>16) To learn about double fertilization and development of embryo.</p>	<p>literature.</p> <p>2. To study diversity in ecological anatomy and embryology.</p>
<p>USBO603FORM AND FUNCTION III (Physiology, Genetics, Bioinformatics and Herbal Cosmetology)</p>	<p>1) To study the structure of biomolecules,</p> <p>2) To study the naomenclature, classification and mode of action of enzyme.</p> <p>3) To understand the nitrogen metabolism.</p> <p>4) To understand methods of genetic mapping.</p> <p>5) To study the gene mutation on molecular level.</p> <p>6) To study about metabolic disorders in human being.</p> <p>7) To know about biological data, databases and to use the soft tools for data analysis and interpretation</p> <p>8) To study the organization of biological data, protein structure analysis and phylogenetic analysis.</p> <p>9) To study of plant antioxidants</p> <p>10) To understand applications of herbs in the herbal cosmetics.</p>	<p>1. To study different biomolecules, enzymes and steps in nitrogen metabolism.</p> <p>2. To acquire knowledge of genetic mapping, changes in gene sequences and metabolic disorders.</p> <p>4. To get knowledge of biological data, databases and to use</p>

		<p>the soft tools for data analysis and interpretation.</p> <p>3. To apply the knowledge of plants in cosmetology.</p>
<p>USBO604 CURRENT TRENDS IN PLANT SCIENCES II (Ethnobotany and aesthetic botany, plant Geography, Economic Botany and post harvest technology)</p>	<ol style="list-style-type: none"> 1) To understand term Ethnobotany. 2) To understand methods of study of Ethnobotany and applications of Ethnobotany. 3) To study the aesthetic botany with respect to bonsai, Ikebana and Flower arrangement. 4) To study the phytogeographical regions of India. 5) To study biodiversity of India and different aspects of biodiversity. 6) To study of essential oil, fatty oils and vegetable fats. 7) To understand post harvest technology. 8) To study methods of storage of plant produce. 9) To study different types of preservation of fruits and vegetables. 	<ol style="list-style-type: none"> 1. To study the methods of data generation at historical and community level. 2. Use of plants aesthetically to get self employment. 3. To study the methods of storage and preservation of fruits and vegetables for economic gain. 4. To study the methods of extraction of volatile and fatty oils. 5. To study distribution of plants and their diversity in India.

Zoology Department

1. To nurture interest in the students for the subject of Zoology\
2. To create awareness of the basic and modern concept of Zoology.
3. To orient students about the importance of biotic and abiotic factors of environment and their conservation.
4. To provide an insight to the basic nutritional and health aspects of human life.
5. To inculcate good lab practices in students and to train them about scientific handling of important instruments.

Department of Zoology

Class	Course/Co urse Code/Title	Course Objective	Course Outcome
F.Y.B.Sc.	Zoology Course I (USZO101) Sem I	<u>Unit I</u> Wonders of Animal world To take learners through a captivating journey of hoarded wealth marvelous animal world.	Curiosity will be ignited in the mind of learners, to know more about fascinating world of animals which would enhance their interest and love for the subject of Zoology.
		<u>Unit II</u> Biodiversity and its conservation To orient learners about rich heritage of biodiversity of India and make them understand significance of its conservations	Learners would appreciate treasure of biodiversity, its importance and hence contribute their best for its conservation.
F.Y.B.Sc		<u>Unit III</u> Footsteps to follow To teach learners about innovative and novel work of scientist/Philosopher/entrepreneurs in the field of biological sciences.	Minds of the learners would be impulsed to think differently and would be encourage ipso facto to their original crude ideas from the field of biological sciences.
	Zoology Course II (USZO102) Sem I	<u>Unit I</u> Laboratory safety units and measurements To make learners aware of risk involved in handling of different hazardous chemicals, sensitive instruments and infectious biological specimens during practical sessions in the laboratory and to train them to avoid mishap.	Learners would work safely in the laboratory and avoid occurrence of accident which will boost their scholastic performance and economy in use of materials/chemicals during practical sessions.

F.Y.B.Sc		<p style="text-align: center;"><u>Unit II</u></p> <p>Animal Biotechnology To acquaint learners to the modern developments and concept of Zoology highlighting their applications aiming for the benefit of human being.</p>	Learners would understand recent advances in the subject and their applications for betterment of mankind and that the young minds would be tuned to think out of the box.
		<p style="text-align: center;"><u>Unit III</u></p> <p>Instrumentation To provide all learners a complete insight about the structure and train them with operational skills of different instruments required in Zoology.</p>	Students will be skilled to select and operate suitable instruments for the studies of different components of Zoology of this course and also of higher classes including research.
	Zoology Course III (USZO201) Sem II	<p style="text-align: center;"><u>Unit I</u></p> <p>Population ecology To facilitate the learning of population ecology its dynamics and regulatory factors important for their sustenance.</p>	This unit would allow learners to study about nature of animal population, specific factors affecting its growth and its impact on the population of other life forms.
		<p style="text-align: center;"><u>Unit II</u></p> <p>Ecosystem To impart knowledge of different components of ecosystem and educate about essentials of coexistence of human being with all other living organisms.</p>	Learners will grasp the concept of interdependence and interaction of physical, chemical and biological factors in the environment and will lead to better understanding about implications of loss of fauna specifically on human being, erupting a desire for conservation of all flora and fauna.
		<p style="text-align: center;"><u>Unit III</u></p> <p>National parks and sanctuaries of India To enlighten learners about the current status about wildlife conservation in India in the light of guidelines from different relevant governing agencies vis-à-vis with adversity of poaching and biopiracy.</p>	Learners would be inspired to choose career options in the field of wildlife conservation, research, photography and ecotourism.

	Zoology Course IV (USZO202) Sem II	<p style="text-align: center;"><u>Unit I</u></p> <p>Nutrition and Health To make learners understand the importance of balanced diet and essential nutrients of food at different stages of life.</p>	Healthy dietary habits would be inculcated in the lifestyle of learners in order to prevent risk of developing health hazards in younger generation due to faulty eating habits.
F.Y.B.Sc		<p style="text-align: center;"><u>Unit II</u></p> <p>Public health and hygiene To impart knowledge about source quantum and need for conservation of fast depleting water resources and essentials of maintaining proper sanitation, hygiene and optimizing use of electronic gadgets.</p>	Promoting optimum conservation of water, encouragement for maintaining adequate personal hygiene, optimum use of electronic gadgets, avoiding addiction, thus facilitating achievement of the goal of healthy young India in true sense.
		<p style="text-align: center;"><u>Unit III</u></p> <p>Common human diseases and disorders To educate learners about causes, symptoms and impact of stress related disorders and infectious diseases.</p>	Learners would be able to promptly recognise stress related problems at the initial stages and would be able to adopt relevant solutions which would lead to psychologically strong mind set promoting positive attitude important for academics and would be able to acquire knowledge of cause, symptoms and precautions of infectious diseases.

Department of Chemistry

To infuse in the learner a spirit of inquiry into the fundamental aspects of the various core areas of Chemistry.

- 2) To make the learner proficient in analysing the various observations and chemical phenomena presented to him during the course.
- 3) To make the learner capable of solving problems in the various units of this course
- 4) To give the learner an opportunity to get hands on experience of the various concepts and processes in the various branches of chemistry
- 5) To impart various skills of handling chemicals, reagents, apparatus, instruments and the care and safety aspects involved in such handling
- 6) To make the learner capable of analysing and interpreting results of the experiments he conducts or performs

REGULATIONS

1. Preamble and objectives of the Course :

In the first two semesters of the six semester graduation program of B. Sc.(Chemistry) the learner was introduced to some basic aspects in the various core branches of chemistry like Physical Chemistry, Organic chemistry and Inorganic chemistry. Concepts about the structure of atom, distribution of electrons, Thermodynamics, Formation of organic compounds and basic ideas in reactivity of molecules in general and organic compounds in particular were introduced to the learner. He was made inquisitive about why and how should atoms combine to give molecules or ions. The non-orbital approach to appreciating the shapes of polyatomic species in general and molecules in particular.

The story of chemistry is taken further in the coming two semesters of the second year of the B. Sc. (Chemistry) Program. However it is also realised that some students opting for the course on Chemistry may not continue with the subject subsequently as such the syllabus is designed to retain the interest of the serious learner of chemistry as well as be helpful to non-chemistry learners. With such students who would want to pursue other branches of science but would want to acquire a basic appreciation and experience of chemistry a separate paper (Paper-III) is designed. This paper along with the laboratory session unit that goes with it deals with the basics of chemical analysis, separating components from a given sample, basic concepts like pH, experimental techniques like Titrimetry, Gravimetry, using instruments to carry out analysis, the various techniques like chromatography, electrophoresis, Instrumentation in general is felt to be of interest to learners of various branches like physics, botany, zoology, and microbiology.

The major objectives of B.Sc. Chemistry course are

- To infuse in the learner a spirit of inquiry into the fundamental aspects of the various core areas of Chemistry.

- To make the learner proficient in analysing the various observations and chemical phenomena presented to him during the course.
- To make the learner capable of solving problems in the various units of this course
- To give the learner an opportunity to get hands on experience of the various concepts and processes in the various branches of chemistry
- To impart various skills of handling chemicals, reagents, apparatus, instruments and the care and safety aspects involved in such handling

- To make the learner capable of analysing and interpreting results of the experiments he conducts or performs
- To make the learner capable of acquiring or pursuing a source of livelihood like jobs in chemical industry
- To arouse the interest to pursue higher levels of learning in chemistry,

Department of Chemistry

Class	Course/Course Code/Title	Course Objective	Course Outcome
F.Y.B.Sc ..	Chemistry -I USCH101/201	Introduction to some basic aspects in the various core branches of chemistry like Physical Chemistry, Organic chemistry and Inorganic chemistry. Introduction to the concepts about the structure of atom, distribution of electrons, Thermodynamics, Formation of organic compounds	Knowledge of basic Aspects in Physical, Inorganic and Organic Chemistry. Knowledge of various concepts about structure of Atom, Thermodynamics
	Chemistry -II USCH102/202	Introduction to basic ideas in reactivity of molecules in general and organic compounds in particular . Concept about why and how should atoms combine to give molecules or ions. The non-orbital approach to appreciating the shapes of polyatomic species in general and molecules in particular	Knowledge of basic ideas in reactivity of organic compounds Knowledge of basic concept about why and how atoms combine to give molecules and non-orbital approach To shapes of polyatomic molecules.

Department of Chemistry

Class	Course/Course Code/Title	Course Objective	Course Outcome
S.Y.B.Sc ..	Chemistry -I USCH301/401	Introduction to some basic aspects in the various core branches of chemistry like Physical Chemistry, Organic chemistry and Inorganic chemistry. Introduction to the concepts about the structure of atom, distribution of electrons, Thermodynamics, Formation of organic compounds	Knowledge of basic Aspects in Physical, Inorganic and Organic Chemistry. Knowledge of various concepts about structure of Atom, Thermodynamics

	Chemistry -II USCH302/402	Introduction to basic ideas in reactivity of molecules in general and organic compounds in particular . Concept about why and how should atoms combine to give molecules or ions. The non-orbital approach to appreciating the shapes of polyatomic species in general and molecules in particular	Knowledge of basic ideas in reactivity of organic compounds Knowledge of basic concept about why and how atoms combine to give molecules and non-orbital approach To shapes of polyatomic molecules.
	Chemistry -III USCH303/403	Introduction to basics of chemical analysis, separating components from a given sample, basic concepts like pH, experimental techniques like Titrimetry, Gravimetry, using instruments to carry out analysis, the various techniques like chromatography, electrophoresis,	Knowledge of basic ideas of chemical analysis. Knowledge of basic concepts like titrimetry, gravimetry . Knowledge of using instruments to carry out analysis, the various techniques like chromatography, electrophoresis.

□□□To infuse in the learner a spirit of inquiry into the fundamental aspects of the various core areas of Chemistry.

- 2) To make the learner proficient in analysing the various observations and chemical phenomena presented to him during the course.
- 3) To make the learner capable of solving problems in the various units of this course
- 4) To give the learner an opportunity to get hands on experience of the various concepts and processes in the various branches of chemistry
- 5) To impart various skills of handling chemicals, reagents, apparatus, instruments and the care and safety aspects involved in such handling
- 6) To make the learner capable of analysing and interpreting results of the experiments he conducts or performs

REGULATIONS

1. Preamble and objectives of the Course :

In the first two semesters of the six semester graduation program of B. Sc.(Chemistry) the learner was introduced to some basic aspects in the various core branches of chemistry like Physical Chemistry, Organic chemistry and Inorganic chemistry. Concepts about the structure of atom, distribution of electrons, Thermodynamics, Formation of organic compounds and basic ideas in reactivity of molecules in general and organic compounds in particular were introduced to the learner. He was made inquisitive about why and how should atoms combine to give molecules or ions. The non-orbital approach to appreciating the shapes of polyatomic species in general and molecules in particular.

The story of chemistry is taken further in the coming two semesters of the second year of the B. Sc. (Chemistry) Program. However it is also realised that some students opting for the course on Chemistry may not continue with the subject subsequently as such the syllabus is

designed to retain the interest of the serious learner of chemistry as well as be helpful to non-chemistry learners. With such students who would want to pursue other branches of science but would want to acquire a basic appreciation and experience of chemistry a separate paper (Paper-III) is designed. This paper along with the laboratory session unit that goes with it deals with the basics of chemical analysis, separating components from a given sample, basic concepts like pH, experimental techniques like Titrimetry, Gravimetry, using instruments to carry out analysis, the various techniques like chromatography, electrophoresis, Instrumentation in general is felt to be of interest to learners of various branches like physics, botany, zoology, and microbiology.

The major objectives of B.Sc. Chemistry course are

- To infuse in the learner a spirit of inquiry into the fundamental aspects of the various core areas of Chemistry.
- To make the learner proficient in analysing the various observations and chemical phenomena presented to him during the course.
- To make the learner capable of solving problems in the various units of this course
- To give the learner an opportunity to get hands on experience of the various concepts and processes in the various branches of chemistry
- To impart various skills of handling chemicals, reagents, apparatus, instruments and the care and safety aspects involved in such handling
- To make the learner capable of analysing and interpreting results of the experiments he conducts or performs
- To make the learner capable of acquiring or pursuing a source of livelihood like jobs in chemical industry
- To arouse the interest to pursue higher levels of learning in chemistry,

Department of Chemistry

Class	Course/Course Code/Title	Course Objective	Course Outcome
T.Y.B.Sc.	Chemistry -I USCH501/601	Introduction to the concepts about Thermodynamics, kinetics, Surface chemistry, nuclear chemistry, spectroscopy Electrochemistry. Introduction to the concepts of quantum chemistry, polymer chemistry	Knowledge of basic Aspects in Physical chemistry. Knowledge of solving problems in the various units of this course Knowledge of various concepts about structure of Atom, Thermodynamics
	Chemistry -II USCH502/602	Introduction to the theories of metal-Ligand bond, metal-complexes, organometallic chemistry, metallurgy. Introduction to the bioinorganic Chemistry, solid state chemistry, Molecular symmetry.	Knowledge of molecular orbital theory. Knowledge of basic concept about inorganic preparation. Knowledge of basic concept of metal-complexes

		Introduction to the comparative study of group 16 & 17, superconductivity.	
	Chemistry -III USCH503/603	Introduction to the concepts of mechanism of chemical reaction, Stereochemistry, synthesis of organic compounds, spectroscopy, IUPAC nomenclature. Introduction to the concepts of natural products	Knowledge of basic ideas of synthesis of organic compounds, Knowledge of basic concepts like nomenclature. Knowledge of carry out analysis, the various techniques like chromatography,

Department of Chemistry

Class	Course/Course Code/Title	Course Objective	Course Outcome
T.Y.B.Sc.	Chemistry -IV USCH504/604	Introduction to quality concepts and chemical calculations Introduction to the classical methods of analysis. Introduction to the methods of separation. Introduction to the analysis of food and cosmetics.	Knowledge of basic Aspects in chemical calculations and quality . Knowledge of various methods of analysis and methods of separation. Knowledge of methods of analysis of cosmetics.
	Chemistry Applied component	Introduction to the different types of drugs and dyes. Introduction to the nanoparticles in medicinal chemistry. Introduction to the health and Environmental Hazards of synthetic dyes and their remedial processes.	Knowledge of preparation of drugs and dyes. Knowledge of basic concept about why and how atoms combine to give molecules and non-orbital approach To shapes of polyatomic molecules.

Department of Physics

Class	Course/Course Code/Title	Course Objective	Course Outcome
F.Y.B.Sc. Semester I	Classical Physics USPH101	<p>To develop analytical abilities towards real world problems</p> <p>To familiarize with current and recent scientific and technological developments</p> <p>To enrich knowledge through problem solving, hands on activities, study visits, projects etc.</p>	<ol style="list-style-type: none"> 1. Understand Newton's laws and apply them in calculations of the motion of simple systems. 2. Use the free body diagrams to analyze the forces on the object. 3. Understand the concepts of friction and the concepts of elasticity, fluid mechanics and be able to perform calculations using them. 4. Understand the concepts of lens system and interference. 5. Apply the laws of thermodynamics to formulate the relations necessary to analyze thermodynamic process. 6. Demonstrate quantitative problem solving skills in all the topics covered

			<p>After successful completion of this course students will be able to</p> <ol style="list-style-type: none"> 1. Understand nuclear properties and nuclear behavior. 2. Understand the type isotopes and their applications. 3. Demonstrate and understand the quantum mechanical concepts. 4. Demonstrate quantitative problem solving skills in all the topics covered.
	Modern Physics USPH102		
	Practical USPHP1		<ol style="list-style-type: none"> 1. To demonstrate their practical skills. 2. To understand and practice the skills while doing physics practical 3. To understand the use of apparatus and their use without fear. 4. To correlate their physics theory concepts through practical 5. Understand the concepts of errors and their estimation
F.Y.B.Sc. Semester II	Mathematical Physics USPH201		<p>On successful completion of this course students will be able to:</p> <ol style="list-style-type: none"> 1. Understand the basic mathematical concepts and applications of

			<p>them in physical situations.</p> <p>2. Demonstrate quantitative problem solving skills in all the topics covered</p>
	Electricity and electronics USPH202		
	Practical USPHP2		<ol style="list-style-type: none"> 1. To demonstrate their practical skills. 2. To understand and practice the skills while doing physics practical 3. To understand the use of apparatus and their use without fear. 4. To correlate their physics theory concepts through practical 5. Understand the concepts of errors and their estimation
S.Y.B.Sc. Semester III	Mechanics and Thermodynamics USPH301	<p>Upon completion of the course, students should have acquired the following knowledge and skills:</p> <ol style="list-style-type: none"> 1. a thorough quantitative and conceptual understanding of the core areas of physics, including mechanics, , thermodynamics, quantum mechanics, electronics at a level compatible with graduate programs in 	<p>Paper I</p> <p>On successful completion of this course, students will be able to :</p> <ol style="list-style-type: none"> i) Understand the concepts of mechanics & properties of matter & to apply them to problems. ii) Comprehend the basic concepts of thermodynamics & its applications in physical situation. iii) Learn about situations in

		<p>physics at peer institutions.</p> <p>2. the ability to analyze and interpret quantitative results, both in the core areas of physics and interdisciplinary areas.</p> <p>3. the ability to use contemporary experimental apparatus and analysis tools to acquire, analyze and interpret scientific data.</p> <p>4. the ability to apply the principles of physics to solve new and unfamiliar problems.</p> <p>5. the ability to communicate scientific results effectively in presentations or posters.</p>	<p>low temperature.</p> <p>iv) Demonstrate tentative problem solving skills in all above areas</p>
	<p>Vector Calculus, Analogue Electronics USPH302</p>		<p>Paper II</p> <p>On successful completion of this course students will be able to :</p> <p>1) Understand the basic concepts of mathematical physics and their applications in physical situations.</p> <p>2) Understand the basic laws of electrodynamics and be able to perform calculations using them.</p> <p>3) Understand the basics of transistor biasing, operational amplifiers, their applications</p> <p>4) Understand the basic</p>

			<p>concepts of oscillators and be able to perform calculations using them.</p> <p>5) Demonstrate quantitative problem solving skill in all the topics covered.</p>
	<p>Applied Physics I USPH303</p>		<p>Paper III</p> <p>On completion of this, it is expected that</p> <p>i) Students will be exposed to contextual real life situations.</p> <p>ii) Students will appreciate the role of Physics in 'interdisciplinary areas related to materials, Bio Physics, Acoustics etc.</p> <p>iii) The learner will understand the scope of the subject in Industry & Research.</p> <p>iv) Experimental learning opportunities will foster creative thinking & a spirit of inquiry</p>
	<p>Practical Course 3 USPHP3</p>		
<p>S.Y.B.Sc. Semester IV</p>	<p>Optics and Digital Electronics USPH401</p>		<p>On successful completion of this course students will be able to :</p> <p>1) Understand the diffraction and polarization processes and applications of them in physical situations.</p> <p>2) Understand the applications of interference in design and working of interferometers.</p> <p>3) Understand the resolving power of different optical</p>

			instruments.\n 4) Understand the working of digital circuits 5) Use IC 555 timer for various timing applications. 6) Demonstrate quantitative problem solving skills in all the topics covered.
	Quantum Mechanics USPH402		On successful completion of this course students will be able to : 1) Understand the postulates of quantum mechanics and to understand its importance in explaining significant phenomena in Physics. 2) Demonstrate quantitative problem solving skills in all the topics covered.
	Applied Physics II USPH403		On successful completion of this course, students will be able to : i) Understand the concepts of mechanics & properties of matter & to apply them to problems. ii) Comprehend the basic concepts of thermodynamics & its applications in physical situation. iii) Learn about situations in low temperature. iv) Demonstrate tentative problem solving skills in all above areas.
	Practical Course 4		
T.Y.B.Sc. Semester V	Mathematical, Thermal and Statistical Physics	1.	From this course, the students are expected to learn some mathematical

	USPH501		techniques required to understand the physical phenomena at the undergraduate level and get exposure to important ideas of statistical mechanics.
	Solid State Physics USPH502		<p>On successful completion of this course students will be able to:</p> <ol style="list-style-type: none"> 1. Understand the basics of crystallography, Electrical properties of metals, Band Theory of solids, demarcation among the types of materials, Semiconductor Physics and Superconductivity. 2. Understand the basic concepts of Fermi probability distribution function, Density of states, conduction in semiconductors and BCS theory of superconductivity. 3. Demonstrate quantitative problem solving skills in all the topics covered.
	Atomic and Molecular Physics USPH503		<ul style="list-style-type: none"> • .This course will be useful to get an insight into spectroscopy Upon successful completion of this course, the student will understand <ul style="list-style-type: none"> ▪ the application of quantum mechanics in atomic physics ▪ the importance of electron spin, symmetric and antisymmetric wave functions and vector atom model ▪ Effect of magnetic field on atoms and its

			<p>application</p> <ul style="list-style-type: none"> • Learn Molecular physics and its applications.
	<p>Electrodynamics USPH504</p>		<p>On successful completion of this course students will be able to :</p> <ol style="list-style-type: none"> 1) Understand the laws of electrodynamics and be able to perform calculations using them. 2) Understand Maxwell's electrodynamics and its relation to relativity 3) Understand how optical laws can be derived from electromagnetic principles. 4) Develop quantitative problem solving skills.
	<p>Practical Course USPHP05 USPHP06</p>		
	<p>Classical Mechanics USPH601</p>		<p>This course will introduce the students to different aspects of classical</p>

			<p>mechanics. They would understand the kinds of motions that can occur under a central potential and their applications to planetary orbits. The students should also appreciate the effect of moving coordinate system, rectilinear as well as rotating. The students are expected to learn the concepts needed for the important formalism of Lagrange's equations and derive the equations using D'Alembert's principle. They should also be able to solve simple examples using this formalism. The introduction to simple concepts from fluid mechanics and understanding of the dynamics of rigid bodies is also expected. Finally, they should appreciate the drastic effect of adding nonlinear corrections to usual problems of mechanics and nonlinear mechanics can help understand the irregularity we observe around us in nature.</p>
	<p>Electronics USPH602</p>		<p>On successful completion of this course students will be able to:</p> <ol style="list-style-type: none"> 2. Understand the basics of semiconductor devices and their applications. 3. Understand the basic concepts of operational amplifier: its prototype and

			<p>applications as instrumentation amplifier, active filters, comparators and waveform generation.</p> <p>4. Understand the basic concepts of timing pulse generation and regulated power supplies</p> <p>5. Understand the basic electronic circuits for universal logic building blocks and basic concepts of digital communication.</p> <p>Develop quantitative problem solving skills in all the topics covered.</p>
	<p>Nuclear Physics USPH603</p>		<ul style="list-style-type: none"> • Upon successful completion of this course, the student will be able to understand <ul style="list-style-type: none"> ▪ the fundamental principles and concepts governing classical nuclear and particle physics and have a knowledge of their applications ▪ interactions of ionizing radiation with matter ▪ the key techniques for particle accelerators ▪ the physical processes involved in nuclear power generation <p>Knowledge on elementary particles will help students to understand the fundamental constituents of matter and lay foundation for the understanding of unsolved questions about dark matter, antimatter and other research oriented topics</p>
	<p>Special Theory of Relativity USPH604</p>		<p>This course introduces students to the essence of special relativity which revolutionized the concept</p>

			<p>of physics in the last century by unifying space and time, mass and energy, electricity and magnetism. This course also give a very brief introduction of general relativity. After the completion of the course the student should be able to</p> <ul style="list-style-type: none"> i) understand the significance of Michelson Morley experiment and failure of the existing theories to explain the null result ii) understand the importance of postulates of special relativity , Lorentz transformation equations and how it changed the way we look at space and time, Absolutism and relativity , Common sense versus Einstein concept of Space and time. iii) understand the transformation equations for : Space and time, velocity , frequency , mass , momentum , force , Energy , Charge and current density , electric and magnetic fields . iv) solve problems based on length contraction , time dilation , velocity addition , Doppler effect , mass energy relation and resolve paradoxes in relativity like twin paradox etc.
	<p>USPHP07 & USPHP08</p>		

Department of Mathematics

Course Objective:

F.Y.B.Sc and S.Y. B.Sc. (Mathematics)

The Mathematics program promotes mathematical skills and knowledge for their intrinsic beauty, effectiveness in developing proficiency in analytical reasoning, and utility in modeling and solving real world problems. To responsibly live within and participate in the transformation of a rapidly changing, complex, and interdependent society, students must develop and unceasingly exercise their analytical abilities.

Students who have learned to logically question assertions, recognize patterns, and distinguish the essential and irrelevant aspects of problems can think deeply and precisely, nurture the products of their imagination to fruition in reality, and share their ideas and insights while seeking and benefiting from the knowledge and insights of others.

Analysis extends and refines calculus; it encompasses differentiation, integration, measure, limits, infinite series, and analytic functions, primarily in the context of real and complex number systems. In much of analysis, the emphasis is not on finding explicit solutions to specific problems, but rather on determining which problems can be solved and what general properties solutions may share. Ordinary and partial differential equations play a central role in analysis, and are widely used in modeling real-world systems

The course in pure mathematics goes on to graduate study in mathematics; the pathway emphasizes the importance of a well-rounded, in-depth mathematical education, and includes advanced coursework in algebra, analysis, and geometry.

The course in computational mathematics track explore applications of mathematics in other fields and gain experience in mathematical modeling of real-world phenomena using ordinary and partial differential equations, approximation and optimization techniques, linear programming, or game theory.

The syllabus provides best learning experience to the students as well as to the teachers by offering two interdisciplinary courses in Semesters III and IV of S.Y. B.Sc.

The interdisciplinary course offered in Semesters III is INTRODUCTION TO COMPUTING AND PROBLEM SOLVING - I. The Aim of this course is to develop Algorithm thinking towards problem solving. The interdisciplinary course offered in Semesters IV is INTRODUCTION TO COMPUTING AND PROBLEM SOLVING - II. In this course students are enabled to write their own Programs in Python. By this syllabus, the quality of

education offered to students is enhanced. This curriculum creates positive improvements in the educational system.

Mathematical and Statistical techniques (F.Y.B.Com.)

The main objective of the Mathematical and Statistical techniques course is to introduce mathematics and statistics to undergraduate students of commerce, so that they can use them in the field of commerce and industry to solve the real life problems as the application of Mathematics and Statistics are widely used in industry and business.

Computer Programming and System Analysis (Applied component at T.Y.B.Sc.)

Computer Science education and its curriculum development are going through some systemic challenges nowadays. There is a constant demand for offering a relevant and matching syllabus to reflect industry standards and job prospects. Rapid changes in information technology front make even the latest syllabus incomplete and the syllabus faces the risk of getting obsolete the moment of its introduction. In this co-evolutionary academic warfare, the learners and teachers have to regularly undergo many cycles of learn, unlearn and relearn. This whole process is all the more difficult and painful for the target group whose first vocation is not Computer Science.

The Course in database management system and SQL commands along with PL/SQL using Oracle gives the student mastery on an open source based toolkit, which has more scope in the job market. The course 'Introduction to C programming' in the Semester V is based on the fact that C still has the charm to be the first programming language to be taught. The introduction to Java programming is done through the framework of object oriented systems. Applets and Graphics programming give the learner an engaging and interesting treat. It has tried to give a new thrust and learner centered and learner controlled learning avenues.

BACHELOR OF MANAGEMENT STUDIES (B.M.S)

Programme Objectives

The objectives of the programme as cited by the University of Mumbai are as follows:

- a) To create for the students of University of Mumbai an additional avenue of self-employment and also to benefit industry by providing them with suitable trained person.
- b) To prepare students to exploit opportunities being newly created in the Management Profession.
- c) To provide adequate basic understanding about Management Education among the students.
- d) To give an adequate exposure to operational environment in the field of Management.
- e) To inculcate training in the use of the modern technology for the benefit of all parties concerned.

Department of Management Studies

CLASS	COURSE/ COURSE CODE	COURSE OBJECTIVES	COURSE OUTCOMES
FYBMS (SEM-I)	Introduction to Financial Accounts	1. To understand the basic concepts and fundamentals used in financial accounting. 2. To learn all the intricacies of corporate financial statements.	1. Clarity and understanding of the basic concepts of accounting and financial statements. 2. Ability to apply the principles and concepts of accounting in preparing the financial statements. 3. Ability to execute the accounting process- Recording-Classifying and Summarizing. 4. Understanding the use of accounting software.
	Business Law	1. To provide the brief idea about the frame work of Indian Business Laws. 2. To orient students, about the legal aspects of business. 3. To familiarize the students with case law studies related to Business Laws of Semester III and IV	1. Giving idea about the frame work of Indian Business Laws. 2. Orientation students, about the legal aspects of business. 3. Acquainting the students with case law studies related to Business Laws, labor laws.

	Business Statistics	<p>1.To know statistical techniques 2.To understand different statistical tools 3.To understand importance of decision support provided by analysis techniques 4.To appreciate and apply it in business situations using case lets, modeling, cases and projects 5.To understand Managerial applications of Statistics.</p>	<p>1. Learner will be able to apply these basic concepts in business situations, 2.Analyze charts graphs to analyze business situations 3.Understand the uncertainty in business situations as probability 4.Understand decision under risk, use of conditional expectation as basis for comparison</p>
	Business Communication - I	<p>1. In all social behavior, communication is essential in building and maintaining human relationships. 2.In business, communication is essential for the smooth and efficient conduct of day-to-day transactions/activities. 3In recent years the importance of communicationhas greatly increased as a result of the growing complexity of businesses,as also the impact of rapid industrialization, globalization and the advent of modern technologies. 4English being globally the language of Management, those with good communication skills in English enjoy a distinct advantage in their work and careers</p>	<p>1.Historical background and the development of communication; 1.Importance and role of communication in everyday life 2.Mechanics behind the communication process, difficulties experienced in communication 3.Different types of communication, impedance due to extraneous factors called “barriers” 4.Important non-verbal parameters in communication 5 .How to make your communication effective and attractive</p>
	Foundation Course - I	<p>i. To Develop a basic understanding about issues related to Human Rights of weaker sections, ecology, and science and technology. ii. To Gain an overview of significant skills required to address competition in career choices iii. To Appreciate the importance of developing a scientific temper towards technology and its use in everyday life</p>	<p>i. Understanding about issues related to Human Rights of weaker sections, ecology, and science and technology. ii. overview of significant skills required to address competition in career choices iii. Appreciation of the importance of developing a scientific temper towards</p>

			technology and its use in everyday life
	Foundation of Human Skills	<ol style="list-style-type: none"> 1. To Understand of Human Nature 2. To Introduction of Group Behaviour 3. To study Organizational Culture and Motivation at workplace 4. To study Organisational Change, Creativity and Development and Work Stress 	<ol style="list-style-type: none"> 1. Understanding of Human Nature 2. Introduction to Group Behaviour 3. Organizational Culture and Motivation at workplace 4. Organisational Change, Creativity and Development and Work Stress
	Business Economics-I	<ol style="list-style-type: none"> 1. This course is designed to equip the students with basic tools of economic theory and its practical applications 2 .The course aims at familiarizing the students with the understanding of the economic aspects of current affairs and thereby prepares them to analyse the market behaviour with economic way of thinking 3. In addition to providing an insight into application of economic principles in business decisions, it also intends to widen analytical ability of the students and to provide them a foundation for further study of economics 4. In order to make the study practical oriented, the paper requires discussion of some cases involving the use of concepts of business economics 	<ol style="list-style-type: none"> 1.The students should be able to decipher, analyse and apply the theory and practice of Managerial Economics 2.Students develop an understanding of a businessman need to locate various factors affecting demand of his product and plan marketing & business strategies accordingly. 3.Students develop an understanding of the practical application of law of demand 4.Students develop an understanding of the various concepts and its applications Students should understand the analytics of supply and demand and its various uses.

CLASS	COURSE/ COURSE CODE	COURSE OBJECTIVES	COURSE OUTCOMES
FYBMS (SEM- II)	Principles of Marketing	<p>1. To Introduction of Marketing concepts</p> <p>2 . To study concepts of Marketing Environment, Research and Consumer Behaviour</p> <p>3. To Study Marketing Mix concept</p> <p>4 To study concepts of Segmentation, Targeting and Positioning and Trends In Marketing</p>	<p>1. Students will develop basic understanding of concepts in the marketing with respect to historical development of the subject</p> <p>2 .Makingstudents familiar with TheFundamental concepts and vocabulary or practices from business perspective inthe Organization.</p> <p>3.Understandingof TheMarketing environment to help students to compare variousopportunities available in various sectors.</p> <p>4.To familiarize students with Variousconcepts relatedto market Researchandits utility.</p> <p>5. Helping students to focus on Important issues Relatedtosuccess in consumer buyingbehavioural process vis a visorganizationalbuying behaviour process.</p> <p>6. Understandingmechanism of developing a new product related process</p>
	Industrial Law	1.To Study Laws Related to Industrial Relations and Industrial Disputes	1.Understaning Laws Related to Industrial Relations and Industrial

		<p>2.To Study Laws Related to Health, Safety and Welfare</p> <p>3.To Study Social Legislation</p> <p>4.To Study Laws Related to Compensation Management</p>	<p>Disputes</p> <p>2.Understanding Laws Related to Health, Safety and Welfare</p> <p>3.Understanding Social Legislation</p> <p>4.Understanding Laws Related to Compensation Management</p>
	Business Mathematics	<p>1. To Study Elementary Financial Mathematics</p> <p>2.To Study Matrices and Determinants</p> <p>3 . To Study Derivatives and Applications of Derivatives</p> <p>4.To Study Numerical Analysis [Interpolation]</p>	<p>1. Understanding Elementary Financial Mathematics</p> <p>2.Understanding Matrices and Determinants</p> <p>3 . Understanding Derivatives and Applications of Derivatives</p> <p>4.Understanding Numerical Analysis [Interpolation]</p>
	Business Communication - II	<p>1. In all social behavior, communication is essential in building and maintaining human relationships.</p> <p>2. In business, communication is essential for the smooth and efficient conduct of day-to-day transactions/activities.</p> <p>3In recent years the importance of communication has greatly increased as a result of the growing complexity of businesses, as also the impact of rapid industrialization, globalization and the advent of modern technologies.</p> <p>4 English being globally the language of Management, those with good communication skills in English enjoy a distinct advantage in their work and careers</p>	<p>1.Historical background and the development of communication;</p> <p>1.Importance and role of communication in everyday life</p> <p>2.Mechanics behind the communication process, difficulties experienced in communication</p> <p>3.Different types of communication, impedance due to extraneous factors called “barriers”</p> <p>4.Important non-verbal parameters in communication</p> <p>5 .How to make your communication effective and attractive</p>
	Foundation Course - II	<p>1.To study Globalisation and Indian Society</p> <p>2. To study Human Rights</p> <p>3. To study Ecology</p>	<p>1. Understanding Globalisation and Indian Society</p> <p>2. Understanding Human</p>

		4 . To study Understanding Stress and Conflict 5. To study Managing Stress and Conflict in Contemporary Society	Rights 3. Understanding Ecology 4 .Understanding Stress and Conflict 5.Managing Stress and Conflict in Contemporary Society
	Business Environment	1. To study Introduction to Business Environment 2. To study Political and Legal environment 3. To study Social and Cultural Environment, Technological environment andCompetitive Environment 4. To study International Environment	1. To understand Introduction to Business Environment 2. To understand Political and Legal environment 3. To study Social and Cultural Environment, Technological environment andCompetitive Environment 4. To understand International Environment
	Principles of Management	1. To study Nature of Management 2. To study concept of Planning and Decision Making 3. To study concept of Organising 4. To study Directing, Leadership, Co-ordination and Controlling concepts.	1.Understanding Nature of Management 2.Understanding Planning and Decision Making 3. UnderstandingOrganising 4.Understanding Directing, Leadership, Co-ordination and Controlling

CLASS	COURSE/ COURSE CODE	COURSE OBJECTIVES	COURSE OUTCOMES
SYBMS (SEM- III)	Basics of Financial Services	1.The course aims at explaining the core concepts of business finance and its importance in managing a business 2.The objectives of develop a conceptual frame work of finance function and to acquaint the participants with the tools, types, instruments of financial systemin the realm of Indian Financial Market	1. Understanding the core concepts of business finance and its importance in managing a business 2.The development a conceptual frame work of finance function and to acquaint the participants with the tools, types, instruments of financial systemin the realm of Indian Financial Market

	Introduction to Cost Accounting	<p>1.This course exposes the students to the basic concepts and the tools used in Cost Accounting</p> <p>2.To enable the students to understand the principles and procedure of cost accounting and to apply them to different practical situations</p>	<p>1. Exposing the basic concepts and the tools used in Cost Accounting</p> <p>2. Understanding the principles and procedure of cost accounting and to apply them to different practical situations</p>
	Consumer Behaviour	<p>1.The basic objective of this course is to develop an understanding about the consumer decision making process and its applications in marketing function of firms</p> <p>2.This course is meant to equip undergraduate students with basic knowledge about issues and dimensions of Consumer Behaviour.</p> <p>3.Students are expected to develop the skill of understanding and analysing consumer information and using it to create consumer-oriented marketing strategies</p>	<p>1. Understanding about the consumer decision making process and its applications in marketing function of firms</p> <p>2. Understanding basic knowledge about issues and dimensions of Consumer Behaviour.</p> <p>3.Development of the skill of understanding and analysing consumer information and using it to create consumer-oriented marketing strategies.</p>
	Advertising	<p>1.To understand and examine the growing importance of advertising</p> <p>2.To understand the construction of an effective advertisement</p> <p>3.To understand the role of advertising in contemporary scenario</p> <p>4.To understand the future and career in advertising.</p>	<p>1. Understanding and examining the growing importance of advertising</p> <p>2. Understanding the construction of an effective advertisement</p> <p>3. Understanding the role of advertising in contemporary scenario</p> <p>4. Understanding the future and career in advertising.</p>
	Recruitment & Selection	<p>1.The objective is to familiarize the students with concepts and principles, procedure of Recruitment and Selection in an organization.</p> <p>2.To give an in depth insight into various aspects of Human Resource management and make them acquainted with practical aspect of the subject.</p>	<p>1. familiarizing the students with concepts and principles, procedure of Recruitment and Selection in an organization.</p> <p>2. Give an in depth insight into various aspects of Human Resource management and make them acquainted with practical aspect of the subject.</p>

Motivation and Leadership	<p>1.To gain knowledge of the leadership strategies for motivating people and changing organizations</p> <p>2.To study how leaders facilitate group development and problem solving and work through problems and issues as well as transcend differences</p> <p>3.To acquaint the students about practical approaches to Motivation and Leadership & its application in the Indian context</p>	<p>1.Gaining knowledge of the leadership strategies for motivating people and changing organizations</p> <p>2. Facilitating group development and problem solving and work through problems and issues as well as transcend differences</p> <p>3. Giving students about practical approaches to Motivation and Leadership & its application in the Indian context</p>
Information Technology in Business Management - I	<p>1.To learn basic concepts of Information Technology, its support and role in Management, for managers</p> <p>2.Module II comprises of practical hands on training required for office automation. It is expected to have practical sessions of latest MS-Office software</p> <p>3.To understand basic concepts of Email, Internet and websites, domains and security therein</p> <p>4.To recognize security aspects of IT in business, highlighting electronic transactions, advanced security features</p>	<p>1.To know data analysis and database management with Microsoft Excel</p> <p>2.To know management of data using Microsoft Access</p> <p>3.To know how to prepare interactive business presentation</p>
Foundation Course (Environmental Management) - III	<p>1.To understand basic Environmental Concepts</p> <p>2.To study causes of Environment degradation</p> <p>3.To study Sustainability and role of business</p> <p>4.To understand importance Innovations in business- an environmental Perspective</p>	<p>1.Understanding basic Environmental Concepts</p> <p>2. Understanding causes of Environment degradation</p> <p>3. Understanding Sustainability and role of business</p> <p>4. Understanding importance Innovations in business- an environmental Perspective</p>
Business Planning & Entrepreneurial Management	<p>1. Entrepreneurship is one of the major Focus areas of the discipline of Management. This course introduces Entrepreneurshi</p>	<p>1.This course introduces Entrepreneurship to budding managers.</p> <p>2. Development of</p>

		<p>pto budding managers.</p> <p>2.To development entrepreneurs&to prepare studentstotaketheresponsibility of full line of management function of a company with special reference to SME sector.</p>	<p>entrepreneurs&to prepare studentstotaketheresponsibility of full line of management function of a company with special reference to SME sector.</p>
	Accounting for Managerial Decisions	<p>1.To acquaint management learners with basic accounting fundamentals.</p> <p>2.To develop financial analysis skills among learners.</p> <p>3.The course aims at explaining the core concepts of business finance and its importance in managing a business</p>	<p>1. Understanding basic accounting fundamentals.</p> <p>2. Development of financial analysis skills among learners.</p> <p>3. Understanding the core concepts of business finance and its importance in managing a business</p>
	Strategic Management	<p>1. The objective of this course is to learn the management policies and strategies at every Level to develop conceptual skills in this area as well as their application in the corporate world.</p> <p>2.The focus is to critically examine the management of the entire enterprise from the Top Management view points.</p> <p>3. This course deals with corporate level Policy & Strategy formulation areas.</p> <p>4. This course aims to developing conceptual skills in this area as well as their application in the corporate world.</p>	<p>1. Understanding the management policies and strategies at every Level to develop conceptual skills in this area as well as their application in the corporate world.</p> <p>2. Examining the management of the entire enterprise from the Top Management view points.</p> <p>3. Understanding corporate level Policy & Strategy formulation areas.</p> <p>4. Development of conceptual skills in this area as well as their application in the corporate world.</p>

CLASS	COURSE/ COURSE CODE	COURSE OBJECTIVES	COURSE OUTCOMES
SYBMS (SEM- IV)	Financial Institutions & Markets	<p>1. The Course aims at providing the students basic knowledge about the structure, role and functioning of financial institutions and markets in the financial system in India.</p>	<p>1. Understanding about the structure, role and functioning of financial institutions and markets in the financial system in</p>

		2.To inculcate understanding relating to managing of financial system	India. 2. Understanding how to managing of financial system.
Strategic Cost Management		1.Learners should develop skills of analysis, evaluation and synthesis in cost and management accounting 2.The subject covers the complex modern industrial organizations within which the various facets of decision-making and controlling operations take place.	1.Developing skills of analysis, evaluation and synthesis in cost and management accounting 2.Understanding various facets of decision-making and controlling operations take place.
Rural Marketing		1.The objective of this course is to explore the students to the Agriculture and Rural Marketing environment so that they can understand consumer's and marketing characteristics of the same for understanding and contributing to the emerging challenges in the upcoming global economic scenario.	1. Understanding Agriculture and Rural Marketing environment so that they can understand consumer's and marketing characteristics of the same for understanding and contributing to the emerging challenges in the upcoming global economic scenario.
Tourism Marketing		1.To understand basic concepts and strategies of Tourism Marketing. 2.To impart knowledge to learners about types of tourism. 3.To understand segmentation and Marketing mix in the context of Tourism Marketing. 4.To familiarize learners with trends and challenges in Tourism Marketing.	1. Understanding basic concepts and strategies of Tourism Marketing. 2. Imparting knowledge to learners about types of tourism. 3. Understanding segmentation and Marketing mix in the context of Tourism Marketing. 4. Familiarize learners with trends and challenges in Tourism Marketing.
Change Management		1.The objective of this paper is to prepare students as organizational change facilitators using the knowledge and techniques of behavioural science	1.Developing students as organizational change facilitators using the knowledge and techniques of behavioural science.
Training &		1.This paper is not pure academic	1. Orientation of the

	Development in HRM	oriented but practice based. It has been designed, keeping in view the needs of the organizations. Successful managerial performance depends on the individual's ability to observe, interpret the issues and modify his approach and behaviour. All organizations need to pay adequate attention to equip their employees. Rapid progress in technology has changed not only in the physical facilities but also in the abstract qualities required of the men who are using them. This paper will attempt to orient the students to tailor themselves to meet the specific needs of the organizations in training and development activities.	students to tailor themselves to meet the specific needs of the organizations in training and development activities.
	Information Technology in Business Management - II	<p>1.To understand managerial decision-making and to develop perceptive of major functional area of MIS.</p> <p>2.To provide conceptual study of Enterprise Resource Planning, Supply Chain Management, Customer Relationship Management, Key issues in implementation. This module provides understanding about emerging MIS technologies like ERP, CRM, SCM and trends in enterprise applications.</p> <p>3.To learn and understand relationship between database management and data warehouse approaches , the requirements and applications of data warehouse</p> <p>4.To learn outsourcing concepts. BPO/KPO industries, their structures , Cloud computing.</p>	<p>1.Understand managerial decision-making and to develop perceptive of major functional areas of MIS.</p> <p>2. Providing conceptual study of Enterprise Resource Planning, Supply Chain Management, Customer Relationship Management, Key issues in implementation. This module provides understanding about emerging MIS technologies like ERP, CRM, SCM and trends in enterprise applications.</p> <p>3. Understanding relationship between database management and data warehouse approaches , the requirements and applications of data warehouse.</p> <p>4.Learning outsourcing concepts. BPO/KPO industries, their structures , Cloud computing.</p>
	Foundation	1.To understand significance of	1.Understanding

	<p>Course (Ethics & Governance)- IV</p>	<p>ethics and ethical practices in businesses which are indispensable for progress of a country</p> <p>2.To learn the applicability of ethics in functional areas like marketing, finance and human resource management</p> <p>3.To understand the emerging need and growing importance of good governance and CSR by organisations</p> <p>4.To study the ethical business practices, CSR and Corporate Governance practiced by various organisations</p>	<p>significance of ethics and ethical practices in businesses which are indispensable for progress of a country</p> <p>2. Learning the applicability of ethics in functional areas like marketing, finance and human resource management</p> <p>3. Understanding the emerging need and growing importance of good governance and CSR by organizations.</p> <p>4. Understanding the ethical business practices, CSR and Corporate Governance practiced by various organisations</p>
	<p>Business Economics-II</p>	<p>1. To Introduction to Macroeconomic Data and Theory</p> <p>2. To study Money, Inflation and Monetary Policies</p> <p>3. To Study Constituents of Fiscal Policy.</p> <p>4. To Study Open Economy : Theory and Issues of International Trade</p>	<p>1. Understanding Macroeconomic Data and Theory</p> <p>2.UnderstandingMoney, Inflation and Monetary Policy</p> <p>3.UnderstandingConstituents of Fiscal Policy</p> <p>4.UnderstandingOpen Economy : Theory and Issues of International Trade</p>
	<p>Business Research Methods</p>	<p>1. The course is designed to inculcate the analytical abilities and research skills among the students.</p> <p>2.The course intends to give hands on experience and learning in Business Research.</p>	<p>1.Inculcating the analytical abilities and research skills among the students.</p> <p>2. Giving hands on experience and learning in Business Research.</p>
	<p>Production & Total Quality Management</p>	<p>1.To acquaint learners with the basic management decisions with respect to production and quality management</p> <p>2.To make the learners understand the designing aspect of production systems</p> <p>3. To enable the learners apply what they have learnt theoretically.</p>	<p>1. Understanding learners with the basic management decisions with respect to production and quality management.</p> <p>2. Understanding the designing aspect of production systems</p> <p>3. Application of</p>

			theoretical concepts to practical areas of business.
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CLASS	COURSE/ COURSE CODE	COURSE OBJECTIVES	COURSE OUTCOMES
TYBMS (SEM- V)	Logistics and Supply Chain Management	1 To provide students with basic understanding of concepts of logistics and supply chain management 2 To introduce students to the key activities performed by the logistics function 3 To provide an insight in to the nature of supply chain, its functions and supply chain systems 4 To understand global trends in logistics and supply chain management	1 Understanding of concepts of logistics and supply chain management 2 Introduction of students to the key activities performed by the logistics function 3 Understanding the nature of supply chain, its functions and supply chain systems 4. Understanding global trends in logistics and supply chain management
	Ethics and Governance	1.To understand significance of ethics and ethical practices in businesses which are indispensable for progress of a country 2.To learn the applicability of ethics in functional areas like marketing, finance and human resource management 3.To understand the emerging need and growing importance of good governance and CSR by organization 4.To study the ethical business practices, CSR and Corporate Governance practiced by various organization	1.Getting to know of the basis and basics of Ethics 2.The compulsive connection between Business and Ethics. How does it help the Business. 3. Strong knowledge of the theory and written material on Ethics, Integrity and Ideologies 4.Knowledge and respect for Law and natural justice in business. Appreciating the role and importance of respecting the tenets of Natural Law in Business.
	Project Work	Project work is considered as a special course involving application of knowledge in solving/analyzing/exploring a real life situation/ difficult problem.	To give corporate exposure to learners.

		Project work would be of 04 credits. A project work may be undertaken in any area of Elective Courses/ study area selected	
Service Marketing	<ol style="list-style-type: none"> 1.To understand distinctive features of services and key elements in services marketing 2.To provide insight into ways to improve service quality and productivity 3.To understand marketing of different services in Indian context 	<ol style="list-style-type: none"> 1. Understanding distinctive features of services and key elements in services marketing 2. Providing insight into ways to improve service quality and productivity 3. Understanding marketing of different services in Indian context 	
E-Commerce and Digital Marketing	<ol style="list-style-type: none"> 1.To understand increasing significance of E-Commerce and its applications in Business and Various Sectors 2 To provide an insight on Digital Marketing activities on various Social Media platforms and its emerging significance in Business 3 To understand Latest Trends and Practices in E-Commerce and Digital Marketing, along with its Challenges and Opportunities for an Organisation. 	<ol style="list-style-type: none"> 1.To understand basic concepts of online businessits applications in Business and Various Sectors. 2.To know insides of Ecommerce. 3.To know how technology helps bridging gaps in business. 	
Sales and Distribution Management	<ol style="list-style-type: none"> 1.To develop understanding of the sales & distribution processes in organizations 2.To get familiarized with concepts, approaches and the practical aspects of the key decision making variables in sales management and distribution channel management 	<ol style="list-style-type: none"> 1. Understanding of the sales & distribution processes in organizations 2. Understanding the concepts, approaches and the practical aspects of the key decision making variables in sales management and distribution channel management 	
Customer Relationship Management	<ol style="list-style-type: none"> 1.To understand concept of Customer Relationship Management (CRM) and implementation of Customer Relationship Management 2.To provide insight into CRM marketing initiatives, customer service and designing CRM strategy 3.To understand new trends in CRM, challenges and opportunities for organizations 	<ol style="list-style-type: none"> 1. Understanding concept of Customer Relationship Management (CRM) and implementation of Customer Relationship Management 2. Providing insight into CRM marketing initiatives, customer service and designing CRM strategy 3. Understanding new 	

		trends in CRM, challenges and opportunities for organizations
Finance for HR Professionals and Compensation Management	<ol style="list-style-type: none"> 1.To orient HR professionals with financial concepts to enable them to make prudent HR decisions 2.To understand the various compensation plans 3.To study the issues related to compensation management and understand the legal framework of compensation management 	<ol style="list-style-type: none"> 1. Orientation to HR professionals with financial concepts to enable them to make prudent HR decisions 2. Understanding the various compensation plans 3. Understanding issues related to compensation management and understand the legal framework of compensation management
Strategic Human Resource Management and HR Policies	<ol style="list-style-type: none"> 1.To understand human resource management from a strategic perspective 2.To link the HRM functions to corporate strategies in order to understand HR as a strategic resource 3.To understand the relationship between strategic human resource management and organizational performance 4.To apply the theories and concepts relevant to strategic human resource management in contemporary organizations 5.To understand the purpose and process of developing Human Resource Policies 	<ol style="list-style-type: none"> 1. Understanding human resource management from a strategic perspective 2. Understanding HRM functions to corporate strategies in order to understand HR as a strategic resource 3. Understanding the relationship between strategic human resource management and organizational performance 4. Understanding the theories and concepts relevant to strategic human resource management in contemporary organizations 5. Understanding the purpose and process of developing Human Resource Policies
Performance Management and Career Planning	<ol style="list-style-type: none"> 1.To understand the concept of performance management in organizations 2.To review performance appraisal systems 3.To understand the significance of career planning and practices 	<ol style="list-style-type: none"> 1.Understanding the concept of performance management in organizations 2.Understanding performance appraisal systems 3. Understanding the significance of career planning and practices
Industrial	1.To understand the concept of	1.Understanding the

	Relations	performance management in organizations 2.To review performance appraisal systems 3.To understand the significance of career planning and practices	concept of performance management in organizations 2.Understanding performance appraisal systems 3. Understanding the significance of career planning and practices

CLASS	COURSE/ COURSE CODE	COURSE OBJECTIVES	COURSE OUTCOMES
TYBMS (SEM- VI)	Operation Research	1.To help students to understand operations research methodologies 2.To help students to solve various problems practically 3.To make students proficient in case analysis and interpretation	1.Understand application in business.Data Envelopment Analysis as extension of LPP model. 2.Understand special cases of LPPand apply in appropriate Situation. 3.Understand special case of LPP and apply in appropriate situation. 4.Understand Competitive environment of business 5.Understandingproject management techniques.
	Indian Ethos in Management	1.To understand the concept of Indian Ethos in Management. 2.To link the Traditional Management System to Modern Management System. 3.To understand the Techniques of Stress Management. 4.To understand the Evolution of Learning Systems in India	1.Understanding the concept of Indian Ethos in Management. 2.Understanding Traditional Management System to Modern Management System. 3. Understanding the Techniques of Stress Management. 4. Understanding the Evolution of Learning Systems in India
	Corporate Communication and Public	1.To provide the students with basic understanding of the concepts of corporate communication and public	1. Basic understanding of the concepts of corporate communication and public

	Relations	<p>relations.</p> <p>2.To introduce the various elements of corporate communication and consider their roles in managing organizations.</p> <p>3.To examine how various elements of corporate communication must be coordinated to communicate effectively.</p> <p>4.To develop critical understanding of the different practices associated with corporate communication.</p>	<p>relations.</p> <p>2. Introduction the various elements of corporate communication and consider their roles in managing organizations.</p> <p>3. Examining how various elements of corporate communication must be coordinated to communicate effectively.</p> <p>4. Understanding of the different practices associated with corporate communication.</p>
	Brand Management	<p>1.To understand the meaning and significance of Brand Management.</p> <p>2.To Know how to build, sustain and grow brands</p> <p>3.To know the various sources of brand equity</p>	<p>1. Understanding the meaning and significance of Brand Management.</p> <p>2. Knowing how to build, sustain and grow brands</p> <p>3. knowing the various sources of brand equity</p>
	Retail Management	<p>1.To familiarize the students with retail management concepts and operations.</p> <p>2.To provide understanding of retail management and types of retailers.</p> <p>3.To develop an understanding of retail management terminology including merchandize management, store management and retail strategy.</p> <p>4.To acquaint the students with legal and ethical aspects of retail management.</p> <p>5.To create awareness about emerging trends in retail management.</p>	<p>1. Familiarize the students with retail management concepts and operations.</p> <p>2.Understanding of retail management and types of retailers.</p> <p>3.Development of an understanding of retail management terminology including merchandize management, store management and retail strategy.</p> <p>4.To acquaint the students with legal and ethical aspects of retail management.</p> <p>5. Creation of awareness about emerging trends in retail management.</p>
	International Marketing	<p>1.To understand International Marketing, its Advantages and Challenges.</p> <p>2.To provide an insight on the dynamics of International Marketing Environment.</p> <p>3.To understand the relevance of International Marketing Mix</p>	<p>1. Understanding International Marketing, its Advantages and Challenges.</p> <p>2. Providing an insight on the dynamics of International Marketing Environment.</p>

		decisions and recent developments in Global Market.	3. Understanding the relevance of International Marketing Mix decisions and recent developments in Global Market.
Media Planning and Management		<p>1.To understand Media Planning, Strategy and Management with reference to current business scenario.</p> <p>2.To know the basic characteristics of all media to ensure most effective use of advertising budget.</p> <p>3.To provide an insight on Media Planning, Budgeting, Scheduling and Evaluating the Different Media Buys.</p>	<p>1. Understanding Media Planning, Strategy and Management with reference to current business scenario.</p> <p>2. Understanding the basic characteristics of all media to ensure most effective use of advertising budget.</p> <p>3. Providing an insight on Media Planning, Budgeting, Scheduling and Evaluating the Different Media Buys.</p>
HRM in Global Perspective		<p>1.To introduce the students to the study and practice of IHRM.</p> <p>2.To understand the concepts, theoretical framework and issues of HRM in Global Perspective.</p> <p>3.To get insights of the concepts of Expatriates and Repatriates.</p> <p>4.To find out the impact of cross culture on Human Resource Management.</p> <p>5.To provide information about Global Workforce Management</p> <p>6.To study International HRM Trends and Challenges</p>	<p>1. Introduction to the study and practice of IHRM.</p> <p>2. Understanding the concepts, theoretical framework and issues of HRM in Global Perspective.</p> <p>3.To get insights of the concepts of Expatriates and Repatriates.</p> <p>4.To find out the impact of cross culture on Human Resource Management.</p> <p>5. Provide information about Global Workforce Management</p> <p>6. Understanding International HRM Trends and Challenges</p>
Organizational Development		<p>1.To understand the concept of Organisational Development and its Relevance in the organization.</p> <p>2.To Study the Issues and Challenges of OD while undergoing Changes.</p> <p>3.To get an Understanding of Phases of OD Programme.</p> <p>4.To Study the OD Intervention to meet the Challenges faced in the Organisation.</p> <p>5.To get an Insight into Ethical Issues in OD.</p>	<p>1. Understand the concept of Organisational Development and its Relevance in the organization.</p> <p>2. Understanding the Issues and Challenges of OD while undergoing Changes.</p> <p>3. Understanding of Phases of OD Programme.</p> <p>4. Understanding the OD Intervention to meet the</p>

			Challenges faced in the Organisation. 5. Understanding Ethical Issues in OD.
	HRM In Service Sector Management	1.To understand the concept and growing importance of HRM in service sector 2.To understand how to manage human resources in service sector 3.To understand the significance of human element in creating customer satisfaction through service quality 4.To understand the Issues and Challenges of HR in various service sectors	1. Understanding the concept and growing importance of HRM in service sector. 2. Understanding how to manage human resources in service sector. 3. Understanding the significance of human element in creating customer satisfaction through service quality. 4. Understanding the Issues and Challenges of HR in various service sectors.
	Human Resource Planning and Information System	1.To Understand the Concept and Process of HRP. 2.To Understand Ways of matching Job Requirements and Human Resource Availability. 3.To Explore the concept of Strategic HRP. 4.To Understand the applications of HRIS.	1.Understanding the Concept and Process of HRP. 2.Understanding Ways of matching Job Requirements and Human Resource Availability. 3. Exploring the concept of Strategic HRP. 4.Understand the applications of HRIS.

DEPARTMENT OF B.COM. (BANKING & INSURANCE)

CLASS/ SEMESTER	COURSE/COU RSE CODE	COURSE OBJECTIVE	COURSE OUTCOME
FY BBI			
SEM- I	Environment & management of financial services UBIFSI.1	<ul style="list-style-type: none"> To provide basic knowledge of different kind of financial services. Learn phases of development of Banking & Insurance. Know the management, regulation and development of Banking & Insurance. 	<ul style="list-style-type: none"> Understand the basic knowledge of financial services. The students understand marketing structure of Banking & Insurance. Students understand functions and working of banking & insurance companies
	Principles of management UBIFSI.2	<ul style="list-style-type: none"> To create basic knowledge about the management. Know why you should care about leadership, entrepreneurship, and strategy. Know the dimensions of the planning-organizing-leading-controlling (P-O-L-C) framework. Learn how economic performance feeds social and environmental performance. Understand what performance means at the individual and group levels. Create your survivor's guide to learning and developing principles of management 	<ul style="list-style-type: none"> Relate, discuss, understand, and present management principles, processes and procedures in consideration of their effort on individual actions. Participate, summarize and/or lead class discussions, case problems and situations from both the text and student experience that relate to the text material. Knowledge and understanding of the Principles of Management will enable the student manager and/ or employee and gain valuable insight into the workings of business and other organizations.
	Financial accounting-I UBIFSI.3	<ul style="list-style-type: none"> To provide basic knowledge about the accounting principles and procedures The objective of this paper is to make the student to 	<ul style="list-style-type: none"> Accounting Principles and Procedures Knowledge of classification of income & expenses &

		<p>understand classification of income & expenses & Accounting Standards</p> <ul style="list-style-type: none"> • To provide adequate knowledge about Issue of Shares Stock Valuation & Hire Purchase • To provide detail knowledge of Final Accounts & Accounts of not for Profit Organization 	<p>Accounting Standards</p> <ul style="list-style-type: none"> • Knowledge of Issue of Shares Stock Valuation & Hire Purchase • Detail knowledge of Final Accounts • Knowledge of Accounts of not for Profit Organization
	<p>Business communication-I UBIFSI.4</p>	<ul style="list-style-type: none"> • To provide basic knowledge about the Communication, Channels, Methods & Modes • To enable students to apply the skills of communication. • To enable the students to understand the role of communication in the corporate world. • To make the students realize the importance of listening skills. 	<ul style="list-style-type: none"> • Proficiency in Communication skill • Knowledge of Channels Methods & Modes of Communication • Role of Communication in Corporate World • Importance of listening skill
	<p>BusinessEconomics I (micro) UBIFSI.5</p>	<ul style="list-style-type: none"> • The objective of this paper is to make the student to understand how the business organizations work by applying economic principles in their business management. • To employ marginal analysis for decision making. 	<ul style="list-style-type: none"> • The students understand in concept of opportunity cost and its importance in day to day life. • They understand the operations of markets under various competitive conditions.
	<p>Quantitative methods I UBIFSI.6</p>	<ul style="list-style-type: none"> • To provide basic knowledge of Data Frequency Distribution Data Representation • To apply different concepts relating to Measures of Central Tendencies & Measures of Dispersion • To provide basic knowledge of Probability Distribution & Index Nos. 	<ul style="list-style-type: none"> • Knowledge of Data Frequency Distribution • Knowledge of Measures of Central Tendencies & Measures of Dispersion • Knowledge of Probability Distribution & Index Nos.

	Foundation course-I UBIFS1.7	<ul style="list-style-type: none"> • To understand the nature of Indian society. • To bring out the significance of gender as a demographic variable. • To create awareness regarding the problems and violence faced by women & physically & mentally challenged people. 	<ul style="list-style-type: none"> • Understand the importance & need of foundation course in their life. • Gain knowledge about social problems.
SEM-II	Principles & practices of banking & insurance UBIFSII.1	<ul style="list-style-type: none"> • To provide basic knowledge about Banking Scenario in India. • To create basic knowledge of Banking & Insurance sector. • To create knowledge of Insurance business environment in India. 	<ul style="list-style-type: none"> • The students understand the Insurance business environment in India. • The students understand the various types of account. • Students understand the introduction of banking & insurance.
	Business law UBIFSII.2	<ul style="list-style-type: none"> • To create basic knowledge about the laws relating to companies act 	Student learn the laws relating to companies act
	Financial accounting-II UBIFSII.3	<ul style="list-style-type: none"> • The objective of this paper is to make the student to understand about valuation of Goodwill & Shares • To create basic knowledge about Company Law & legal provision of Buyback of Equity shares • To provide adequate knowledge about Redemption of Preference Shares & Debentures 	<ul style="list-style-type: none"> • Knowledge of Valuation of Goodwill & Shares • Knowledge about Company Law & legal provision of Buyback of Equity shares • Knowledge about Redemption of Preference Shares & Debentures
	Business communication-II UBIFSII.4	<ul style="list-style-type: none"> • To conduct effective business research and communicating the process & findings in a range of business documents and oral presentations. • To provide planning and managing a business project & communication strategy. • To demonstrating advance interpersonal communication, business etiquette & relationship 	<ul style="list-style-type: none"> • Proficiency in business documents and oral presentations. • Knowledge of planning and managing a business project & communication strategy. • Knowledge of interpersonal communication, business etiquette &

		building skills.	relationship building skills.
	Foundation course-II UBIFSII.5.1	<ul style="list-style-type: none"> • Develop a basic understanding about issues related to human rights, violations, ecology, stress & conflicts. • To create awareness towards the issues & concerns regarding environment. 	<ul style="list-style-type: none"> • Understand concept of human rights. • Studied intergroup conflicts among various groups in India.
	Organizational behavior UBIFSII.6	<ul style="list-style-type: none"> • To provide basic knowledge of key approaches and Models relating to Organizational Behavior. • To identify specific steps managers can take to motivate the employees. • To understand ways of acting effectively and finding ways for controlling human behavior. • To apply different concepts relating to managing of conflicts, change, time and stress 	<ul style="list-style-type: none"> • Students understand the approaches and Models relating to Organizational Behavior. • Student learns how to control the conflicts, change, time & stress management. • Student learns how to control effectively the human behavior.
	Quantitative methods II UBIFSII.7	<ul style="list-style-type: none"> • To provide basic knowledge of Testing of Hypothesis • To provide basic knowledge about Linear Programming Techniques • To provide basic knowledge of Application of Matrices & Determinant in business Or Economics • To apply different concepts relating to ratio Percentage Statistical Application in Investment 	<ul style="list-style-type: none"> • Knowledge of Testing of Hypothesis • Knowledge about Linear Programming Techniques • Application & Knowledge of Matrices, Determinant Statistical & Application in Investment
SEM-III	Financial management-I UBIFSIII.1	<ul style="list-style-type: none"> • The students examine the general nature of financial management. • Specific attention is given to present value and capital budgeting; financial analysis and forecasting; financial decisions and market efficiency; and 	<ul style="list-style-type: none"> • Understand TVM (Time Value of Money) concepts and calculations; including future value of a present sum, present value, and present and future values of annuities.

		<p>capital structure. Problem-solving methodology is used to illustrate the theories and tools in financial decision making.</p>	<ul style="list-style-type: none"> • Calculate Weighted Average Cost of Capital. • Understand the various techniques used in capital budgeting decisions.
	<p>Management accounting UBIFSIII.2</p>	<ul style="list-style-type: none"> • To develop the understanding of accounting tools and information and their uses in Decision making • To impart basic management accounting knowledge as applicable to business with suitable illustrations. 	<ul style="list-style-type: none"> • Understand financial statement concepts and calculations of ratio analysis & balance sheet ratio. • Understand the various techniques used in working capital management. • Understand determinants of dividend policy.
	<p>Mutual fund management UBIFSIII.5</p>	<ul style="list-style-type: none"> • To get complete understanding of mutual fund industry. • Student should understand how mutual funds are marketed & how the schemes are to be evaluated. 	<ul style="list-style-type: none"> • Understanding the concept of investing in mutual fund • Understanding the mutual fund industry and the players. • Ability to calculate NAV. • Understanding the regulatory framework.
	<p>Information technology in banking & insurance- II UBIFSIII.6</p>	<ul style="list-style-type: none"> • The objective of this paper is to expose the students to the managerial issues relating to information systems and help them identify and evaluate various options in this regard. • To provide basic knowledge about Microsoft word, excel and power point. 	<ul style="list-style-type: none"> • Students understand about the concept 'Digital' and how to use digital services. • Students understand about letter writing through Microsoft word, creating Microsoft power point slide and data manipulation through Microsoft excel
	<p>Foundation course III UBIFSIII.7.1</p>	<ul style="list-style-type: none"> • To provide basic knowledge of overview of banking industry. • To provide adequate information of commercial banking, retail banking, corporate banking and rural banking. 	<ul style="list-style-type: none"> • Students understand the current developments in banking sectors. • The students understand concept of universal banking with detail and banking

		<ul style="list-style-type: none"> To knowledge of universal banking and technology in banking. To provide basic knowledge of microfinance, financial inclusion 	<p>technology.</p> <ul style="list-style-type: none"> The students understand the basic knowledge of commercial banking, retail banking, corporate banking and rural banking.
	Financial market UBIFSIII.8	<ul style="list-style-type: none"> To understand the Indian banking system & describe the role of regulatory bodies in financial markets. To gain an understanding of the characteristics of commodity markets and derivatives. To provide the knowledge of different motivations for their use & how they are traded. 	<ul style="list-style-type: none"> Understanding different kinds of financial services available in Indian financial institutions. Comprehension and products available for retail and corporate by banks in India. Understand the role of RBI in the Indian financial system.
	Direct taxation UBIFSIII.9	<ul style="list-style-type: none"> To impart knowledge of the basic principles underlying provisions of income tax. To understand the current income tax provisions & exempted income. 	<ul style="list-style-type: none"> Students gain knowledge and understanding of the provisions of the direct tax. Develop the skill of independent thinking and creativity in the field of direct tax law.
SEM-IV	Financial management-II UBIFSIV.1	<ul style="list-style-type: none"> To impart basic working capital knowledge as applicable to banking and insurance with suitable illustration. To identify specific types of budget and suitable illustration. To provide adequate knowledge on financial policy and corporate strategy. To provide knowledge of types of leverages & suitable illustration. 	<ul style="list-style-type: none"> Students understand management of inventory in working capital. Understand the student's advantages of budgeting and zero based budgeting. Students understand the debt and equity financing. The students understand types of leverages and practical illustrations.
	Cost accounting UBIFSIV.2	<ul style="list-style-type: none"> To provide adequate knowledge on Cost Accounting Practice To impart basic cost accounting 	<ul style="list-style-type: none"> Student understands classification of cost & cost sheet. Calculation of

		knowledge as applicable to banking and insurance with suitable illustrations.	variance analysis. <ul style="list-style-type: none"> • Calculation of marginal costing.
	Customer relationship management UBIFSIV.3	<ul style="list-style-type: none"> • To familiarize with the strategy , tactics, key concepts and best practices of Customer Relationship Management (CRM) • To apply analytical techniques and concepts to solve real world decision problems in CRM. • To provide better understanding of how companies gain competitive advantage and improve financial performance through crafting and implementation of better customer retention strategies. 	<ul style="list-style-type: none"> • Understand the need of CRM in the competitive market. • They learn how to use CRM in any problem solving.
	Information technology in banking & insurance- IUBIFSIV.6	To provide basic knowledge about e-commerce, Microsoft office suite, internet technology and revolutionary banking technology.	Students understand how to use Microsoft office for daily work, surfing on internet to adopt educational knowledge, various E-banking technologies.
	Foundation course IV UBIFSIV.7.1	<ul style="list-style-type: none"> • To provide a basic knowledge of insurance. • To knowledge of life & health insurance. • To provide adequate information of home and motor insurance. • To provide knowledge of role of insurance in logistic. 	<ul style="list-style-type: none"> • Students understand SBI and ICICI health insurance plans. • Students understand the role of insurance in logistic and fire insurance. • Students understand basic knowledge of home and motor insurance. • Students understand knowledge of LIC and Plans of LIC.
	Corporate law & security laws UBIFSIV.8	<ul style="list-style-type: none"> • To make the students aware of the laws relating to the business. • To provide conceptual knowledge about the business law 	<ul style="list-style-type: none"> • Students understand basic knowledge of laws relating to the business.
	Business economics-	<ul style="list-style-type: none"> • Introduction to Macro Economics data & Theory 	<ul style="list-style-type: none"> • Knowledge of Macro Economics

	IIUBIFSIV.9	<ul style="list-style-type: none"> • To provide basic knowledge about Money Inflation Monetary Policy • To make the students aware of constituents of Fiscal Policy • To explain the scope of Open Economy & Issue of International Trade 	<ul style="list-style-type: none"> • Awareness of Fiscal Policy • Awareness of Money Inflation Monetary Policy & Open Economy
SEM-V	Marketing in banking & insurances UBIFSIV.1	<ul style="list-style-type: none"> • To develop concepts in marketing. • To explain the scope of marketing management-analyzing opportunities, selecting target segments, developing the market mix, managing the marketing effort. • To provide understanding of the communication mix, advertising campaigns, media planning, budgeting, marketing mix decisions, scope and limitations of market research. • To develop strong concepts in marketing strategies for emerging technology and mature markets. • To provide understanding about the internet as a strategic medium for marketing and sales efforts for a company. 	<ul style="list-style-type: none"> • Student learn marketing concept, how to select target segments, developing the market mix, managing the marketing effort. • Student understanding of the communication mix, advertising campaigns, media planning, budgeting, marketing mix decisions, scope and limitations of market research. • Student understanding about the internet as a strategic medium for marketing and sales efforts for a company.
	Financial service management UBIFSIV.2	<ul style="list-style-type: none"> • To understand the basic concepts related to Financial Services Management • To understand the basic concepts related to Merchant Banking, Hire Purchase Leasing, Venture Capital Mutual Fund, Derivatives Credit Rating, etc. 	<ul style="list-style-type: none"> • Knowledge of Financial Services Management • Knowledge of Merchant Banking, Hire Purchase Leasing • Knowledge of Venture Capital Mutual Fund, Derivatives Credit Rating, etc.
	International banking & finance	<ul style="list-style-type: none"> • To understand the basic concepts related to International Finance. 	<ul style="list-style-type: none"> • Knowledge of International Finance • Knowledge of

	UBIFSV.3	<ul style="list-style-type: none"> • To understand International Economics • To understand International Monetary system. • To understand Euro Currency Market. 	<p>International Economics</p> <ul style="list-style-type: none"> • Knowledge of International Monetary system. • Knowledge of EuroCurrency Market.
	Financial reporting & analysis UBIFSV.4	<ul style="list-style-type: none"> • To provide knowledge of preparation and presentation of corporate final accounts with practical illustration. • To provide knowledge of accounting policies and accounting standards. • To provide adequate information of financial analysis and interpretation of final accounts with practical illustration. 	<ul style="list-style-type: none"> • Understand the Calculate selected financial ratios with practically. • Students understand accounting policies and disclosures. • Students understand cash flow management with practical illustration.
	Security analysis & portfolio management UBIFSV.5	<ul style="list-style-type: none"> • To provide adequate knowledge of investment alternatives and security market. • To provide knowledge of financial ratios with suitable illustrations. • To Provide. • The knowledge of time value of money with practical example. • To provide adequate information of portfolio management framework. 	<ul style="list-style-type: none"> • The students understand calculate selected financial ratios. • Understand the differentiate the components of the extended DuPont equation, and calculate the return on equity using the DuPont format. • Understand TVM (Time Value of Money) concepts and calculations; including future value of a present sum, present value, and present and future values of annuities.
	Auditing UBIFSV.6	<ul style="list-style-type: none"> • To provide basic knowledge of auditing concept, principles & techniques, vouching & verification, audit ceiling, qualification, system audit, liability of auditor, etc. • To develop an understand of 	<ul style="list-style-type: none"> • Student learns how to create vouchers & verify that. • How to write audit report role & know the rules regulation of auditing.

		audit of bank & insurances companies, role of regulatory authorities.	
	Banking project UBIFS.V.7	<ul style="list-style-type: none"> To create awareness about banking research & provide knowledge of overall banking industries. 	<ul style="list-style-type: none"> Students understand the research report writing & learn of detail knowledge of banking.
SEM-VI	Strategic management UBIFS.VI.1	<ul style="list-style-type: none"> To develop an understanding of the general and competitive business environments. To enable to understand and resolve cases through strategic decision making. To develop an understanding of strategic management concepts and techniques. 	<ul style="list-style-type: none"> Student understanding of the general and competitive business environments. Students understand how to resolve cases through strategic decision making. Students understand how to use strategic management concepts and techniques.
	Central banking UBIFS.VI.2	<ul style="list-style-type: none"> To provide knowledge of central banking and instruments of central bank. To provide knowledge of RBI and non banking financial companies. To provide basic knowledge of role of RBI. To provide basic knowledge of financial sector reforms. 	<ul style="list-style-type: none"> Students understand about knowledge of central banks in India and other. Students understand about money supply determination and credit creation. Students understand about issue of financial stability.
	International business UBIFS.VI.3	<ul style="list-style-type: none"> To develop a deep understanding of international management. To develop analytical ability of the student to attain an insight into international management contact. 	<ul style="list-style-type: none"> Understanding the scope of international business. International finance decisions and impact on operations. Basics of wto from the perspective of a business manager.
	Human resource management in banking & insurances UBIFS.VI.4	<ul style="list-style-type: none"> To highlight the role of human resources in success of an enterprise. To understand various processes involved in increasing the value of human assets. 	<ul style="list-style-type: none"> Students understand how they effectively manage & plan key human resource functions within organization.

		<ul style="list-style-type: none"> • To understand ways for maintaining high employees morale and sound human relations by sustaining and improving the various conditions and facilities. <p>To examine current issues, trends, practices & processes in HRM.</p>	<ul style="list-style-type: none"> • Students understand how to solve problems strategically.
	<p>Business ethics & corporate governance UBIFS VI.5</p>	<ul style="list-style-type: none"> • To understand ethical issues in business. • To highlight the role of Corporate Governance practices in maintaining Transparency in business transactions. • To highlight the importance of commitment to values and ethical conduct of Business. • To increase awareness about the statutory and legal compliances involved in corporate governance. 	<ul style="list-style-type: none"> • Students understand about the corruption, frauds and scams in financial institution. • Students understand about business ethics and values, morals. • Students understand about knowledge of corporate governance practices.
	<p>Turnaround management UBIFS VI.6</p>	<ul style="list-style-type: none"> • To enable students to understand need for revival of sick and stressed business unit. • To make students aware of the different turnaround strategies. • To give an overview of the recent business scenario. 	<ul style="list-style-type: none"> • Students to understand need for revival of sick and stressed business unit. • Student learns different turnaround strategies. • Student learn recent business scenario.
	<p>Insurance project UBIFS VI.7</p>	<ul style="list-style-type: none"> • To create awareness about insurances research report & provide knowledge of overall insurances company. 	<ul style="list-style-type: none"> • Students understand the research report writing & learn of detail knowledge of insurance company.

BACHELOR OF COMPUTER SCIENCE(B.Sc.C.S.)

Programme Objectives

The objectives of the programme as cited by the University of Mumbai are as follows:

- a) Demonstrate proficiency in problem-solving techniques using the computer
- b) Demonstrate proficiency in at least two high-level programming languages and two operating systems
- c) Demonstrate proficiency in the analysis of complex problems and the synthesis of solutions to those problems
- d) Demonstrate comprehension of modern software engineering principles
- e) Demonstrate a breadth and depth of knowledge in the discipline of computer science

Programme Specific Outcomes of B.Sc.C.S.

After Completing Bachelors of Computer Science(B.Sc.C.S.)Students are able to:

- a) An ability to apply knowledge of computing and mathematics appropriate to the discipline.
- b) An ability to identify, formulate, and develop solutions to computational challenges.
- c) An ability to design, implement, and evaluate a computational system to meet desired needs within realistic constraints.
- d) An ability to function effectively on teams to accomplish shared computing design, evaluation, or implementation goals.
- e) An understanding of professional, ethical, legal, security, and social issues and responsibilities for the computing profession.
- f) An ability to communicate and engage effectively with diverse stakeholders.
- g) An ability to analyze impacts of computing on individuals, organizations, and society.

- h) Recognition of the need for and ability to engage in continuing professional development.
- i) An ability to use appropriate techniques, skills, and tools necessary for computing practice.
- j) An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computational systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.
- k) An ability to apply design and development principles in the construction of software systems of varying complexity.

**BACHELOR IN COMPUTER SCIENCE(B.Sc. CS)
Programme Objectives**

The objectives of the programme as cited by the University of Mumbai are as follows:

- a) The revised and restructured curriculum for the Three-year integrated course is systematically designed considering the current industry needs in terms of skills sets demanded under new technological environment.
- b) Information and Communication Technology (ICT) has today become integral part of all industry domains as well as fields of academics and research.
- c) It also endeavors to align the programmer structure and course curriculum with student aspirations and corporate expectations.
- d) The proposed curriculum is more contextual, industry affable and suitable to cater the needs of society and nation in present day context.

Department of Computer Science

CLASS	COURSE/ COURSE CODE	COURSE OBJECTIVES	COURSE OUTCOMES
FYCS (SEM-I)	Computer Organization and Design	To understand the structure and operation of modern processors and their instruction sets	1) To learn about how computer systems work and underlying principles 2) To understand the basics of digital electronics needed for computers 3) To understand the basics of instruction set architecture for reduced and complex instruction

		sets 4) To understand the basics of processor structure and operation 5) To understand how data is transferred between the processor and I/O devices
Programming with Python- I	The objective of this paper is to introduce various concepts of programming to the students using Python.	1) Students should be able to understand the concepts of programming before actually starting to write programs. 2) Students should be able to develop logic for Problem Solving. 3) Students should be made familiar about the basic constructs of programming such as data, operations, conditions, loops, functions etc. 4) Students should be able to apply the problem solving skills using syntactically simple language i.e.
Free and Open-source Software	1.Open Source has acquired a prominent place in software industry. 2. Having knowledge of Open Source and its related technologies is an essential for Computer Science student. 3.This course introduces Open Source methodologies and ecosystem to students.	1) Upon completion of this course, students should have a good working knowledge of Open Source ecosystem, its use, impact and importance. 2) This course shall help student to learn Open Source methodologies, case studies with real life examples.
Database Systems	The objective of this course is to introduce the concept of the DBMS with respect to the relational model, to specify the functional and data requirements for a typical database application and to understand creation, manipulation and querying of data in databases	1) Students should be able to evaluate business information problem and find the requirements of a problem in terms of data. 2) Students should be able to design the database schema with the use of appropriate data types for storage of data in database. 3) Students should be able to create, manipulate, query and back up the databases.

Discrete Mathematics	<p>1.The purpose of the course is to familiarize the prospective learners with mathematical structures that are fundamentally discrete.</p> <p>2.This course introduces sets and functions, forming and solving recurrence relations and different counting principles. 3.These concepts are useful to study or describe objects or problems in computer algorithms and programming languages.</p>	<p>1) To provide overview of theory of discrete objects, starting with relations and partially ordered sets.</p> <p>2) Study about recurrence relations, generating function and operations on them.</p> <p>3) Give an understanding of graphs and trees, which are widely used in software.</p> <p>4) Provide basic knowledge about models of automata theory and the corresponding formal languages.</p>
Descriptive Statistics and Introduction to Probability	<p>1.The purpose of this course is to familiarize students with basics of Statistics.</p> <p>2.This will be essential for prospective researchers and professionals to know these basics.</p>	<p>1) Enable learners to know descriptive statistical concepts</p> <p>2) Enable study of probability concept required for Computer learners</p>
Soft Skills Development	<p>1.To help learners develop their soft skills and develop their personality together with their technical skills.</p> <p>2.Developing professional, social and academic skills to harness hidden strengths, capabilities and knowledge equip them to excel in real work environment and corporate life.</p> <p>3.Understand various issues in personal and profession communication and learn to overcome them</p>	<p>1) To know about various aspects of soft skills and learn ways to develop personality</p> <p>2) Understand the importance and type of communication in personal and professional environment.</p> <p>3) To provide insight into much needed technical and non-technical qualities in career planning.</p> <p>4) Learn about Leadership, team building, decision making and stress management</p>

CLASS	COURSE/ COURSE CODE	COURSE OBJECTIVES	COURSE OUTCOMES
FYCS (SEM-II)	Programmin g with C	The objective of this course is to provide a comprehensive study of the C programming language, stressing upon the strengths of C, which provide the students with the means of writing modular, efficient, maintainable, and portable code.	<ol style="list-style-type: none"> 1) Students should be able to write, compile and debug programs in C language. 2) Students should be able to use different data types in a computer program. 3) Students should be able to design programs involving decision structures, loops and functions. 4) Students should be able to explain the difference between call by value and call by reference 5) Students should be able to understand the dynamics of memory by the use of pointers. 6) Students should be able to use different data structures and create/update basic data files.
	Programmin g with Python – II	The objective of this paper is to explore the style of structured programming to give the idea to the students how programming can be used for designing real-life applications by reading/writing to files, GUI programming, interfacing database/networks and various other features.	<ol style="list-style-type: none"> 1) Students should be able to understand how to read/write to files using python. 2) Students should be able to catch their own errors that happen during execution of programs. 3) Students should get an introduction to the concept of pattern matching. 4) Students should be made familiar with the concepts of GUI controls and designing GUI applications. 5) Students should be able to connect to the database to move the data to/from the application. 6) Students should know how to connect to computers, read from URL and send email.

	Linux	<p>1.This course introduces various tools and techniques commonly used by Linux programmers, system administrators and end users to achieve their day to day work in Linux environment.</p> <p>2.It is designed for computer students who have limited or no previous exposure to Linux.</p>	<p>1) Upon completion of this course, students should have a good working knowledge of Linux, from both a graphical and command line perspective, allowing them to easily use any Linux distribution.</p> <p>2) This course shall help student to learn advanced subjects in computer science practically.</p> <p>3) Student shall be able to progress as a Developer or Linux System Administrator using the acquired skill set.</p>
	Data Structures	<p>1. To explore and understand the concepts of Data Structures and its significance in programming. Provide and holistic approach to design, use and implement abstract data types.</p> <p>2. Understand the commonly used data structures and various forms of its implementation for different applications using Python.</p>	<p>1) Learn about Data structures, its types and significance in computing</p> <p>2) Explore about Abstract Data types and its implementation</p> <p>3) Ability to program various applications using different data structure in Python</p>
	Calculus	<p>1.The course is designed to have a grasp of important concepts of Calculus in a scientific way.</p> <p>2. It covers topics from as basic as definition of functions to partial derivatives of functions in a gradual and logical way.</p> <p>3. The learner is expected to solve as many examples as possible to a get compete clarity and understanding of the topics covered.</p>	<p>1) Understanding of Mathematical concepts like limit, continuity, derivative, integration of functions.</p> <p>2) Ability to appreciate real world applications which uses these concepts.</p> <p>3) Skill to formulate a problem through Mathematical modeling and simulation.</p>
	Statistical Methods and Testing of Hypothesis	<p>1. The purpose of this course is to familiarize students with basics of Statistics.</p> <p>2. This will be essential for prospective researchers and</p>	<p>1) Enable learners to know descriptive statistical concepts</p> <p>2) Enable study of probability concept required for Computer learners</p>

		professionals to know these basics.	
	Green Technologies	<p>1.To familiarize with the concept of Green Computing and Green IT infrastructure for making computing and information system environment sustainable.</p> <p>2.Encouraging optimized software and hardware designs for development of Green IT Storage, Communication and Services.</p> <p>3.To highlight useful approaches to embrace green IT initiatives.</p>	<p>1) Learn about green IT can be achieved in and by hardware, software, network communication and data center operations.</p> <p>2) Understand the strategies, frameworks, processes and management of green IT</p>

CLASS	COURSE/ COURSE CODE	COURSE OBJECTIVES	COURSE OUTCOMES
SYCS (SEM-III)	Theory of Computation	<p>1.To provide the comprehensive insight into theory of computation by understanding grammar, languages and other elements of modern language design.</p> <p>2.Also to develop capabilities to design and develop formulations for computing models and identify its applications in diverse areas.</p>	<p>1. Understand Grammar and Languages</p> <p>2. Learn about Automata theory and its application in Language Design</p> <p>3. Learn about Turing Machines and Pushdown Automata</p> <p>4. Understand Linear Bound Automata and its applications</p>
	Core Java	<p>The objective of this course is to teach the learner how to use Object Oriented paradigm to develop code and understand the concepts of Core Java and to cover-up with the pre-requisites of Core java.</p>	<p>1. Object oriented programming concepts using Java.</p> <p>2. Knowledge of input, its processing and getting suitable output.</p> <p>3. Understand, design, implement and evaluate classes and applets.</p> <p>4. Knowledge and implementation of AWT package.</p>

Operating System	<p>1. Learners must understand proper working of operating system.</p> <p>2. To provide a sound understanding of Computer operating system, its structures, functioning and algorithms.</p>	<p>1. To provide a understanding of operating system, its structures and functioning</p> <p>2. Develop and master understanding of algorithms used by operating systems for various purposes.</p>
Database Management Systems	<p>To develop understanding of concepts and techniques for data management and learn about widely used systems for implementation and usage.</p>	<p>1. Master concepts of stored procedure and triggers and its use.</p> <p>2. Learn about using PL/SQL for data management</p> <p>3. Understand concepts and implementations of transaction management and crash recovery</p>
Combinatorics and Graph Theory	<p>To give the learner a broad exposure of combinatorial Mathematics through applications especially the Computer Science applications.</p>	<p>1. Appreciate beauty of combinatorics and how combinatorial problems naturally arise in many settings.</p> <p>2. Understand the combinatorial features in real world situations and Computer Science applications.</p> <p>3. Apply combinatorial and graph theoretical concepts to understand Computer Science concepts and apply them to solve problems</p>
Physical Computing and IoT Programming	<p>To learn about SoC architectures; Learn how Raspberry Pi. Learn to program Raspberry Pi. Implementation of internet of Things and Protocols.</p>	<p>1. Enable learners to understand System On Chip Architectures.</p> <p>2. Introduction and preparing Raspberry Pi with hardware and installation.</p> <p>3. Learn physical interfaces and electronics of Raspberry Pi and program them using practical's</p> <p>4. Learn how to make consumer grade IoT safe and secure with proper use of protocols.</p>
Web Programming	<p>To provide insight into emerging technologies to design and develop state of - the art web</p>	<p>1. To design valid, well-formed, scalable, and meaningful pages using emerging technologies.</p>

		applications using client-side scripting, server-side scripting, and database connectivity.	<ol style="list-style-type: none"> 2. Understand the various platforms, devices, display resolutions, viewports, and browsers that render websites 3. To develop and implement client-side and server-side scripting language programs. 4. To develop and implement Database Driven Websites. 5. Design and apply XML to create a markup language for data and document centric applications.
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CLASS	COURSE/ COURSE CODE	COURSE OBJECTIVES	COURSE OUTCOMES
SYCS (SEM-IV)	Fundamentals of Algorithms	<ol style="list-style-type: none"> 1. To understand basic principles of algorithm design and why algorithm analysis is important 2. To understand how to implement algorithms in Python 3. To understand how to transform new problems into algorithmic problems with efficient solutions 4. To understand algorithm design techniques for solving different problems 	<ol style="list-style-type: none"> 1. Understand the concepts of algorithms for designing good program 2. Implement algorithms using Python
	Advanced Java	Explore advanced topic of Java programming for solving problems.	<ol style="list-style-type: none"> 1) Understand the concepts related to Java Technology 2) Explore and understand use of Java Server Programming
	Computer Networks	In this era of Information, its computation and its exchange techniques, Learner should be able to conceptualize and understand the framework and working of communication networks. And on completion, will be able to have a firm grip	<ol style="list-style-type: none"> 1. Learner will be able to understand the concepts of networking, which are important for them to be known as a 'networking professionals'. 2. Useful to proceed with industrial requirements and International vendor

		over this very important segment of Internet.	certifications.
Software Engineering		<p>1.To provide learner with knowledge in Software Testing techniques. To understand how testing methods can be used as an effective tools in providing quality assurance concerning for software.</p> <p>2.To provide skills to design test case plan for testing software</p>	<p>1.Understand various software testing methods and strategies. Understand a variety of software metrics, and identify defects and managing those defects for improvement in quality for given software.</p> <p>2.Design SQA activities, SQA strategy, formal technical review report for software quality control and assurance.</p> <p>.</p>
Linear Algebra using Python		To offer the learner the relevant linear algebra concepts through computer science applications.	<p>1. Appreciate the relevance of linear algebra in the field of computer science.</p> <p>2. Understand the concepts through program implementation</p> <p>3. Instill a computational thinking while learning linear algebra.</p>
.Net Technologies		To explore .NET technologies for designing and developing dynamic, interactive and responsive web applications.	<p>1. Understand the .NET framework</p> <p>2. Develop a proficiency in the C# programming language</p> <p>3. Proficiently develop ASP.NET web applications using C#</p> <p>4. Use ADO.NET for data persistence in a web application</p>
Android Developer Fundamentals		To provide the comprehensive insight into developing applications running on smart mobile devices and demonstrate programming skills for managing task on mobile. To provide systematic approach for studying definition, methods and its applications for Mobile-App development.	<p>1) Understand the requirements of Mobile programming environment.</p> <p>2) Learn about basic methods, tools and techniques for developing Apps</p> <p>3) Explore and practice App development on Android Platform</p> <p>4) Develop working prototypes of working systems for various uses in daily lives.</p>

CLASS	COURSE/ COURSE CODE	COURSE OBJECTIVES	COURSE OUTCOMES
TYCS (SEM-V)	Artificial Intelligence	Artificial Intelligence (AI) and accompanying tools and techniques bring transformational changes in the world. Machines capability to match, and sometimes even surpass human capability, make AI a hot topic in Computer Science. This course aims to introduce the learner to this interesting area.	After completion of this course, learner should get a clear understanding of AI and different search algorithms used for solving problems. The learner should also get acquainted with different learning algorithms and models used in machine learning.
	Linux Server Administration	1.Demonstrate proficiency with the Linux command line interface, directory & file management techniques, file system organization, and tools commonly found on most Linux distributions. Effectively operate a Linux system inside of a network environment to integrate with existing service solutions. 2.Demonstrate the ability to troubleshoot challenging technical problems typically encountered when operating and administering Linux systems.	1.Learner will be able to develop Linux based systems and maintain. Learner will be able to install appropriate service on Linux server as per requirement. 2.Learner will have proficiency in Linux server administration.
	Software Testing and Quality Assurance	1.To provide learner with knowledge in Software Testing techniques. To understand how testing methods can be used as an effective tools in providing quality assurance concerning for software. 2.To provide skills to design test case plan for testing software	1.Understand various software testing methods and strategies. Understand a variety of software metrics, and identify defects and managing those defects for improvement in quality for given software. 2.Design SQA activities, SQA strategy, formal technical review report for software quality control and assurance.
	Information and Network Security	To provide students with knowledge of basic concepts of computer security including network security and cryptography.	1.Understand the principles and practices of cryptographic techniques. Understand a variety of generic security threats and vulnerabilities, and identify &

			analyze particular security problems for a given application. 2.Understand various protocols for network security to protect against the threats in a network
	Architecting of IoT	Discovering the interconnection and integration of the physical world. Learner should get knowledge of the architecture of IoT.	Learners are able to design & develop IoT Devices. They should also be aware of the evolving world of M2M Communications and IoT analytics.
	Web Services	1.To understand the details of web services technologies like SOAP, WSDL, and UDDI. To learn how to implement and deploy web service client and server. 2.To understand the design principles and application of SOAP and REST based web services (JAX-WS and JAX-RS). 3.To understand WCF service. To design secure web services and QoS of Web Services	Emphasis on SOAP based web services and associated standards such as WSDL. Design SOAP based / RESTful / WCF services Deal with Security and QoS issues of Web Services
	Game Programming	Learner should get the understanding computer Graphics programming using DirectX or OpenGL. Along with the VR and AR they should also aware of GPU, newer technologies and programming using most important API for windows.	Learner should study Graphics and gaming concepts with present working style of developers where everything remains on internet and they need to review it, understand it, be a part of community and learn.

CLASS	COURSE/ COURSE CODE	COURSE OBJECTIVES	COURSE OUTCOMES
TYCS (SEM- VI)	Wireless Sensor Networks and Mobile Communication	1.In this era of wireless and adhoc network, connecting different wireless devices and understanding their compatibility is very important. 2.Information is gathered in many different ways from these devices. Learner should be able to conceptualize and understand the	1.After completion of this course, learner should be able to list various applications of wireless sensor networks, describe the concepts, protocols, design, implementation and use of wireless sensor networks. 2.Also implement and evaluate new ideas for solving wireless

	framework. 3.On completion, will be able to have a firm grip over this very important segment of wireless network.	sensor network design issues.
Cloud Computing	1.To provide learners with the comprehensive and in-depth knowledge of Cloud Computing concepts, technologies, architecture, implantations and applications. 2.To expose the learners to frontier areas of Cloud Computing, while providing sufficient foundations to enable further study and research.	1.After successfully completion of this course, learner should be able to articulate the main concepts, key technologies, strengths, and limitations of cloud computing and the possible applications for state-of-the-art cloud computing using open source technology. 2.Learner should be able to identify the architecture and infrastructure of cloud computing, including SaaS, PaaS, IaaS, public cloud, private cloud, hybrid cloud, etc. 3.They should explain the core issues of cloud computing such as security, privacy, and interoperability.
Cyber Forensics	To understand the procedures for identification, preservation, and extraction of electronic evidence, auditing and investigation of network and host system intrusions, analysis and documentation of information gathered	The student will be able to plan and prepare for all stages of an investigation - detection, initial response and management interaction, investigate various media to collect evidence, report them in a way that would be acceptable in the court of law.
Information Retrieval	1.To provide an overview of the important issues in classical and web information retrieval. 2.The focus is to give an up-to-date treatment of all aspects of the design and implementation of systems for gathering, indexing, and searching documents and of methods for evaluating systems.	1.After completion of this course, learner should get an understanding of the field of information retrieval and its relationship to search engines. 2.It will give the learner an understanding to apply information retrieval models.
Digital Image Processing	1.To study two-dimensional Signals and Systems. 2.To understand image fundamentals and transforms	1.Learner should review the fundamental concepts of a digital image processing system. Analyze the images in the

		<p>necessary for image processing.</p> <p>3.To study the image enhancement techniques in spatial and frequency domain.</p> <p>4.To study image segmentation and image compression techniques.</p>	<p>frequency domain using various transforms.</p> <p>2.Evaluate the techniques for image enhancement and image segmentation.</p> <p>3.Apply various compression techniques. They will be familiar with basic image processing techniques for solving real problems.</p>
	Data Science	<p>1.Understanding basic data science concepts.</p> <p>2.Learning to detect and diagnose common data issues, such as missing values, special values, outliers, inconsistencies, and localization. 3.Making aware of how to address advanced statistical situations, Modeling and Machine Learning.</p>	<p>After completion of this course, the students should be able to understand & comprehend the problem; and should be able to define suitable statistical method to be adopted.</p>
	Ethical Hacking	<p>To understand the ethics, legality, methodologies and techniques of hacking.</p>	<p>Learner will know to identify security vulnerabilities and weaknesses in the target applications. They will also know to test and exploit systems using various tools and understand the impact of hacking in real time machines.</p>

BACHELOR OF INFORMATION TECHNOLOGY(B.Sc.I.T.)

Programme Objectives

The objectives of the programme as cited by the University of Mumbai are as follows:

The main objectives of the course are:

- to think analytically, creatively and critically in developing robust, extensible and highly maintainable technological solutions to simple and complex problems.
- to apply their knowledge and skills to be employed and excel in IT professional careers and/or to continue their education in IT and/or related post graduate programmes.
- to be capable of managing complex IT projects with consideration of the human, financial and environmental factors.
- to work effectively as a part of a team to achieve a common stated goal.
- to adhere to the highest standards of ethics, including relevant industry and organizational codes of conduct.
- to communicate effectively with a range of audiences both technical and non-technical.
- to develop an aptitude to engage in continuing professional development.

Programme Specific Outcomes of B.Sc.I.T

After Completing Bachelors of Information Technology(B.Sc.I.T) Students are able to:

1. An ability to apply knowledge of computing and mathematics appropriate to the program's student outcomes and to the discipline
2. An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution
3. An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs
4. An ability to function effectively on teams to accomplish a common goal
5. An understanding of professional, ethical, legal, security and social issues and responsibilities
6. An ability to communicate effectively with a range of audiences
7. An ability to analyze the local and global impact of computing on individuals, organizations, and society
8. Recognition of the need for and an ability to engage in continuing professional development

9. An ability to use current techniques, skills, and tools necessary for computing practice
10. An ability to use and apply current technical concepts and practices in the core information technologies
11. An ability to identify and analyze user needs and take them into account in the selection, creation, evaluation and administration of computer-based systems
12. An ability to effectively integrate IT-based solutions into the user environment
13. An understanding of best practices and standards and their application
14. An ability to assist in the creation of an effective project plan

Bachelor Of Information Technology

Programme Objectives

The main objectives of the course are:

- to think analytically, creatively and critically in developing robust, extensible and highly maintainable technological solutions to simple and complex problems.
- to apply their knowledge and skills to be employed and excel in IT professional careers and/or to continue their education in IT and/or related post graduate programmes.
- to be capable of managing complex IT projects with consideration of the human, financial and environmental factors.
- to work effectively as a part of a team to achieve a common stated goal.
- to adhere to the highest standards of ethics, including relevant industry and organizational codes of conduct.
- to communicate effectively with a range of audiences both technical and non-technical.
- to develop an aptitude to engage in continuing professional development.

Department of Information Technology

CLASS	COURSE/ COURSE CODE	COURSE OBJECTIVES	COURSE OUTCOMES
FYIT (SEM-I)	Imperative Programming	The objective of this course is to provide a comprehensive study of the C programming language, stressing upon the strengths of C, which provide the students with the means of writing modular, efficient, maintainable, and portable code.	1) Students should be able to write, compile and debug programs in C language. 2) Students should be able to use different data types in a computer program. 3) Students should be able to

			<p>design programs involving decision structures, loops and functions.</p> <p>4) Students should be able to explain the difference between call by value and call by reference</p> <p>5) Students should be able to understand the dynamics of memory by the use of pointers.</p> <p>6) Students should be able to use different data structures and create/update basic data files.</p>
Digital Electronics	To understand the structure and operation of modern processors and their instruction sets		<p>1) To learn about how computer systems work and underlying principles</p> <p>2) To understand the basics of digital electronics needed for computers</p> <p>3) To understand the basics of instruction set architecture for reduced and complex instruction sets</p> <p>4) To understand the basics of processor structure and operation</p> <p>5) To understand how data is transferred between the processor and I/O devices</p>
Operating Systems	Learners must understand proper working of operating system. To provide a sound understanding of Computer operating system, its structures, functioning and algorithms.		<p>1. To provide a understanding of operating system, its structures and functioning</p> <p>2. Develop and master understanding of algorithms used by operating systems for various purposes.</p>
Discrete Mathematics	The purpose of the course is to familiarize the prospective learners with mathematical structures that are fundamentally discrete. This course introduces sets and functions, forming and solving recurrence relations and different counting principles. These concepts are useful to study or describe objects or problems in computer algorithms and programming		<p>1) To provide overview of theory of discrete objects, starting with relations and partially ordered sets.</p> <p>2) Study about recurrence relations, generating function and operations on them.</p> <p>3) Give an understanding of graphs and trees, which are widely used in software.</p> <p>4) Provide basic knowledge</p>

		languages.	about models of automata theory and the corresponding formal languages.
	Communication Skills	To help learners develop their soft skills and develop their personality together with their technical skills. Developing professional, social and academic skills to harness hidden strengths, capabilities and knowledge equip them to excel in real work environment and corporate life. Understand various issues in personal and profession communication and learn to overcome them	<ol style="list-style-type: none"> 1) To know about various aspects of soft skills and learn ways to develop personality 2) Understand the importance and type of communication in personal and professional environment. 3) To provide insight into much needed technical and non-technical qualities in career planning. 4) Learn about Leadership, team building, decision making and stress management

CLASS	COURSE/ COURSE CODE	COURSE OBJECTIVES	COURSE OUTCOMES
FYIT (SEM-II)	Object oriented Programming	The objective of this course is to provide a comprehensive study of the C++ programming language, stressing upon the strengths of C++, which provide the students with the means of writing modular, efficient, maintainable, and portable code.	<ol style="list-style-type: none"> 1) Students should be able to write, compile and debug programs in C++ language. 2) Students should be able to use different data types in a computer program. 3) Students should be able to design programs involving decision structures, loops and functions. 4) Students should be able to explain the difference between call by value and call by reference 5) Students should be able to understand the dynamics of memory by the use of pointers. 6) Students should be able to use different data structures and create/update basic data files.
	Microprocessor Architecture	To understand the structure and operation of modern processors and	1) To learn about how computer systems work and

		their instruction sets	<p>underlying principles</p> <ol style="list-style-type: none"> 2) To understand the basics of digital electronics needed for computers 3) To understand the basics of instruction set architecture for reduced and complex instruction sets 4) To understand the basics of processor structure and operation 5) To understand how data is transferred between the processor and I/O devices
	Web Programming	To provide insight into emerging technologies to design and develop state of - the art web applications using client-side scripting, server-side scripting, and database connectivity.	<ol style="list-style-type: none"> 1. To design valid, well-formed, scalable, and meaningful pages using emerging technologies. 2. Understand the various platforms, devices, display resolutions, viewports, and browsers that render websites 3. To develop and implement client-side and server-side scripting language programs. 4. To develop and implement Database Driven Websites. 5. Design and apply XML to create a markup language for data and document centric applications.
	Numerical and Statistical Methods	The purpose of this course is to familiarize students with basics of Statistics. This will be essential for prospective researchers and professionals to know these basics.	<ol style="list-style-type: none"> 1) Enable learners to know descriptive statistical concepts 2) Enable study of probability concept required for Computer learners
	Green Computing	To familiarize with the concept of Green Computing and Green IT infrastructure for making computing and information system environment sustainable. Encouraging optimized software and hardware designs for development of Green IT Storage, Communication and Services. To highlight useful approaches to	<ol style="list-style-type: none"> 1) Learn about green IT can be achieved in and by hardware, software, network communication and data center operations. 2) Understand the strategies, frameworks, processes and management of green IT

	embrace green IT initiatives.	
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CLASS	COURSE/ COURSE CODE	COURSE OBJECTIVES	COURSE OUTCOMES
SYIT (SEM- III)	Python Programming	<p>1)The objective of this paper is to introduce various concepts of programming to the students using Python.</p> <p>2)The objective of this paper is to explore the style of structured programming to give the idea to the students how programming can be used for designing real-life applications by reading/writing to files, GUI programming, interfacing database/networks and various other features.</p>	<p>1) Students should be able to understand the concepts of programming before actually starting to write programs.</p> <p>2) Students should be able to develop logic for Problem Solving.</p> <p>3) Students should be made familiar about the basic constructs of programming such as data, operations, conditions, loops, functions etc.</p> <p>4) Students should be able to apply the problem solving skills using syntactically simple language i.e. Python (version: 3.X or higher)</p> <p>5) Students should be able to understand how to read/write to files using python.</p> <p>6) Students should be able to catch their own errors that happen during execution of programs.</p> <p>7) Students should get an introduction to the concept of pattern matching.</p> <p>8) Students should be made familiar with the concepts of GUI controls and designing GUI applications.</p> <p>9) Students should be able to connect to the database to move the data to/from the application.</p> <p>10) Students should know how to connect to computers, read from URL and send email.</p>

	Data Structures	To explore and understand the 2 concepts of Data Structures and its significance in programming. Provide and holistic approach to design, use and implement abstract data types. Understand the commonly used data structures and various forms of its implementation for different applications using Python.	1) Learn about Data structures, its types and significance in computing 2) Explore about Abstract Data types and its implementation 3) Ability to program various applications using different data structure in Python
	Computer Networks	In this era of Information, its computation and its exchange techniques, Learner should be able to conceptualize and understand the framework and working of communication networks. And on completion, will be able to have a firm grip over this very important segment of Internet.	1.Learner will be able to understand the concepts of networking, which are important for them to be known as a ' <i>networking professionals</i> '. 2. Useful to proceed with industrial requirements and International vendor certifications.
	Database Management Systems	To develop understanding of concepts and techniques for data management and learn about widely used systems for implementation and usage.	1. Master concepts of stored procedure and triggers and its use. 2. Learn about using PL/SQL for data management 3. Understand concepts and implementations of transaction management and crash recovery
	Applied Mathematics	The course is designed to have a grasp of important concepts of Applied Mathematics in a scientific way. It covers topics from as basic as definition of functions to partial derivatives of functions in a gradual and logical way. The learner is expected to solve as many examples as possible to a get compete clarity and understanding of the topics covered.	1) Understanding of Mathematical concepts like limit, continuity, derivative, integration of functions. 2) Ability to appreciate real world applications which uses these concepts. 3) Skill to formulate a problem through Mathematical modeling and simulation.

CLASS	COURSE/ COURSE CODE	COURSE OBJECTIVES	COURSE OUTCOMES
SYIT (SEM- IV)	Core Java	The objective of this course is to teach the learner how to use Object Oriented paradigm to develop code and understand the concepts of Core Java and to cover-up with the pre-requisites of Core java.	<ol style="list-style-type: none"> 1. Object oriented programming concepts using Java. 2. Knowledge of input, its processing and getting suitable output. 3. Understand, design, implement and evaluate classes and applets. 4. Knowledge and implementation of AWT package.
	Introduction to Embedded Systems	<p>Students completing this course will be well positioned to:</p> <ol style="list-style-type: none"> 1. Discuss the major components that constitute an embedded system. 2. Implement small programs to solve well-defined problems on an embedded platform. 3. Develop familiarity with tools used to develop in an embedded environment. 	<ol style="list-style-type: none"> 1. Understanding what is a microcontroller, microcomputer, embedded system. 2. Understand different components of a micro-controller and their interactions. 3. Become familiar with programming environment used to develop embedded systems 4. Understand key concepts of embedded systems like IO, timers, interrupts, interaction with peripheral devices 5. Learn debugging techniques for an embedded system
	Computer Oriented Statistical Techniques	The purpose of this course is to familiarize students with basics of Statistics. This will be essential for prospective researchers and professionals to know these basics.	<ol style="list-style-type: none"> 1) Enable learners to know descriptive statistical concepts 2) Enable study of probability concept required for Computer learners
	Software Engineering	The main objective is to introduce to the students about the product that is to be engineered and the process that provides a framework for the engineering technology.	<ol style="list-style-type: none"> 1. Students will demonstrate basic knowledge in software engineering. 2. Students will be able to plan, design, develop and validate

		<p>1.To provide knowledge of software engineering discipline.</p> <p>2.To analyze risk in software design and quality.</p> <p>3.To introduce the concept of advance software methodology.</p>	<p>te the software project.</p> <p>3.Students will be apply advance software methodology to create high quality WebApps.</p> <p>4.Students will have an understanding of impact of sound engineering principles.</p>
	Computer Graphics and Animation	<p>1 To equip students with the fundamental knowledge and basic technical competence in the field of computer graphics.</p> <p>2 To emphasize on implementation aspect of Computer Graphics Algorithms.</p> <p>3 To prepare the student for advance areas like Image Processing or Computer Vision or Virtual Reality and professional avenues in the field of Computer Graphics.</p>	<p>1 Understand the basic concepts of Computer Graphics.</p> <p>2 Demonstrate various algorithms for scan conversion and filling of basic objects and their comparative analysis.</p> <p>3 Apply geometric transformations, viewing and clipping on graphical objects.</p> <p>4 Explore solid model representation techniques and projections.</p> <p>5 Understand visible surface detection techniques and illumination models</p>

CLASS	COURSE/ COURSE CODE	COURSE OBJECTIVES	COURSE OUTCOMES
TYIT (SEM-V)	Software Project Management	<p>1. To familiarize the students with the use of a structured methodology/approach for each and every unique project undertaken, including utilizing project management concepts, tools and techniques.</p> <p>2. To appraise the students with the project management life cycle and make them knowledgeable about the various phases from project initiation through closure.</p>	<p>1. Apply selection criteria and select an appropriate project from different options.</p> <p>2. Write work break down structure for a project and develop a schedule based on it.</p> <p>3. Identify opportunities and threats to the project and decide an approach to deal with them strategically.</p> <p>4. Use Earned value technique and determine & predict status of the project.</p> <p>5. Capture lessons learned during project phases and document them for future reference</p>

Internet of Things	To learn about SoC architectures; Learn how Raspberry Pi. Learn to program Raspberry Pi. Implementation of internet of Things and Protocols.	<ol style="list-style-type: none"> 1. Enable learners to understand System On Chip Architectures. 2. Introduction and preparing Raspberry Pi with hardware and installation. 3. Learn physical interfaces and electronics of Raspberry Pi and program them using practical's 4. Learn how to make consumer grade IoT safe and secure with proper use of protocols.
Advanced Web Programming	To explore .NET technologies for designing and developing dynamic, interactive and responsive web applications.	<ol style="list-style-type: none"> 1. Understand the .NET framework 2. Develop a proficiency in the C# programming language 3. Proficiently develop ASP.NET web applications using C# 4. Use ADO.NET for data persistence in a web application
Artificial Intelligence	Artificial Intelligence (AI) and accompanying tools and techniques bring transformational changes in the world. Machines capability to match, and sometimes even surpass human capability, make AI a hot topic in Computer Science. This course aims to introduce the learner to this interesting area.	After completion of this course, learner should get a clear understanding of AI and different search algorithms used for solving problems. The learner should also get acquainted with different learning algorithms and models used in machine learning.
Linux System Administration	Demonstrate proficiency with the Linux command line interface, directory & file management techniques, file system organization, and tools commonly found on most Linux distributions. Effectively operate a Linux system inside of a network environment to integrate with existing service solutions. Demonstrate the ability to troubleshoot challenging technical problems typically encountered when	Learner will be able to develop Linux based systems and maintain. Learner will be able to install appropriate service on Linux server as per requirement. Learner will have proficiency in Linux server administration.

		operating and administering Linux systems.	
	Enterprise Java	Explore advanced topic of Java programming for solving problems.	1) Understand the concepts related to Java Technology 2) Explore and understand use of Java Server Programming

CLASS	COURSE/ COURSE CODE	COURSE OBJECTIVES	COURSE OUTCOMES
TYIT (SEM- VI)	Software Quality Assurance	I. Basic software debugging methods. II. White box and Black box testing methods III. Writing the testing plans IV. Different testing tools	1: Identify the reasons for bugs and analyze the principles in software testing to prevent and remove bugs. 2: Implement various test processes for quality improvement 3: Apply the software testing techniques in commercial environments 4: Provides practical knowledge of a variety of ways to test software and an understanding of some of the trade-offs between testing techniques. 5: Familiar with the open source testing tools.
	Security in Computing	To provide students with knowledge of basic concepts of computer security including network security and cryptography.	Understand the principles and practices of cryptographic techniques. Understand a variety of generic security threats and vulnerabilities, and identify & analyze particular security problems for a given application. Understand various protocols for network security to protect against the threats in a network
	Business Intelligence	1. To introduce the concept of data Mining as an important tool for enterprise data management and as a cutting edge technology for building competitive advantage.	1. Demonstrate an understanding of the importance of data mining and the principles of business intelligence 2. Organize and

		<p>2. To enable students to effectively identify sources of data and process it for data mining</p> <p>3. To make students well versed in all data mining algorithms, methods of evaluation.</p> <p>4. To impart knowledge of tools used for data mining</p> <p>5. To provide knowledge on how to gather and analyze large sets of data to gain useful business understanding.</p>	<p>Prepare the data needed for data mining using pre preprocessing techniques</p> <p>3. Perform exploratory analysis of the data to be used for mining.</p> <p>4. Implement the appropriate data mining methods like classification, clustering or Frequent Pattern mining on large data sets.</p> <p>5. Define and apply metrics to measure the performance of various data mining algorithms.</p>
	Principles of Geographic Information Systems	<p>It introduces participant to the fundamentals of GIS, GPS, data models, data sources, databases, cartography, introduction to Global Positioning Systems (GPS) and geospatial metadata.</p> <p>It prepares the candidate for the geospatial modeling and analysis.</p>	<p>1. describe what GIS is; name the major GIS software available; know where to find more information;</p> <p>2. explain the components and functionality of a GIS and the differences between GIS and other information systems;</p> <p>3. understand the nature of geographic information and explain how it is stored in computer (including map projection) and the two types of GIS data structure;</p> <p>4. conduct simple spatial analysis using GIS software;</p> <p>5. design and complete a GIS project from start to finish (data capture, data storage and management, analysis, and presentation);</p>
	Enterprise Networking	<p>In this era of Information, its computation and its exchange techniques, Learner should be able to conceptualize and understand the framework and working of communication networks. And on completion, will be able to have a firm grip over this very important segment of Internet.</p>	<p>1. Learner will be able to understand the concepts of networking, which are important for them to be known as a 'networking professionals'.</p> <p>2. Useful to proceed with industrial requirements and International vendor certifications.</p>
	IT Service Management	<p>The course is designed as an introduction and practical implementation of Information</p>	<p>- Ability to identify IT services as a means to provide functionality and</p>

		<p>Technology Service Management (ITSM) and enables the students to understand how an integrated ITSM framework can be utilized to achieve IT business integration, cost reductions and increased productivity.</p>	<p>value to customers in the context of specific case studies.</p> <ul style="list-style-type: none"> - Ability to understand the needs and targets of the different stakeholders (service providers, customers, suppliers/partners) in the services value chain. - Ability to understand the value of a service management framework as a means to help consultants and firms to establish a common understanding to ground a service management approach. - Ability to understand the service management processes - Ability to specify the service management system for given customers - Ability to select the appropriate tools to support a given designed service management solution.
	<p>Cyber Laws</p>	<ol style="list-style-type: none"> 1. To understand and identify different types cybercrime and cyber law 2. To recognized Indian IT Act 2008 and its latest amendments 3. To learn various types of security standards compliances 	<ol style="list-style-type: none"> 1. Understand the concept of cybercrime and its effect on outside world 2. Interpret and apply IT law in various legal issues 3. Distinguish different aspects of cyber law 4. Apply Information Security Standards compliance during software design and development

Department Of Rural Development

OBJECTIVE

- 1) To introduce students with Rural development.
- 2) Description about community development.
- 3) Explain different Govt. Schemes.
- 4) How to strengthen democracy in rural India.
- 5) Concept of Animal Husbandry and dairy development.
- 6) Study of successful mil co operative in Maharashtra.
- 7) Introduction in leadership theories of leadership
- 8) To understand the concept of Human rights.
- 9) Vulnerable groups in India.

Class	Course / Course Code Title	Course Objective	Course Outline
M.A.R.D. Part I Sem. I	Paper I Rural development theories	1) To define history of rural development 2) Explain / understand community development approach 3) Theories of rural development	Awareness about history of rural development, knowledge of RD theories
M.A.R.D. Part I Sem. I	Paper II Rural Development policy planning and administration	1) Explain different Govt. schemes 2) Micro level planning 3) Local self Govt.	How to implement Govt. Schemes Local leadership development
M.A.R.D. Part I Sem. I	Paper III Introduction to Rural sociology	1) To define and explain rural sociology. 2) To provide key insights in to the discipline of rural sociology 3) To study village community in India context	Knowledge about rural sociology, rural community
M.A.R.D. Part I Sem. I	Paper IV Introduction to social work	1) Meaning of social work, need, values and principles of social work profession 2) Methods of social work, major field of social work. 3) Social research description	Knowledge about social work Awareness about social problems
M.A.R.D. Part I Sem. II	Paper V Significant issues in agriculture	1) Role of agriculture in Indian economy 2) Explain issues in agriculture 3) Farmers problems in Maharashtra state	Understand about Indian economy Knowledge about agricultural issues
M.A.R.D Part I Sem. II	Paper VI Rural Industrialization	1) Importance of rural industries in rural development 2) Description about Gandhian	Knowledge about rural employment program awareness about agro

		<p>approach</p> <p>3) Explain about agro based industries</p> <p>4) Description of all entrepreneur development</p>	based industries
M.A.R.D. Part I Sem. II	Paper VII Rural finance and self help groups in rural India	<p>1) Explain rural finance, financial institution in rural India</p> <p>2) Co-operation in society</p> <p>3) Peoples participation in Govt. schemes</p>	<p>Knowledge about rural finance, SHG</p> <p>Awareness about social problems</p>
M.A.R.D. Part I Sem. II	Paper VII Management of voluntary sector organization in rural areas	<p>1) To explain voluntary social work, principle of voluntary social work</p> <p>2) Significance of voluntary sector in Maharashtra</p> <p>3) Principle and practice of management of nonprofit sector</p>	<p>Knowledge about professional social work, social problems NGO work</p>
M.A. R.D. Part II Sem. III	Research Methodology for Rural Development (MARD3.1)	<p>1) To Introduce the learner to the field of social research and research process</p> <p>2) To help learner identify various research designs and sampling techniques</p> <p>3) To introduce the learner with tools and techniques or data collection</p>	Aware about research methodology
M.A. R.D. Part II Sem. III	Agriculture and rural development (MARD3.3)	<p>1) To understand the importance of agriculture sector in Indian economy and rural development</p> <p>2) To study the various trends of agriculture</p> <p>3) To understand the contemporary situation of agriculture in India</p>	<p>Knowledge about importance of agriculture.</p> <p>Different trends in agriculture</p>
M.A. R.D. Part II Sem. III	Dairy and animal husbandry and rural development (MARD3.6)	<p>1) To acquaint the concept of animal husbandry and dairy development and its role in rural development</p> <p>2) To understand the prospects of animal husbandry and its allied activities and management</p>	<p>Knowledge about traditional and modern dairy developments</p> <p>Climate change goat farming , sheep etc</p>
M.A. Part II	Rural Resource Management (MARD3.8)	<p>1) To understand the nature and characteristics of rural resources and its importance in rural development</p> <p>2) To understand various</p>	<p>Awareness about natural resources</p> <p>Knowledge about living resource</p>

		resources available in rural India such as land, water and human and other resource	
M.A. Part II Sem. IV	Research project with dissertation (MARD4.1)	1) To study survey, data collection 2) Different methods of data collection	Knowledge of research survey etc
M.A. Part II Sem. IV	Internship with CBO/NGO/Govt. corporate sector (MARD4.2)	1) How to work in organization 2) Functions, communication with people	Awareness about communication, function dealing with different types of people
M.A. Part II Sem. IV	Leadership Development skill (MARD4.4)	1) Introduction to leadership 2) Leadership skill development 3) Strategic leadership and knowledge management	Knowledge about leadership, skills Types, qualities
M.A. Part II Sem. IV	Human rights and vulnerable groups (MARD4.6)	1) To understand the concept of human rights 2) To apply human rights with vulnerable groups in India 3) To understand the role of various organizations in promoting human rights in India	Awareness about human rights Knowledge about different organization Human rights

Course Objective & Course Outcomes PHYSICS P.G.

Department	Physics (P.G.)
Co-coordinator	Dr.Survase L.S.
HOD	Dr. Mane T.B.

Course Aim - The aim of the course is to train postgraduates with advanced knowledge and understanding of nuclear physics and technology with higher order critical, analytical, problem solving and research skills; ability to think rigorously and independently to meet higher level expectations of academia and research with sufficient transferrable skills.

Class	Semester	Course/Course Code/Title	Course Objective	Course Outcome
M.Sc. Part I	Sem I	Paper I Mathematical methods(PSPH101)	<ul style="list-style-type: none"> ●Impart higher level knowledge and understanding of physics and technology ● Apply the theory of physics for 	Knowledge and Understanding <ul style="list-style-type: none"> ●Identify the basic constituents of matter and describe the interactions between them
	Sem I	Paper II Classical Mechanics(PSPH102)		
	Sem I	Paper III Quantum Mechanics I (PSPH103)		
	Sem I	Paper IV Solid state physics (PSPH104)		

			newer applications	<ul style="list-style-type: none"> • Enumerate the various types of nuclear reactors and distinguish them • Explain the techniques of electronic waste management • Discuss the use of electronics in daily use
	Sem II	Paper I Advanced Electronics (PSPH201)	<ul style="list-style-type: none"> • Enable students to analyses mathematical models of physical systems for enhancement of system performance and arrive at limitations of physical systems 	
	Sem II	Paper II Electrodynamics (PSPH202)		
	Sem II	Paper III quantum Mechanics II (PSPH203)		
	Sem II	Paper IV Solid State Device (PSPH204)		
M.Sc. Part II	Sem III	Paper I Statistical Mechanics (PSPH302)	<ul style="list-style-type: none"> • Enhance students' ability to develop mathematical models of defined physical systems • Prepare students to evaluate the soundness of concepts proposed • Students' skills to pursue physics as a teaching and research career • Train students in team work and in lifelong learning for continuous professional development 	<p>Capability /Transferable Skills</p> <ul style="list-style-type: none"> • Communicate and present ideas clearly and concisely • Perform under constraints to meet the desired objectives • Build, work and lead teams effectively • Adopt a reflective approach to personal development and embrace the philosophy of continual professional development
	Sem III	Paper II Nuclear Physics (PSPH302)		
	Sem III	Paper III Signal modulation and transmission technique (PSPHET307)		
	Sem III	Paper IV Microwave Electronics, RADAR and Optical fiber communication (PSPHET308)		
	Sem IV	Paper I Experimental Physics (PSPH401)		
	Sem IV	Paper II Atomic And molecular Physics (PSPH402)		
	Sem IV	Paper III Digital communication system and PYTHON programming (PSPHET407)		
	Sem IV	Paper IV Computer Networking (PSPHET408)		

M.Sc Environmental Science
Programme Outcomes

PO1: Intellectual Flexibility - Students will possess the intellectual flexibility necessary to view environmental questions from multiple perspectives and prepared to change their understanding as they develop new vision towards environmental issues.

PO2: Problem Solving - Students will solve problems systematically, creatively and apply innovative techniques. It will help to assemble knowledge and formulate strategy.

PO3: Interdisciplinary Approach - When encountering environmental problems students will assess necessary scientific concepts and data. Relate environmental issues with socio-economical and cultural aspects.

PO4: Research - When encounter with various questions that lie beyond their current knowledge base, students will actively research data, concepts, histories, and narratives necessary for adequate consideration of the issue.

PO5: Communication - Students will communicate with precision, effective art and sound language speech. Data collection and survey will develop communication skills among the students.

PO6: Values - Reflecting upon their internalized values system, students will continue to evolve an individual vision of harmonious and sustainable interaction among humans as well as between humans and environmental.

PO7: Knowledge – Students will have mastered foundational knowledge enabling them to make sound life decisions as well as enter a career in an environmental profession or graduate school.

PO7: Understanding- To deal with environmental issues one must understand not only scientific concepts, but also the social interactions by which humans behave and the cultural values that underlay behaviors.

Class	Course/ Course Code/Title	Course Objective	Course Outcome
M.Sc Environm ental Science, Part I, Semester-I	PSEVS101 Ecology and Ecosystem	<ol style="list-style-type: none"> 1. To understand concept and scope of ecology. 2. To study different types of ecology. 3. To study various interactions between the organisms. 4. To construct ecological pyramid 5. To study different biogeochemical cycles. 6. To understand succession process 	<ol style="list-style-type: none"> 1. To understand basic concept of ecology. 2. To understand different aspects of marine ecology. 3. Students will be able to understand ecological concepts. 4. Students will be able to understand the correlation between components of the ecology.
	PSEVS 102 Biodiversity	<ol style="list-style-type: none"> 1. To understand concept of ecosystem. 2. To study ecological and economical importance of biodiversity. 3. To study different types of biodiversity. 4. To understand national and global status of biodiversity. 5. To study role different organizations in biodiversity conservation. 6. To study different methods of conservation. 	<ol style="list-style-type: none"> 1. Students will understand need of conservation of biodiversity. 2. Students will know the endangered and threatened animals and plants
	PSEVS103 Environment and natural resources	<ol style="list-style-type: none"> 1. To understand structure and composition of atmosphere. 2. To study Indian monsoon pattern 3. To study different types of natural resources. 4. To study renewable and non- renewable natural resources. 5. To study use and overexploitation of resources. 	<ol style="list-style-type: none"> 1. To understand earth and environment. 2. Student will know the importance and need to conserve natural resources.
	PSEVS104 Environmental Pollution	<ol style="list-style-type: none"> 1. To study different types of pollution. 2. To study sources and 	<ol style="list-style-type: none"> 1. Students will know the impact of pollution and degradation of ecosystem

		<p>impacts of pollution.</p> <ol style="list-style-type: none"> To understand solid waste pollution. To study basic properties of sound waves. To study oil pollution and its impact. 	<p>due to anthropogenic impact.</p> <ol style="list-style-type: none"> Students will adopt different ways to manage the pollution.
M.Sc Environmental Science, Part I, Semester-II	PSEVS201 Environmental Monitoring and Assessment	<ol style="list-style-type: none"> To study environmental quality. To understand the need of EIA. To study different methods of EIA To evaluate merits and demerits of EIA To study concept and application of remote sensing. To study GIS 	<ol style="list-style-type: none"> Student will learn use of remote sensing in environmental science. Students will understand how to maintain the environmental quality.
	PSEVS202 Pollution Control Technology	<ol style="list-style-type: none"> To understand the concept of bioremediation. To study anaerobic and aerobic methods of water treatment. To study air pollution control methods. To study phytoremediation. To study different methods of solid waste disposal. 	<ol style="list-style-type: none"> To understand different methods applied in water treatment. To understand use of different microbes in pollution control.
	PSEVS203 Green Technology	<ol style="list-style-type: none"> To understand the concept and principle of green technology. To study green synthesis methods. To study tools of green chemistry. To study concept and application of nano technology. To understand implementation of nano technology in resource conservation. 	<ol style="list-style-type: none"> Students will acquire knowledge about the technology that is least harmful to environment. Students will understand that sustainable development is need of hour.

	PSEVS204 Environmental Policies and Regulations	<ol style="list-style-type: none"> 1. To study the role of international agencies to conserve the nature. 2. To understand the initiatives taken at international level to conserve the environment. 3. To study international environmental treaties and conventions. 4. To study the objectives and provision of Acts and Rules made by Indian Government to conserve environmental. 	<ol style="list-style-type: none"> 1. Students will understand the initiatives taken by IndianGovt for conservation of resources. 2. Students will understand the efforts taken by different organization to safeguard the biodiversity.
M.Sc Environm ental Science, Part II, Semester- III	PSEVS 301 Advanced Pollution Control Technology	<ol style="list-style-type: none"> 1. To study different method used to treat waste water. 2. To study different method used to treat drinking water. 3. To study different method used to control air pollution. 4. To understand sources and management of hazardous waste pollution. 	<ol style="list-style-type: none"> 1. Students will acquire innovative methods to cope with the pollution. 2. To understand the present pollution control methods.
	PSEVS 302 Instrumentatio n and Biostatistics	<ol style="list-style-type: none"> 1. To understand the techniques of environmental Monitoring. 2. To study characterization of samples. 3. To study different instruments used for analysis. 4. To study the bio statistical tools applied in environmental studies. 	<ol style="list-style-type: none"> 1. Students will learn to apply bio statistical tools in research. 2. Students will acquire knowledge of different instruments used for analysis.
	PSEVS 303 Environmental Toxicology	<ol style="list-style-type: none"> 1. To study the basic concept of eco-toxicology. 2. To understand the factors affecting toxicity. 3. To study sources and 	<ol style="list-style-type: none"> 6. Students will concept of toxicity and route of toxicants. 7. To understand impact of toxins. 8. To understand specific

		<p>entry routes of toxins.</p> <ol style="list-style-type: none"> To study organ toxicity. To understand dose response curve. 	<p>activity of toxicants..</p>
	PSEVS 304 Industrial Hygiene and Chemical Safety	<ol style="list-style-type: none"> To understand scope and significance of industrial hygiene. To study various occupational stresses. To study the methods to monitor the work place. To study natural disasters. To study the disaster management plan. To study the protective equipment used in industries. 	<ol style="list-style-type: none"> Students will understand the importance to safety and hygiene in industry. Students will acquire knowledge regarding hazards in industries and how to minimize them.
M.Sc Environmental Science, Part II, Semester-IV	PSEVS 401 Eco Technology	<ol style="list-style-type: none"> To understand the concept of eco-technology. To understand Gandhian philosophy. To study different phytosanitation techniques. To understand carbon sequestration. To study the method of restoration and conservation of resources. 	<ol style="list-style-type: none"> Students will understand the need of rural areas. Students will understand climate change mitigation at national and international level.
	PSEVS 402 Environmental Biotechnology and Nanotechnology	<ol style="list-style-type: none"> To study recombinant DNA technology. To study bioremediation and phytoremediation. To study the application of biotechnology in agriculture. To study the different types of bio pesticides and fertilizers. To study the application of nano- technology. 	<ol style="list-style-type: none"> Students will get knowledge about the application of biotechnology. To understand appropriate use of technology in agriculture.
	PSEVS 403 Sustainable Management	<ol style="list-style-type: none"> To understand the concept of sustainable development. To study different initiatives taken at 	<ol style="list-style-type: none"> To understand the need of sustainable development. Students will understand different ways of

		<p>nation and international level</p> <ol style="list-style-type: none"> 3. To study sustainable business strategy. 4. To understand sustainable urban development. 5. To study various sustainable practices adopted for conservation of resources. 	sustainable development.
	PSEVS 404 Environmental Management	<ol style="list-style-type: none"> 1. To study the principles of environmental management. 2. To understand the procedure of lifecycle assessment. 3. To study the process of environmental audit. 4. To study the principle and benefits of environmental design. 	<ol style="list-style-type: none"> 5. Students will get knowledge of life cycle assessment process. 6. To understand evaluation techniques implemented to assess the performance