त्रिमुर्ती शिक्षण संस्थेचे
श्रीमती विमलबाई उत्तमराव पाटील कला
व कै.डॉ.भास्कर सदाशिव देसले विज्ञान
महाविद्यालय,साक्री जि.धुळे ४२४३०४

Trimurti Shikshan Sanstha,Sakri
Smt. Vimalbai Uttamrao Patil Arts
& Late Dr. Bhaskar Sadashiv Desale
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2.6.1: Programme Outcomes (POs) and Course Outcomes (COs) for all Programmes offered by the institution are stated and displayed on the website and attainment of POs and COs are evaluated.

- **Programme Outcomes (PO's)**
- **Programme Specific Outcomes (PSO's)**
- **Course Outcomes (CO's)**

UG & PG Programme & Courses

Arts	Science
Marathi	Chemistry
Hindi	Computer Science
English	Information Technology
Geography	Microbiology
History	Physics
Defense Studies	Mathematics
Sociology	Zoology
Political Science	Electronics
Economics	
Education	
History (M.A.)	

➢ Department of Marathi

➢ Programme Outcomes: B.A. Marathi:-

Sr. No.	Programme Outcomes (PO's)
PO's	मातृभाषा व साहित्यातून मानवी जीवनव्यवहार समजून घेता येतो तसेच युवक वयोगटातील विद्यार्थ्यांची भाषा व वाङ्मयविषयक मनोभूमिका दृढ होते.
PO's	समाजव्यवहारात भाषेचे यथोचित आकलन व वापर करण्याची क्षमता विकसित होते. भाषा व संस्कृती आणि साहित्य व संस्कृती यांचा अनुबंध समजून घेता येतो.
PO's	समाजामध्ये वावरण्यासाठीची संवेदनशीलता विकसित होते.व्यक्तिमत्त्व विकास साध्य करता येतो.
PO's	साहित्य व संस्कृतीविषयी ज्ञान संग्रहण, संक्रमण प्रक्रिया गतिमान होते.भाषेवर प्रभुत्व निर्माण करता येते.
PO's	साहित्यातील जीवनदर्शन, समकाल, व्यवहार यांची जाणीव होते.

➢ Programme Specific Outcomes: B.A. Marathi: -

Sr. No.	Programme Specific Outcomes (PSO's)
PSO 1	वाङ्मयीन मराठीतून विध्यार्थ्यांना कथा, कविता, कादंबरी, नाटक, चरित्र आत्मचरित्र, ललिततगद्य या वाङ्मय प्रकारांचा विध्यार्थ्यांना परिचय होतो व हे साहित्य प्रकार विध्यार्थी आत्मसात करून लेखनास प्रवृत होतात.
PSO 2	विद्यार्थ्यांना बीए मराठी विषय घेण्यामागे शिक्षण शासकीय खाजगी न्यायालय प्रकाशन संस्था अधिक क्षेत्रात नोकरीची संधी उपलब्ध होते तसेच स्वतःचा व्यवसाय स्पर्धापरीक्षेच्या दृष्टीने भाषेचा व्याकरणिक अभ्यास उपयोगी पडतो घरातील व्यक्तींमध्ये चांगले संभाषण करता येते त्याचप्रमाणे व्याकरणाचे साहित्याचे ज्ञान मिळण्यासाठी लेखन कौशल्य अवगत करण्यासाठी मराठी भाषेचा उपयोग महत्त्वाचा ठरतो.

PSO 3	संवादाची क्षमता विकसीत करणे व भाषा कौशल्य विकसीत करणे.
PSO 4	मराठी व्याकरणाचा आस्वाद घेऊन आकलन क्षमता विकसीत करणे.
PSO 5	उत्तम दर्जाची व्यवसायिक कृती वृत्ती निर्माण करून उद्योगाची दिशा दाखवता येते.
PSO 6	नाटकातील सुखात्मिका शोकात्मिका यांचे स्वरूप व वैशिष्ट्य समजून घेता येते.

➢ Course Outcomes: B.A. Marathi: -

Sr. No.	Class	Course	Course Outcomes
CO 1	F.Y.B.A Sem- I	विशिष्ट वाडमय प्रकारचा अभ्यास :कथा	1) कथा वाडमय प्रकाराचा परिचय करून देणे.2) कथेचे विविध घटक समजावून घेणे 3) कथेचे स्वरूप वैशिष्ट्ये प्रकार व वाटचाल समजून घेणे.
CO 2	F.Y.B.A. Sem II	विशिष्ट वाडमय प्रकारचा अभ्यास :कविता	1)कविता वाडमय प्रकाराचा परिचय करून देणे.2) कवितेचे विविध घटक समजावून घेणे. 3) कवितेचे स्वरूप वैशिष्ट्ये प्रकार व वाटचाल समजून घेणे.
CO 3	S.Y.B.A. Sem I DSC-C	विशिष्ट वाडमय प्रकारांचा अभ्यास: वैचारिक गद्य लेखनाचा अभ्यास, शेतकऱ्याचा आसूड: महात्मा ज्योतिराव फुले.	1) मराठीतील वैचारिक गद्य लेखनाच्या परंपरेचा परिचय करून देणे. 2) महात्मा ज्योतिराव फुले यांचे जीवन कार्य व त्यांची वैचारिक जडण-घडण याबाबत जाणून घेणे. 3) शेतकऱ्याचा आसूड मधील वैचारिक आशयाचे स्वरूप वैशिष्ट्ये समजून घेणे.

CO 4	S.Y.B.A Sem II DSC-D	चरित्र-आत्मचरित्र यांच्या लेखनाचा अभ्यास . जीवन रंग चरित्र व आत्मचरित्र लेख.	1) मराठीतील चरित्र आत्मचरित्र लेखनाच्या परंपरेचा परिचय करून घेणे. 2) जीवनरंग पुस्तकातील निवडक चरित्रपर व आत्मचरित्रपर लेखांचे स्वरूप जाणून घेणे. 3) जीवनरंग या पुस्तकातील निवडक चरित्र व आत्मचरित्रपर लेखांची वांग्मयीन गुणवैशिष्ट्ये लक्षात घेणे.
CO 5	S.Y.B.A Sem I (S2)	साहित्यविचार (भारतीय आणि पाश्चात्य)	1) भारतीय आणि पाश्चात्य साहित्य विचारांचा परिचय करून देणे. 2) संस्कृत व पाश्चात्य प्रमुख साहित्य मीमांसक यांनी साहित्य स्वरूप आणि साहित्याचे प्रयोजन याविषयी मांडलेला विचारांचा परिचय करून घेणे. 3) साहित्यनिर्मितीच्या प्रधान व गौण कारणाची ओळख करून देणे.
CO 6	S.Y.B.A. Sem II (S2)	साहित्यविचार (भारतीय आणि पाश्चात्य)	1) साहित्याच्या भाषेचे स्वरूप जाणून घेताना शब्द शक्तीचे स्वरूप व प्रकार समजून घेणे. 2) साहित्याच्या भाषेचे स्वरूप जाणून घेताना पाश्चात्य साहित्य मिमांसका नी मांडलेल्या विविध संकल्पनांचा परिचय करून घेणे. 3) साहित्यातील रस प्रक्रिया संस्कृत साहित्य निर्माण सरकारने मांडलेल्या रस विचाराच्या आधारे जाणून घेणे.
CO 7	S.Y.B.A Sem I (S1) DSE-A	आधुनिक वाडमयीन प्रकारांचा अभ्यास :कादंबरी	1) कादंबरी या वाडमयीन प्रकाराचे स्वरूप व त्याची वैशिष्ट्ये जाणून घेणे. 2) आधुनिक मराठी कादंबरीच्या वाटचालीचा परामर्श घेणे. 3) अवकाळी पावसाच्या दरम्यानची गोष्ट या कादंबरीतील ग्रामीण जीवन वास्तवाचे स्वरूप व वांग्मयीन मूल्यमापन करणे.

CO 8	SYBA Sem II (S1) DSE-B	आधुनिक वाडमय प्रकार :कविता	1)आधुनिक मराठी कवितेच्या वाटचालीचा परामर्शघेणे.2) माझे विद्यापीठ या कवितासंग्रहातील विविध जीवन जाणिवांचा शोध घेणे. 3) माझे विद्यापीठ या कवितासंग्रहाचे वांग्मय मूल्यमापन करणे.
CO 9	S.Y.B.A Sem-I SEC	मराठी लेखन कौशल्य	1) मुद्रित शोधन चे स्वरूप आणि आवश्यकता जाणून घेणे.2) मुद्रित शोधन चे कौशल्य आत्मसात करणे.3) मुद्रित शोधन च्या खुणा अर्थ आणि उपयोजन या बाबत जाणून घेणे व मुद्रित शोधन चा सराव करणे. 4) विरामचिन्हे आणि लेखन विषयक नियम यांचे स्वरूप जाणून घेणे.
CO 10	S.Y.B.A. Sem-II SEC	मराठी लेखन कौशल्य :सर्जनशील लेखन	1) सर्जनशील लेखनाचे स्वरूप आणि त्याची वैशिष्ट्ये जाणून घेणे. 2)कथालेखनाची निर्मिती प्रक्रिया समजून कथा लेखनाचा सराव करणे. 3) नाट्यात्मक लेखनाची निर्मिती प्रक्रिया समजून नाट्यात म लेखनाचा सराव करणे.
CO 11	SYBA. Sem-I MIL	मुद्रित माध्यमांसाठी लेखन व संवाद.	1) वृत्तपत्र या मुद्रित माध्यमाचा विशेष परिचय करून घेणे. 2) वृत्तपत्र या मुद्रित माध्यमाचे कार्य त्याची उपयुक्तता जाणून घेणे.3) वृत्तपत्र माध्यमासाठी च्या जाहिरात लेखन, विविध वृत्तलेख, स्तंभ व सदर लेखन यांचे स्वरूप व तंत्र अवगत करणे.
CO 12	S.Y B.A.Sem-II MIL	श्राव्य माध्यमांसाठी लेखन व संवाद.	1) नभोवाणी या श्राव्य माध्यमाचा विशेष परिचय करून घेणे. 2) नभोवाणी या श्राव्य माध्यमात चे कार्य आणि त्याची उपयुक्तता जाणून घेणे. 3) नभोवाणी माध्यमासाठी च्या भाषण लेखन, श्रुतिका लेखन, युवकांसाठी च्या कार्यक्रमाचे लेखन यांचे स्वरूप व तंत्र अवगत करणे.

CO 13	T.Y.B.A Sem I DSE	एकांकिका लेखनाचा अभ्यास.	1) एकांकिका या नाट्य प्रकाराचे स्वरूप व त्याची वैशिष्ट्ये जाणून घेणे 2) मराठीतील एकांकिका लेखनाची वाटचाल लक्षात घेणे. 3) दलित एकांकिका लेखनाचे स्वरूप वैशिष्ट्ये व वाटचाल समजून निवडक दलित एकांकिकांचा अभ्यास करणे.
CO 14	T.Y.B.A Sem-II DSE	ललित गद्य लेखनाचा अभ्यास.	1) ललित गद्य वाडमयीन प्रकारची संकल्पना त्याचे स्वरूप वैशिष्ट्ये जाणून घेणे. 2) मराठीतील ललितगद्य लेखनाच्या वाटचालीचा परामर्श घेणे.3) स्त्रीविषयक निवडक ललितगद्य लेखनाचा अभ्यास करणे.
CO 15	T.Y.B.A. Sem-I DSC-3	मध्ययुगीन मराठी वाडमयीन इतिहास.	1) मध्ययुगीन मराठी वाडमयीन इतिहासाचा परिचय करून घेणे. 2) मध्ययुगीन मराठी वाडमयीन निर्मितीमागील प्रेरणा जाणून घेणे. 3) महानुभाव संप्रदायाच्या निर्मितीचे स्वरूप लक्षात घेऊन त्याची वैशिष्ट्ये जाणून घेणे. 4) शाहिरी काव्याचे स्वरूप लक्षात घेऊन त्याची ठळक वैशिष्ट्ये जाणून घेणे.
CO 16	TYBA Sem-II DSC-3	मध्ययुगीन मराठी वांग्मयाचा इतिहास.	1) वारकरी संप्रदायातील प्रमुख संत कवींच्या काव्यनिर्मितीचे स्वरूप जाणून घेऊन त्याची वैशिष्ट्ये लक्षात घेणे. 2) बखर वांग्मयीन निर्मितीचा परिचय करून घेवून त्याची ठळक वैशिष्ट्ये जाणून घेणे.3) निवडक ग्रंथकारांच्या साहित्यकृतींचा परिचय करून घेणे.
CO 17	T.Y.B.A. Sem-I DSE-4	मराठीचा भाषिक अभ्यास	1) भाषेचे स्वरूप आणि तिचे कार्य जाणून घेणे. 2) भाषा अभ्यासाच्या विविध अंगांचा परिचय करून घेणे. 3) भाषाकुळ संकल्पना समजून घेणे व मराठी भाषेच्या उत्पत्तीचे सिद्धांत जाणून घेणे.

CO 18	T.YB.A Sem-II DSE-4	मराठीचा भाषिक अभ्यास	1) मराठीच्या कालिक भेद व प्रांतिक भेदांचे स्वरूप व वैशिष्ट्ये जाणून घेणे. 2) मराठीच्या निवडक प्रमुख बोलींचे वैशिष्ट्य जाणून घेणे व मराठी वरील अन्य भाषांच्या प्रभावाचे स्वरूप लक्षात घेणे.
CO 19	T.Y.B.A. Sem I GE -A	मराठी लोकरंगभूमी	1) लोकरंगभूमी ची संकल्पना स्वरूप व वैशिष्ट्ये यांचा परिचय करून घेणे. 2) लोकसाहित्य आणि लोक रंगभूमी यांचे परस्पर संबंध समजून घेणे. 3) किर्तन आणि भारुड या लोक रंगभूमीच्या पारंपरिक रूपांची व खानदेशी वही आणि कोकणी दशावतार या प्रादेशिक प्रकारांची स्वरूप वैशिष्ट्ये जाणून घेणे.
CO 20	TYBA. Sem-II GE-B	मराठी लोकरंगभूमी	1) लोकनाट्य या रंगभूमीच्या आधुनिक रुपाची स्वरूप वैशिष्ट्ये जाणून घेणे. 2) तमाशा या लोक रंगभूमीच्या पारंपारिक रूपाची स्वरूप वैशिष्ट्ये जाणून घेणे.3) सत्यशोधक जलसे व आंबेडकरी जलसे तसेच पथनाट्य आणि रिंगण नाट्य या लोक रंगभूमीच्या आधुनिक रुपाची स्वरूप वैशिष्ट्ये जाणून घेणे.
CO 21	T.Y B.A.Sem-I MIL-3	माध्यमांसाठी लेखन व संवाद.	1) दूरचित्रवाणी या दृकश्राव्य माध्यमांचा विशेष परिचय करून घेणे व त्याची कार्यपद्धती आणि उपयुक्तता समजून घेणे.2) दूरचित्रवाणी साथीच्या मनोरंजनपर व माहितीपर कार्यक्रमाचे लेखन व जाहिरात लेखनाचे स्वरूप आणि तंत्र अवगत करणे.
CO 22	T.Y.B.A Sem-II MIL -4	आधुनिक समाज माध्यमांसाठी लेखन व संवाद.	1)आधुनिक समाज माध्यमांचा परिचय करून त्यांचे कार्य व त्यांची उपयुक्तता याबाबत जाणून घेणे. 2) इ मेल व ब्लॉग लेखनाचे स्वरूप लक्षात घेऊन ते लेखन तंत्र अवगत करणे. 3) फेसबुक ट्विटर व्हाट्सअप यूट्यूब या वरील लेखनाचे स्वरूप जाणून घेणे.

CO 23	T.Y.B.A Sem-I SEC -3	लेखन कौशल्य व निबंध लेखन.	1) निबंध लेखनाचे कौशल्य आत्मसात करणे. 2) निबंध लेखनाचे स्वरूप व त्याचे घटक जाणून घेणे. 3) निबंधाचे प्रकार लक्षात घेऊन त्यांच्या लेखना चा सराव करणे.
CO 24	T.Y.B.A. Sem-II SEC-4	लेखन कौशल्य व ग्रंथ परीक्षण लेखन.	1) ग्रंथ परीक्षण लेखनाचे कौशल्य आत्मसात करणे. 2) ग्रंथ परीक्षण लेखनाचे स्वरूप व प्रक्रिया जाणून घेणे. 3) विविध प्रकारांमधील ग्रंथांचे परीक्षण करून लिहिण्याचा सराव करणे.
CO 25	F.Y.B.SC. Sem-I AEC	कथा आणि संवाद कौशल्य यांचा अभ्यास.	1) माणदेशी माणसं या कथासंग्रहातील कथानक संघर्ष व्यक्तिचित्र प्रसंग वर्णन भाषा या अंगाने जाणवणारी वैशिष्ट्ये लक्षात घेणे. 2) संवाद कौशल्य साठी आवश्यक बाबींचा परिचय करून घेणे. 3) संवादाच्या औपचारिक व अनौपचारिक प्रकारांचा परिचय करून घेणे. 4) भाषण सादरीकरण वाद-विवाद सूत्रसंचालन गटचर्चा या संवाद कौशल्य यांचे स्वरूप स्पष्ट करून त्यांचे उपयोजन करण्यास शिकविणे.
CO 26	SYB.SC. Sem-.I&II .AEC	मराठी कथा आणि उपयोजित लेखन.	1)विज्ञान कथा व विनोदी कथा प्रकारांचा परिचय करून घेणे.2) विज्ञानाच्या क्षेत्रातील विविध विषयांबाबत मराठीतून लेखन करण्यास प्रोत्साहन देणे व त्याचे कौशल्य जाणून घेणे. 3) वैज्ञानिक संज्ञा संकल्पना बाबत विज्ञान कशासाठी नोंद लेखन करण्याचे तंत्र आत्मसात करणे 4) वैज्ञानिक दृष्टिकोन विकसित करण्यास सहाय्यभूत ठरणे.

➢ Department of Hindi

➢ Programme Outcomes: B. A. Hindi :-

बी.ए. में प्रवेश के इच्छुक छात्र कार्यक्रम में निम्नलिखित गुणवत्ता होणे की उम्मीद है। जो उन्हे अपने भविष्य में अपेक्षीत लक्षों कों प्राप्त करने में मदत करती है।.

Sr. No.	Programme Outcomes (PO's)
PO's	मानविय मुल्यों की प्राप्ती।
PO's	समाजसेवा की भावना।
PO's	जिम्मेदार और कतिव्यपरायण नागरिका ।
PO's	रचनात्कम क्षमता।
PO's	गंभिर स्वभाव।
PO's	काव्यशास्त्र का सामान्य परिचय कराना ।

➢ Programme Specific Outcomes: B.A. Hindi : -

Sr. No.	Programme Specific Outcomes (PSO's)
PSO1	छात्रो को हिन्दी भाषा से अवगत कराना ।
PSO2	छात्रो को प्रतीयोगीता परीक्षा के लीये तैयार कराना ।
PSO3	छात्रो को हिन्दी मे कार्य करने की विचार क्षमता , कल्पनाशिलता विकषित कराना ।

➢ Course Outcomes: B.A. Hindi :-

Sr. No.	Class	Course	Course Outcomes

1.	F.Y.B.A	हिंदी कहानी हिंदी कविता	1)छात्रों को हिंदी कहानी से परिचित कराना। 2)छात्र में मानवीय मूल्यों के प्रति आस्था निर्माण करना 3) विभिन्न कहानियों के माध्यम से छात्रों की भाषिक क्षमता को वि कसित करना।4)छात्रो में विभिन्न कहानियों के माध्यम से सामाजिक संवेदना को। जागृत करना 5)छात्रो को हिंदी कविता विधासे परिचित कराना।6)छात्रो मे मानवी मूल्य के प्रति आस्था निर्माण करना 7) विभिन्न कविताओ के माध्यम से छात्रों की भाषिक क्षमता को विकसित करना।8)छात्रो में विभिन्न कविता ओके माध्यम से सामाजिक संवेदना को जागृत करना.
2	F.Y.B.A .	प्रयोजनमूलक हिंदी	1)छात्रो की प्रयोजनमूलक हिंदी का महत्व समजना 2) छत्रा को मानक लिपी का परिचय करना 3) छात्रों को अंकलेखन से परिचित कराना। 4) छात्रों को हिंदी के व्याकरण का ज्ञान प्रदान करना। 5) पत्रलेखन तथा निबंध लेखन की क्षमता को विकसित करना। 6) शब्द निर्माण, रिपोर्ट लेखन, कार्यालय टिप्पण, पत्राचार तथा, पारिभाषिक शब्दावली का परिचय कराना।
3.	S.Y.B.A	1) MIL-HINDI लेखन कौशल्य :मीडिया एवं साहित्य(लघुकथा) 2)MIL-HINDI लेखन कौशल्य: मीडिया एवं साहित्य(गीत-नवगित)	1)अभिव्यक्ती के विविध क्षेत्र से छात्रों का परिचय करवाना। 2)रचनात्मक लेखन के विविध रुपो से छात्रों को परिचित कराना।3) हिंदी लघुकथा ओ के माध्यम से रचनात्मक लेखन की सर्जन प्रक्रिया को दर्शना 4) हिंदी लघुकथाओ के माध्यम से मानवी मूल्य विकास संवर्धन एवं संरक्षण करना।5)छात्रों के रचनात्मक लेखन के सैद्धांतिको से अवगत कराना।
4.	S.Y.B.A	DSC-1(c) A HINDI. कथेतर गद्य विधाये DSC-1 (D) B HINDI श्रेष्ठ हिंदी एकांकी	1)कथेतर गद्य विधा का विकासात्मक परिचय प्रस्तुत करना २) कथेतर गद्य विधा की कालजयी रचनाओ को छात्रों परिचित कराना। 3) एकांकी विधा का विकासात्मक परिचय देना 4) प्रमुख एकांकीकारो का परिचय कराना। 5) एकांकीयो के माध्यम से रंगमंचीय प्रभाव को विषद करना

5.	S.Y.B.A	DSC-1(c)B HINDI. प्रयोजनमूलक हिंदी (वैकल्पिक) DSC-1(D)B HINDI प्रयोजनमूलक हिंदी(वैकल्पिक)	1) शब्द संसाधन के अंतर्गत छात्रों को मुहावरो का अर्थ बताकर वाक्य मे प्रयोग करने का प्रशिक्षण देना। 2) संपादन की कला से छात्रों अवगत कराना 3) श्रव्य और दृश्य संचार के विविध माध्यम से छात्रों को परिचित कराना। 4) मुद्रित माध्यम तथा संक्षेपण और पल्लवन का सामान्य परिचय कराना। 5) कार्यालयीन कार्य व्यवहार एवं पत्र व्यवहार की जानकारी देना। 6) फायलिंग प्रणाली की जानकारी देना.
6.	S.Y.B.A	SEC -1HINDI भाषिक संप्रेषण SEC - 1 HINDI अनुवाद विज्ञान	1) हिंदी भाषा के भाषिक स्वरूप से छात्रों को परिचित कराना। 2) संप्रेषण के प्रमुख प्रकार से छात्रों को परिचित कराना। 3) मौखिक संप्रेषण के विविध रूपो से छात्रों को अवगत कराना। 4) अनुवाद विज्ञान की प्रविधि से छात्रों अवगत कराना। 5) अनुवाद विज्ञान की सैद्धांतिक विवेचन करना. 6) अनुवाद विज्ञान की प्रविधि से छात्रों को अवगत कराना 7) साहित्यिक अनुवाद, मशीनी अनुवाद से छात्रों को अवगत कराना
7.	S.Y.B.A	DSC -1(B) HINDI - काव्यशास्त्र	1) काव्य की विविध विधाओं से परिचित कराना 2) अलंकारों का छात्रों को परिचय देना।3) काव्यशास्त्र का छात्रों को सामान्य परिचय देना। 4) गधे की विविध विधाओं से छात्रों को परिचित कराना। 5) शब्द शक्तियों का छात्रों को परिचय देना। 6) छंद एवं रसों का छात्रों को परिचय देना। 7) आलोचना की क्षमता छात्रों में विकसित करना।
8	S.Y.B.A	DSC -II (A) HINDI उपन्यास विधा(समय सरगम) DSC-II(B)HINDI- नाटक विधा	1)छात्रों को हिंदी उपन्यास विधा का विकासात्मक परिचय कराना २) हिंदी उपन्यास कारों का सामान्य परिचय देना। ३) निर्धारित उपन्यास के माध्यम से छात्रों को मानवीय जीवन में समय का महत्व, व्यक्ति की विश्वव्यापी स्वाधीनता, वृद्ध की समस्या की समस्या , मूल्य संवर्धन, संयुक्त परिवार आदि से अवगत कराना। ४) उपन्यास के माध्यम से सामाजिक उत्तरदायित्व के प्रती छात्रों में एहसास जगाना। ५) हिंदी नाटक विद्या का विकासात्मक परिचय देना ६) हिंदी नाटक और रंगमंच के परस्पर संबंधों पर प्रकाश डालना। ७) धरती आबा नाटक के माध्यम से आदिवासी समाज जीवन का चित्रण करना। ८) आदिवासी साहित्य और संस्कृति से छात्रों को परिचित कराना।

9.	T.Y.B.A	MIL-III Hindi संपादन लेखन और सावहत्य (मुद्रित माध्यम) MIL-IV Hindi हहंदी वसनेमा और सावहत्य (इलेवक्ट्रोवनक माध्यम)	1)छात्रों को संपादकीय कला से अवगत कराना 2) संपादक की योग्यता, दायित्व, महत्व से परिचित कराना 3) संपादकीय लेखन के तत्व और प्रविधि को दर्शना 4) विभिन्न समाचार पत्र और पत्रिकाओं के उल्लेखनीय संपादकीय से परिचित कराना। 5) छात्रों को हिंदी सिनेमा के इतिहास से अवगत कराना। ६) सिनेमा और भारतीय समाज के संबंध का परिचय देना।७) हिंदी सिनेमा की तकनीकी पक्ष के संबंध में जानकारी देना। 8) साहित्य कृति पर आधारित सिनेमा से परिचित करवाना। 9) मोहन दास की कहानी के माध्यम से सामाजिक यथार्थ को दर्शाना।

10.	T.Y.B.A	DSC-E (A) Hindi ववषेश ववधा यात्रा सावहत्य DSC-F (A) Hindi ववषेश ववधा भारतीय संत काव्य	1) यात्रा साहित्य विधा के सैद्धांतिक विवेचन को अवगत कराना। २)यात्रा साहित्य विधा के विकासात्मक परिचय से छात्रों को परिचित कराना। ३) यात्रा साहित्य विधा के प्रमुख साहित्यकार तथा उनके यात्रा वर्णन का ज्ञान छात्रों को प्रदान करना। ४) मेरी जापान यात्रा इस साहित्य कुर्ती के माध्यम से छात्रों में यात्रा साहित्य लेखन की कला से परिचित कराना। ५) भारतीय संत काव्य का परिचय कराना।६) भारतीय संत काव्य परंपरा का विकासात्मक परिचय करवाना।७) भारतीय संतो के काव्य का अध्ययन करिना। ८) भारतीय संत काव्य की विशेषताएं तथा उपलब्धियों का परिचय देना। .
11		DSC-E(B) HINDI प्रयोजनमूलक हिंदी DSC-F HINDI (B) प्रयोजनमूलक हिंदी	1) कार्यालय भाषा हिंदी से छात्रों को अवगत कराना २) कंप्यूटर और हिंदी भाषा प्रयोग तथा कंप्यूटर और रोजगार से छात्रों को अवगत कराना। ३) टिपण के स्वरूप उद्देश्य, प्रक्रिया तथा टिप्पणी के तत्व एवं नियमों से छात्रों को अवगत कराना। ४) कार्यक्रम पत्रिका ,कार्यालय पत्रिका .विवरण .कार्यवृत्त .रिपोर्ट .सचिव के कार्य .पदनाम लेखन . टेबल पाक, सूचना पट्ट आदि से छात्रों को परिचित कराना । ५) कार्यालय हिंदी क्रियान्वयन योजना से छात्रों को परिचित कराना। ६) कार्यालय भाषा हिंदी से छात्रों को अवगत कराना। ७) वाणिज्यिक पत्र लेखन की छात्रों को जानकारी देना। ८) बैंकिंग के व्यवहार से छात्रों को अवगत कराना। ९) विज्ञापन का महत्व एवं आवश्यकता ,विज्ञापन की भाषा के रूप में हिंदी का प्रयोग. आदि की छात्रों को जानकारी देना ।

			१०) शब्द संसाधन से छात्रों को परिचित कराना। ११) साक्षात्कार (भेंटवार्ता)की छात्रों को जानकारी देना।
12.	T.Y.B.A	SEC-III HINDI हिंदी व्याकरण और अभिव्यक्ति कौशल्या। SEC-IV HINDI हिंदी भाषा का मानकीकरण और अशुद्धि शोधन।	1) छात्रों को हिंदी भाषा की व्याकरणिक संरचना से अवगत कराना। 2)छात्रों को हिंदी शब्द संधारण से परिचित कराना। 3) छात्रों को पल्लवन करने की प्रक्रिया से अवगत कराना। 4) वक्तृत्व कला कौशल्य की जानकारी से छात्रों को परिचित कराना हिंदी भाषा के मानक रूप से परिचित कराना। ५) देवनागरी लिपि तथा हिंदी वर्तनी संबंधी नियमावली की जानकारी देना ६)शासकीय पत्र प्रारूप लेखन की क्षमता विकसित करना ७) साक्षात्कार प्रणाली की क्षमता को विकसित करना। ८) शुद्ध लेखन की क्षमता को विकसित करना।
13.	T.Y.B.A	DSE-HINDI -III (A) हिंदी साहित्य का इतिहास आदिकाल ,भक्तिकाल और रीतिकाल DSE-HINDI III (B) हिंदी साहित्य का इतिहास -आधुनिक काल	१) हिंदी साहित्य का काल विभाजन नामकरण से छात्रों को अवगत कराना। २) आदिकाल साहित्य की प्रमुख प्रवृत्तियां तथा प्रमुख रचनाकारों से छात्रों को परिचित कराना। ३) भक्तिकालीन साहित्य की प्रमुख परिस्थितियों प्रवृत्तियों तथा प्रमुख रचनाकारों से छात्रों को परिचित कराना ४) हिंदी साहित्य इतिहास के आधुनिक काल के साहित्य से छात्रों को परिचित कराना ५) हिंदी साहित्य के आधुनिक काल के साहित्य की प्रमुख प्रवृत्तियां तथा रचनाकारों से छात्रों को अवगत कराना ६) हिंदी साहित्य का इतिहास के आधुनिक काल के पद्य और गद्य साहित्य तथा प्रमुख साहित्यकारों का ज्ञान छात्रों को प्रदान करना ७) आधुनिक काल के साहित्य की प्रमुख उल्लेखनीय कृतियो का छात्रों को परिचय देना.

14.	T.Y.B.A	DSE Hindi IV (A)	की परिभाषा तथा विशेषताओं से छात्रों को अवगत कराना2) भाषा के विविध रूपों का ज्ञान छात्रों को प्रदान करना 3) विविध बोलियों के सामान्य परिचय से छात्रों को परिचित कराना 4) भाषा की उत्पत्ति विषयक सिद्धांत से छात्रों को परिचित कराना 5) हिंदी के प्रचार एवं प्रसार से खानदेश के साहित्यकारों के योगदान को उजागर करना 6) भाषा विज्ञान की परिभाषा तथा भाषा विज्ञान के विभिन्न अंगों से छात्रों को परिचित कराना 7) भाषा विज्ञान तथा व्याकरण के तुलनात्मक अध्ययन का ज्ञान छात्रों को प्रदान करना 8) विज्ञान से संबंधित विविध मुद्दों से छात्रों को परिचित कराना 9) रूप पर विज्ञान से संबंधित विविध

			मुद्दों से छात्रों को परिचित कराना 10) वाक्य विज्ञान से संबंधित विविध मुद्दों से छात्रों को परिचित कराना11) अर्थ विज्ञान से संबंधित विविध मुद्दों से छात्रों को परिचित कराना.
15	T.Y.B.A	GE -I HINDI- हिंदी की राष्ट्रीय काव्यधारा GE-II (A) HINDI खानदेश का लोक साहित्य	1) हिंदी की राष्ट्रीय काव्यधारा से छात्रों को अवगत कराना। 2) हिंदी की राष्ट्रीय काव्यधारा का विकासात्मक परिचय प्रस्तुत करना। 3) हिंदी की राष्ट्रीय काव्य धारा के प्रमुख कवियों का सामान्य परिचय देना। 4) भारतीय स्वतंत्रता आंदोलन में हिंदी की राष्ट्रीय काव्यधारा के योगदान को उजागर करना। 5) पाठ्यक्रम में समाविष्ट कविताओं के आधार पर छात्रों में राष्ट्र के प्रति अस्मिता स्वाभिमान तथा गौरव का भाव जागृत करना।6) लोक साहित्य सिद्धांत की से छात्रों को परिचित कराना। 7) खानदेश के लोक साहित्य और लोक संस्कृति से छात्रों को अवगत कराना। 8) छात्रों को खानदेश की प्रमुख बोलियों अहिराणी लेवा ,और आदिवासी के साहित्य से अवगत कराना।9) लोकगीत ,लोककथा ,लोकनृत्य और लोक संस्कृति का साक्षात्कार कराना। 10) लोकगीत ,लोक कथा ,लोकनृत्य और लोक उत्सव आदि से संबंधित बातें छात्रों को सिखाना।

➢ Department of English

➢ Programme Outcomes: B.A. English:-

After successful completion of three-year degree program in English a student should be able to

Sr. No.	Programme Outcomes (PO's)
PO 1	The papers framed for this Program are in accordance with the norms of CBCS pattern.
PO 2	Discipline specific papers will acquaint the students with the rich legacy of English Literature and the contribution of legendary writers to the development of English Literature.

PO 3	The papers of skill and ability enhancement are framed not only to orient the students on the use of language but how to use the language creatively and professionally.
PO 4	The paper of Project writing will inculcate the skills of explanation, interpretation and visualization in the students.
PO 5	The Paper of Compulsory English is specifically framed from the viewpoint of value education which is the basis of quality life.
PO 6	Selection of contents in all the courses will help the students to comprehend the worldly wisdom and commercial perception which will ultimately lead them to be successful and enjoy quality life.
PO 7	The special papers will open up traditional job opportunities for the students but the papers of skill and ability enhancement will open up corporate, govt. and private sectors for the students of English literature.

➢ Programme Specific Outcomes: B.A. English: -

Sr. No.	Programme Specific Outcomes (PSO's)
PSO 1	Use correct English in oral as well as written form.
PSO 2	Inculcate human values for one's transformation of behavior.
PSO 3	Interpret the literary works by critical analysis.
PSO 4	Compare literary works of the great philosophers using their logic and literary capacity.
PSO 5	Use correct English in oral as well as written form.

➢ Course Outcomes: B. A. English: -

Sr. No.	Class	Course	Course Outcomes

CO 1	F.Y.B.A	Compulsory English (Silver Lining)	•The course will introduce the basic forms of literature to the students. •The course will develop the liking of reading in the students. •The course will inspire students to develop their creative ability. •Consequently, the course will develop reading skills and creative and expressive ability of the students.
CO 2	F.Y.B.A	Optional English	•To develop the ability of students to comprehend written texts •To inculcate amongst students moral and human values •To make the students aware of the aesthetic pleasure of literature •To introduce to the students the basic forms of poetry •To create interest among students for literature
CO 3	S.Y.B.A	16th and 17th Century English Literature (DSE 1A&B)	•To acquaint the students with the major literary trends and tendencies and prominent writers of the 16th and 17th Century English Literature. •To make the students aware about the literary history, salient features and sociocultural background of the period. •To help the students to grasp the content and critically appreciate the prescribed texts. • To inculcate amongst students a liking for the Elizabethan and Post-Shakespearean literature.
CO 4	S.Y.B.A	18th and 19th Century English Literature (DSE 2A&B)	•To impart basic ideas about the 18th and 19th Century English Literature with special reference to Poetry and Novel. •To make the students aware about the literary history, salient features, socio political and cultural background of the Romantic and Victorian age. •To help the students to grasp the content and critically appreciate the prescribed Texts.

			•To inculcate amongst students a liking for Romantic and Victorian literature.
CO 5	S.Y.B.A	The Study of Novel and Drama (DSC 1C)	•To develop the interest of students in reading/understanding novels and drama. •To acquaint students with Novel and Drama as genres of literature. •To develop students' competence to study, understand, analyze and interpret novels and drama. •To introduce students with the key terms useful in the study of novels and drama. •To orient students with major types of novel and drama.
CO 6	S.Y.B.A	SEC-I: English for Competitive Examinations	•To enable students to prepare for the competitive exams of various kinds especially meant for testing ability in English language. •To introduce students with the common question types asked in competitive examinations concerning English-grammar, vocabulary, comprehension, and other significant topics. •To encourage students to appear and prepare for the competitive exams. •To help the students to overcome the fear about English as a compulsory subject in various competitive exams.
CO 7	T.Y.B.A	20th Century English Literature (S-3)	•To acquaint the students with the growth of Indian drama and novel in English during the 20th century. •To enable the students to evaluate, analyze, appreciate and criticize drama and novels prescribed. •To acquaint the students with the social, political and cultural background and literary movements of the century.

			•To acquaint the students with the developments in American poetry and novels.

CO 8	T.Y.B.A	DSE-4 The Study of English Language (S-4)	•To introduce the students to the properties and functions of language. •To inculcate phonological competence among students. •To acquaint the students with English grammatical forms and functions. •To acquaint the students with morphological concepts and processes. •To introduce the students to the basic concepts in syntactic and semantic levels of language.
CO 9	T.Y.B.A	G-III	•To acquaint the students with the origin of drama and dramatic art. •To introduce the students to the aspects and genres of drama. •To enable the students to trace the development of English drama. •To inculcate amongst the students the competence to study drama systematically. • To acquaint the students with representative English dramatists.
CO 10	F.Y.B.Sc	AEC	•To introduce to the students with writing and reading skills •To acquaint the students with the use of the English Language through different means. • To acquaint the students with the creative use of English Language.
CO 11	S.Y.B.Sc	Optional English	•Development of research aptitude in students will further boost their confidence for research. English is global language and to achieve professional success, practice of various skills is the demand of the hour •Present course is framed keeping in mind the requirement of science students •Present course contains the introduction to all the topic that contains the introduction to all the topic that science students need in their studies, job opportunities and research as well •Introduction of practical work for internal assessment is

			from the view point of honing the writing and spoken skill of the students.

			•The practical work will also help to ensure the opportunity of interaction between students and teachers. •Research aptitude will be inculcated in the students due to practical work, so that they will actively participate in research conventions like Avishkar, Indradhanushya, and Anveshan etc. Inculcation of research aptitude will further boost the student's confidence for research

➢ Department of Geography

➢ Programme Outcomes: B.A. Geography:-

After successful completion of three-year degree program in geography a student should be able to

Sr. No	Programme Outcomes (PO's)
PO 1	To Acquaint the students with basics of scale, Map projection and cartographic.
PO 2	Techniques and surveying to proper guidance to students for Competitive examination.
PO 3	The paper of Physical geography of Maharashtra Specifically framed to acquire knowledge of our states and within various resources to students.
PO 4	The paper of Practical Geography specifically framed to acquaint the students with basics of scale map projection and Cartographic techniques.
PO 5	The paper of Human and Economic Geography was specifically framed to acquaint with knowledge of the economic realm in the world as well as in India and various races of Mankind in the world.
PO 6	The paper of SEC (Both Semester) Specifically framed to Students will gate knowledge about various approaches and model of regional planning and development
PO 7	To understand the principle of Remote sensing.

➢ Programme Specific Outcomes: B.A. Geography: -

Sr. No.	Programme Specific Outcomes (PSO's)
PSO 1	To Study theory and models of economic Geography
PSO 2	to explain the trade and transport activities in world
PSO 3	To enable the students use scale map and cartographic techniques
PSO 4	To learn basic of GPS based survey

➢ Course Outcomes: B.A. Geography: -

Sr.No	Class	Course	Course Outcomes
CO 1	F.Y.B.A	Physical Geography	•To study the Latitudes and Longitudes measurement of time. •To understand the effect of rotation of the earth •To understand Interior structure of the Earth.
CO 2	SYBA (DSC 1C & 1D)	General Cartography & Human Geography	•To acquaint the knowledge about practical and theoretical understand of cartographical concepts. •To acquaint yourself with knowledge of types of races in the world. •To study various types of settlement patterns.
CO 3	SYBA (9DSE 1A & 1B)	Geography of Tourism & Geography of India	•To know the importance of sustainable tourism. •To understand the various geo-tourism. • To make the students able to understand the geographical personality of India.

CO 4	SYBA (DSE 2 A & 2B)	Practical Geography	•To acquaint the students with basics of scale map projection and cartographic techniques. •To acquaint the students with principles of surveying, it's important and utility in geographical studies. •To know how to draw the map on various scale
CO 5	SYBA	SEC- Skill Enhancement Course	•Students will become well aware about regional planning and development. •Students will get knowledge about various approaches and models of regional planning and development. •To understand the principle of remote sensing. •To acquaint students with fundamental concepts of aerial photography.
CO 6	TYBA	Population and Political Geography	•To understand the recent problems of population in the world as well as nations. •To familiarize the students with different theories of population growth. •To understand the various States boundaries and Theories related boundaries.

➢ Department of History

➢ Programme Outcomes: B.A. History :-

After successful completion of three-year degree program in History a student should be able to-

Sr. No.	Programme Outcomes (PO's)
PO 1	To introduce various perspectives of the Indian Freedom movement.
PO 2	To develop the Spirit of Nationalism Among Students.
PO 3	To create and enhance interest about regional History among the students.

PO 4	Useful for the Preparation of the Competitive Examination.

➢ Programme Specific Outcomes: B.A. History: -

Sr. No.	Programme Specific Outcomes (PSO's)
PSO1	To Understand the basic concepts of historical movements , development of cultural civilization
PSO2	To analyze the economic importance of various sectors like Agriculture , Industry and Service sector of different administration levels.
PSO3	To understand, develop and demonstrate academic proficiency in the subfields of political theory.
PSO4	To promote values such as sustainable development, Optimum utilization of resources, patriotism, respecting the ideals of freedom struggle and responsible citizenship, political participation and socialization.

➢ Course Outcomes:B.A. History: -

Sr. No	Class	Course	Course Outcomes
CO 1	F.Y.B.A	History of India (1857-1950)	•To introduce various perspectives of the Indian Freedom Movement. •To develop the spirit of Nationalism among students. •To bring awareness among the students as responsible.

CO 2	SYBA DSC 2	History of the Marathas (1605-1750)	•To Great and enhance interest about Regional History among the Students. •To acknowledge students how Shivaji Maharaj created the Empire in adverse circumstances. •To Motivate Students for the Research work of Maratha History.
CO 3	SYBA DSE1A	History of U.S.A. (1776-1945)	• To understand the importance of America (USA) in world history. • To Study the foreign policy of America (USA) • To Study and the Role of America between two world wars.
CO 4	SYBA DSE2A	History of Ancient India (B.C.3000- 1206)	•To acquaint the students with different sources of Ancient Indian History. •To enable the students to understand the political, Socio-Economic and Cultural Developments in the Periods under study and appreciate the rich Cultural Heritage in India. •To Survey sources of History of Ancient India.
CO 5	SYBA SEC	Sem III, Research Methodology in History. Sem. IV An Introduction to Archives in India	•The paper is designed to provide an adequate conceptual base. •Help Research in terms of formulating hypotheses and develop broad frames of interaction with other social sciences and attain a certain level of Interdisciplinary Approach. •To introduce the importance of Archives in Study of History.

			•To create awareness to conserve the historical Records in their Local Arias.

CO 6	TYBA Gen3	History of Modern World (1789-1945)	•To introduce the Students to the Concept and Nature of Modern world History. •It will create patriotism and European Nationalism among the Students. •Develop an interest in Students to study history as a discipline.
CO 7	TYBA Spl3	Expansion and Fall of the Maratha Power (1707-1818)	•To Great and enhance interest about Regional History among the Students. •To Motivate Students for the Research work of Maratha History. •Useful for the Preparation of the Competitive Examinations.
CO 8	TYBA Spl4	History of Sultan & History of the Mughals 1206-1707	•To Developed the skill and opportunities among the Students •Syllabus covers competitive examinations (UPSC, MPSC, NET, SET, Railway Board and Staff Selection etc.) •Syllabus related to Tour and excursion visit and Report writing.

➢Department of Defense Studies

➢ Programme Outcomes: B.A. Defense Studies:-

After successful completion of three-year degree program in Defense Studies a student should be able to

Sr. No.	Programme Outcomes (PO's)
PO 1	Become knowledgeable in the subject of National security and apply the principles of the same to the requirements of the Uniformed forces.
PO 2	Understand and Appreciate Professional Ethics, Community Living and Nation Building Initiatives.

PO 3	Understanding and giving solutions to varied Security problems.
PO 4	Able to identify and adopt compliance formalities in National Administration
PO 5	Demonstrate ability to adapt to a rapidly changing environment by learning new skills and new competencies for application thereof.
PO 6	Acquire the spirit of compassion, kinship and commitment for National Harmony
PO 7	Progressively adopt and learn continuously through ICT modules
PO 8	Enable the students to acquire professional qualification at the earliest.
PO 9	Prepare young and Capable minds to serve the nation in Army, Navy and Airforce.

➢ Programme Specific Outcomes: B.A. Defense Studies:-

Sr. No.	Programme Specific Outcomes (PSO's)
PSO1	Inculcating analytical heart and mind to manage day- to- day National issues
PSO2	Solve the practical problems in the area of National Security conformity with human, environment Political, etc
PSO3	Understand the problems of International issues and inculcate in required skills for conflict management.
PSO4	Be an active member of a Uniformed force.

➢ Course Outcomes: B.A. Defense Studies:-

Sr. No	Class	Course	Course Outcomes
CO 1	F.Y.B.A	Indian Art of War	Student familiar with evolution of art of warfare in India; Student learns and understands the Strategy, tactics, application of principles of war and causes of defeat and victory of various Indian, Mughal, Maratha and Sikh Generals. Student appreciates and understands

			evolutionary changes in the art and science of war in India through ages.
CO 2	SYBA DSC 2	India's National Security	Students understand that national security is the highest political goal of all states. Students understand the approaches adopted by states differ based on their individual power status, and the prevailing political and strategic dynamics at regional and global level. Students acquire the threats to a state, typology of threats, national power and its elements, doctrinal orientation for security; its linkages with foreign policy and defense policy.
CO 3	SYBA DSE1A	Contemporary Warfare	Understand the basic aspects of international law. Learn various aspects of legal provisions and practices in international security. Learn basics of laws of warfare through existing international legal principles.
CO 4	SYBA Spe-2	Defence Mechanism and Organization of India	
CO 5	TYBA Gen	International Securities Issues	Students understand that national security is the highest political goal of all states. Students understand the approaches adopted by states differ based on their individual power status, and the prevailing political and strategic dynamics at regional and global level. Students acquire the threats to a state, typology of threats, national power and its elements, doctrinal orientation for security; its linkages with foreign policy and defense policy.
CO 6	TYBA Gen3	Contemporary of War & Peace	Students understand the concept of Limited Warfare. Students understand the concept of biological Warfare.Student understands the concept of chemical Warfare.Student understands the concept of psychological Warfare.Student understands the concepts and applications of Electronics Warfare. Students understand

			the concepts and applications of Space and Ballistic Missile Defence (BMD) in Warfare.
CO 7	TYBA Spe-4	Geo Strategy	Students understand the definition, meaning and distinguish basic concepts of Geo Strategy. Students understand various types of geo strategy and its various typologies, techniques and characteristics. Student understands and grasp the concept and theories of geo strategy in details

➢ Course Outcomes:B.A.Sociology -

Sr. No.	Class	Course	Course Outcomes
CO 1	F.Y.B.A	Introduction to sociology	•To introduce the students to the Discipline of sociology •To familiarize students with the basic concepts in sociology •To provide basic understanding of the social structure of society.
CO 2	S.Y.B.A	Indian society: Issues and problems (DSC 1&2 C	•To sensitive the students to the Emerging social issues in India. •To empower them to deal with these issues and problems.
CO 3	T.Y.B.A G-3	Indian society: Structure and change	•To provide the students the basic knowledge of social structure and change • To familiarize the student about the major segment in social life

➢Course Outcomes: B. A. Political Science -

Sr. No.	Class	Course	Course Outcomes

CO 1	F.Y.B.A	Indian Constitution	•This paper is a basic introduction to the process, concept and working of the Indian constitution. The Indian Constitution is a social document. •This paper acquaints students with the constitution, design of state structure institutions and their actual working overtime. •The Indian constitution accommodates conflicting impulses of liberty and justice, territorial decentralization and a strong union for instance within itself. •The paper traces the embodiment of some of these conflicts in constitutional provisions and shows how this has played out in political practices in further encouraging study of state in situation in their mutual interaction with the larger extra constitutional environment & recent trends in Indian democracy.
CO 2	S.Y.B.A Sem-III	(DSC 1 C) Introduction to Administration of Maharashtra	•This paper is essential for students of any faculty – discipline. Because it is not only useful for G.K. but also necessary to admire the history and administration of our region. •We should learn about how our administration is going on, what is the role of administrator of all internal sections, features of gov, internal branches of administration, structure of govt etc. This paper will help to create further administrators.

CO 3	S.Y.B.A	(SEC 1) Research Methodology in Political Science.	•This paper attempts to discuss the main concepts and methodology of research. Political science is the part of social science/humanities. And therefore, undergraduate students should learn suitable research topics for further research work, and the ability to write a research proposal/report. •National education policy (2019) has to decide to enhance quality research and publication.

			•In this context, at UG level students should admire proper understanding methodology and hard work for quality.

CO 4	S.Y.B.A	(SEC 2) Election Management	•This paper attempts to discuss principles, structure, debate and practices of election management. •It will be useful for properly understanding the process of election and management. • As well as admire the concepts and thoughts of election administration. •Each and every one has evolved in the election process so we should get more information through this paper.
CO 5	T.Y.B.A	Personnel Administration and Management	•This paper focuses on the personal administration and management in an Indian contest. •The course will narrate student the meaning definition and importance of administrative leadership •It helps them to study the characteristics of Management and describe the first Posdcorb theory . •As well as admire the concept and thoughts of policy formation and coordination.
CO 6	T.Y.B.A	Western Political Thought	•This paper focuses on the classical ideas generated in the western world representing the ancient to the modern. • The Eight thinkers have been selected who represent ideal, realistic, and liberal tradition. The test is interpreted both in historical and philosophical perspective. • The course will narrate students the legacy of the thinkers and orient them about continuity and change within the western political tradition. • It helps them to study the historical aspects western state and society. The main purpose of this paper is to acknowledge students with how the great masters explained and analyzed political events and problems of their time and prescribes solutions

➢ Course Outcomes:B.A.Economics: -

Sr. No.	Class	Course	Course Outcomes
CO 1	F.Y.B.A	(G-1:GENERAL ECONOMICS) - Part – I Paper code Eco G 101(A): Principles of Micro economics-1	•Introduced the students to the basic principles of microeconomic theory. •To introduced the student's behavior of consumer, producer in Economy, Price determination in • Market and also factor pricing. •How to microeconomic concepts can be applied to analyze real life situations
CO 2	S.Y.B.A	Indian Economy Since 1980- I&II DSC Eco 231 C & DSC Eco 241 D	•To enable students to have an understanding of the various issues of the Indian Economy. •To develop the analyzing capability in the context of current Indian Economic Problems. •To enable the students to appear in the MPSC, UPSC and other competitive Examinations.
CO 5	T.Y.B.A	DSC -1 (E & F) Eco-351 & 361 Indian Economy	•To enable students to have an understanding of the various issues of the Indian Economy.

➢ Course Outcomes: B. A. Education : -

Sr. No.	Class	Course	Course Outcomes
CO 1	F.Y.B.A	(CCED-1)Introduction to the Foundation of Education (Edu-101 & 201)	Understand children of different ages by interacting & observing them in diversified social, economic and cultural context rather than through an exclusive focus on psychological theories of child development.

CO 2	S.Y.B.A	(DSC-1C)Psychological Foundation of Education (Edu-231 & 241)	Become health aware & sensitize about mental and physical health.
CO 3	T.Y.B.A	Philosophical, Sociological Foundation of Education and Health Education (DSC)	Understand learning as a divergent process. And psychological traits of learners.

➢Department of History (M.A.)

➢ Programme Outcomes: M.A.History :-

After successful completion of three-year degree program in History a student should be able to

Sr. No.	Programme Outcomes (PO's)
PO's	The papers framed for this program are in accordance with the norms of CBCS pattern.
PO's	Selection of contents in all the courses will help the students to comprehend the worldly wisdom and commercial perception which will ultimately lead them to be successful and enjoy quality life.
PO's	The special papers will open up traditional job opportunities for the students but the papers of skill and ability enhancement will open up corporate, govt. and private sectors for the students of History subject.

➢ Programme Specific Outcomes: M.A.History:-

Sr. No.	Programme Specific Outcomes (PSO's)
PSO1	Understand the background of our religion, customs institutions, administration and so on.
PSO2	Understand the present existing social, political, religious and economic conditions of the people.
PSO3	Analyzing the relationship between the past and the present is lively presented in history.
PSO4	Develop practical skills helpful in the study and understanding of historical events.

➢Department of Chemistry

➢ Programme Specific Outcomes: B.Sc. Chemistry:-

Sr. No.	Programme Specific Outcomes (PSO's)
PSO 1	Developed students with the skills required to succeed in graduate school, the chemical industry or professional school.
PSO 2	To expose the students to a breadth of experimental techniques using modern instrumentation.
PSO 3	The student will understand the importance of the Periodic Table of the Elements, how it came to be, and its role in organizing chemical information.
PSO 4	The student will understand the interdisciplinary nature of chemistry and to integrate knowledge of mathematics, physics and other disciplines to a wide variety of chemical problems.
PSO 5	The student will learn the laboratory skills needed to design, safely conduct and interpret chemical research.

PSO 6	The student will acquire a foundation of chemistry of sufficient breadth and depth to enable them to understand and critically interpret the primary chemical literature.

➢Course Outcomes:B.Sc. Chemistry: -

Sr. No.	Class	Course	Course Outcomes
CO 1	F.Y.B.Sc Sem-I	CH-101: Physical and Inorganic Chemistry	•To expose & develop interest in the field of chemistry.
			•To develop ability & to acquire the knowledge of terms, facts concept processes techniques & principles of subject. •To understand the fundamental principle and chemical analysis
CO 2	F.Y.B.Sc Sem-I	CH-102: Organic and Inorganic Chemistry	•To develop skills required in chemistry such as the proper handling of apparatus & chemical analysis •To develop ability to apply the knowledge of contents of principles of chemistry
CO 3	F.Y.B.Sc Sem-II	CH-201: Physical and Inorganic Chemistry	•To develop problem solving skills in students. •To develop proper aptitude towards the subject. •To develop the ability to apply the knowledge of contents of principles of chemistry.
CO 4	F.Y.B.Sc Sem-II	CH-202: Organic and Inorganic Chemistry	•Determine analyses and evaluate the interpretation ships involved in chemistry. •Develop thirst of chemical knowledge, become flexible and persistence learners and appreciate the need for lifelong learning.

CO 5	S.Y.B.Sc Sem-III	CH-301: Physical and Inorganic Chemistry	•Know the qualitative properties of solution, the depression in freezing point, elevation in boiling point and osmotic pressure. Calculate molar and normal solution of various concentrations. •Explains the application of colligative properties in determining molecular mass. •Know the qualitative properties of solution, the depression in freezing point, elevation in boiling point and osmotic pressure. •Compares the general characteristics electronic configuration of lanthanides and actinides, uses of lanthanides and actinides.
CO 6	S.Y.B.Sc Sem-III	CH-302: Organic and Inorganic Chemistry	•This course gives quantitative ideas about the synthesis, properties and uses of such heterocyclic compounds like pyrrole, pyridine quinoline, thiophene, furan etc.. Different methods for the preparation of important Hetero cycles and their important reactions. Aromaticity, Huckel's rule and its applications

			•Explains the different types of structural and stereoisomers CO2 Represent organic molecules by Fischer, Flying wedge,Sawhorse and Newman projection formulas,Conformational isomerism of ethane, n-butane, cyclohexane, Conformational analysis of 1,4 cis and trans disubstituted cyclohexane. •Explains the theories of acids and bases. Different solvents and solubility. Hard and soft acids and bases: definitions, Pearson HSAB concept, theories of Hardness and softness, application and limitation of HSAB concepts.

CO 7	S.Y.B.Sc Sem-III	CH-303 Chemistry Practical	•Determine the miscibility temperature of phenol– water system •Experimental demonstration of Conductometric and Potentiometric titrations of strong acid against strong base, weak acid against strong base. •Simple Organic and Inorganic derivatives preparations
CO 8	S.Y.B.Sc Sem-III	CH-304 Basic Analytical Chemistry	•Develops accuracy and precision in doing experiments, understands the different errors and methods for minimizing errors. Explanation of MSDS. Explain significant figures, absolute error, relative error, mean, median, Give the theory behind the qualitative and quantitative analysis conducted in the laboratory. Study the importance of safety and security, responsibility types of hazards and risk in chemical laboratories. Understand the use of personal protective and other safety equipment, handling of chemical in laboratory. •Understand the route of exploration for toxic chemicals. Learn good laboratory practices and its applications. •Students are enabling to aware about PH, POH, derivation of Henderson's equation, conduct acid base titrations, Different indicators used in titrations, •Complexometric titrations, Applications of titrations Students are able to learn about Classification of chromatography, Mobile phase and stationary phase, Study the instrumentation, sample injection system, columns for HPLC and GC, Solvent treatment system and choice of mobile phase. To give an extended knowledge about chromatographic

CO 9	S.Y.B.Sc Sem-IV	CH-401: Physical and Inorganic Chemistry	•Free energy and equilibrium, Gibbs and Helmholtz energies, spontaneous and non spontaneous reactions, changes in enthalpy, Entropy and free energy of reactions, Derivations of Clauses and Celsius chaperon equations. •Electrochemistry discussed electrical properties of ionic solutions. Different types of cells and their formulations, applications. Solve the cell reactions and calculate cell EMF. •Double salts and coordination compounds, coordination complexes and complex ions, coordination number, Unidentate, bidentate and polydentate ligands, chelating ligand and chelates, physical methods used in study of complex, Nomenclature of coordination compounds. •Theoretical knowledge about metals, non metals and semiconductors. Understand the p-type semiconductor and n-type semiconductor. Their preparations and uses.
CO 10	S.Y.B.Sc Sem-IV	CH-402: Organic and Inorganic Chemistry	•Synthesis of organic reaction itself involves a large part of organic chemistry. This is called synthetic organic chemistry. This chapter involves different synthetic reagents for synthesis of malonic ester and Acetoacetic ester. •Organometallic compounds are very important in biological bodies like hemoglobin, •Chlorophylls, Vitamin B12 and also, they can be used as chemical reagents. The course discussed the synthesis and properties of these organometallics of Zinc, Magnesium, Lithium and Copper.

			•To understand different theories like MOT, VBT, CFT, LCAO, Compare MO and VB theory, Know the meaning of various terms involved in coordination Chemistry, To understand Werner's formulation of complexes and identify the types of valences, Know the limitations of VBT, Know the shapes of d-orbitals and degeneracy of d-orbitals, Explain MO Theory and draw the MO diagrams for H2, He2 , B2, N2, O2, CO and NO
CO 11	S.Y.B.Sc Sem-IV	CH-403: Chemistry Practical	• Experiments based on Gravimetric and Colorimetric analysis. • Gravimetric estimation of Barium, Sulfate, Calcium using silica crucible • Organic qualitative analysis in small quantities helps in type determination and reduces the consumption of chemicals. • Determine the physical constants like boiling point and melting point of organic compounds. •Recrystallisation of organic compounds from alcohol and water. •Identify the organic compounds. •Paper chromatography
CO 12	S.Y.B.Sc Sem-IV	CH-404: Advance Analytical Chemistry	•To understand redox reaction •Complexometric titrations & its applications •Introduction of gravimetric analysis
CO 13	T.Y.B.Sc Sem-V	CH -351 Physical Chemistry	•To orient and acquaint the students towards the basic concepts of Quantum Chemistry •To acquire knowledge about rates of chemical reactions and distinguishing the reaction of different order and their characteristics. •To understand the basic principles of phase rules and phase diagrams. •To learn the underlying principles of electrode reactions,

			electrochemical cells and applications of EMF.
CO 14	T.Y.B.Sc Sem-V	CH -352 Inorganic Chemistry	•To describe the VSEPR theory to predict the shape of molecules from electron pairs. • To describe the bonding in simple compounds using VBT.
			•To describe the principles of VBT to predict hybridization of orbitals. •To understand how CFT explains electronic structure, color and magnetic properties of coordination compounds. • To introduce the basic principles of MOT and electronic geometry of molecules.
CO 15	T.Y.B.Sc Sem-V	CH -353 Organic Chemistry	•Synthesis of organic reaction itself involves a large part of organic chemistry. This is called synthetic organic chemistry. This is discussed in a simple way for some simple molecules to the students. This includes fragmentation and retrosynthetic analysis and also finding synthonor reactive starting molecules of a target molecule. •Pericyclic reactions are used in a vast way in nature and also by organic chemists. •This course gives the student the theoretical basis of this kind of reaction and also helps them to find a way to carry out these types of reactions. the reactivity and stability of an organic molecule based on structure, including conformation and stereochemistry an understanding of nucleophiles,electrophiles, electronegativity, and resonance the prediction of mechanisms for organic reactions •How to use their understanding of organic mechanisms to predict the outcome of reactions •How to design syntheses of organic molecules •How to determine the structure of organic molecules using IR and NMR spectroscopic techniques

CO 16	T.Y.B.Sc Sem-V	CH- 354 Analytical Chemistry	•The course gives an introduction to inorganic and organic analytical chemistry, including basic analytical methods. •Explain the theoretical principles and important applications of classical analytical methods. •Explains all theoretical principles of various separation techniques in chromatography, and typical applications of chromatographic techniques.

CO 17	T.Y.B.Sc Sem-V	CH -355 Industrial Chemistry	•To produce graduates with enhanced skills, applied knowledge, aptitude to carry out higher studies or research and development in the various industrial areas. •To make the student cognizant about important aspects of Chemical Industries, Industrial work culture and environment. •To prepare the students for immediate entry to the workplace with sound theoretical knowledge and some basic experimental concepts in the area of various industries viz. Sugar Industry, Fermentation Industry, Petroleum and Petrochemicals. •To offer the synergism between basic concepts of Chemistry with Industrial applications. •To equip the students with knowledge of some industrial organic synthesis as a requirement of diverse chemical industries. •Empower the students to understand the concepts in chemical processing, engineering and industrial development.

CO 18	T.Y.B.Sc Sem-V	CH -356 (A) Biochemistry	•Students will study molecules like carbohydrates, amino acids, proteins, enzymes, lipids and nucleic acids. •Students will understand definitions, classifications and examples of these biomolecules. •Students will learn the detailed structure of these biomolecules along with types of bonds or linkages present in their molecules. •Students will learn the chemical properties of these biomolecules and the action of some reagents on them in the form of reactions or graphical presentation. •Students will understand biochemical energetics of common energy rich compounds along with hydrolytic reactions. Page 41 of 70

			•Students will learn metabolisms like Glycolysis, TCA cycle, Transamination, deamination and β- oxidation through reactions, enzymes involved, outlines and energetics.
CO 19	T.Y.B.Sc Sem-VI	CH -361 Physical Chemistry	•To learn the basics of molecular spectroscopy and rotational spectra. •To understand the basic principles and applications of nuclear chemistry. •To learn the consequences of light absorption by atoms and molecules and photochemical reactions. •To learn the laws of crystallography and basics of crystal structure.

CO 20	T.Y.B.Sc Sem-VI	CH -362 Inorganic Chemistry	•The bonding fundamentals for both ionic and covalent compounds, including electronegativities, bond distances and bond energies using MO diagrams and thermodynamic data •Predicting geometries of simple molecules • The fundamentals of the chemistry of the main group elements, and important real world applications of many of these species •The use of group theory to recognize and assign symmetry characteristics to molecules and objects, and to predict the appearance of a molecule's vibrational spectra as a function of symmetry •The bonding models, structures, reactivities, and applications of coordination complexes, boron hydrides, metal carbonyls, and organometallics.
CO 21	T.Y.B.Sc Sem-VI	CH -363 Organic Chemistry	•This semester I have fragmentation and retrosynthetic analysis and also finding a synthon or reactive starting molecule of a target molecule. •Pericyclic reactions are used in a vast way in nature and also by organic chemists. •This course gives the student the theoretical basis of this kind of reaction and also helps them to find a way to carry out these types of reactions. the reactivity and stability of an organic molecule based on structure, including conformation and

			stereochemistry an understanding of nucleophiles, electrophiles, electronegativity, and resonance the prediction of mechanisms for organic reactions •how to use their understanding of organic mechanisms to predict the outcome of reactions 5. how to design syntheses of organic molecules •how to determine the structure of organic molecules using IR and NMR spectroscopic techniques.
CO 22	T.Y.B.Sc Sem-VI	CH- 364 Analytical Chemistry	•To develop an understanding of the range and uses of analytical methods in spectrometry. •To understand and establish the role of chemistry in quantitative analysis using IR and Thermal methods. •To enhance the Analytical instrumental skill of the students.
CO 23	T.Y.B.Sc Sem-VI	CH -365 Industrial Chemistry	•To produce graduates with enhanced skills, applied knowledge, aptitude to carry out higher studies or research and development in the various industrial areas. •To make the student cognizant about important aspects of Chemical Industries, Industrial work culture and environment. •To prepare the students for immediate entry to the workplace with sound theoretical knowledge and some basic experimental concepts in the area of various industries viz. Sugar Industry, Fermentation Industry, Petroleum and Petrochemicals. •To offer the synergism between basic concepts of Chemistry with Industrial applications. •To equip the students with knowledge of some industrial organic synthesis as requirement of diverse chemical industries. •Empower the students to understand the concepts in chemical processing, engineering and industrial development.

CO 24	T.Y.B.Sc Sem-VI	CH -366 (C) Polymer Chemistry	•Define terms like monomer, polymer, polymerization, polydispersity index, etc., classify polymers based on their origin, native backbone chain, and thermal response. •Know glass transition temperature and its determination, various ways to express molecular weights of polymers and polydispersity index. • Identify different mechanisms of polymerizations viz. free radical, ionic, and condensation polymerizations. •Distinguish techniques of polymerization based on physical conditions required for the preparation of polymers in laboratory or industry. • Familiar with preparation, properties, and applications of industrially important selected polymers.

➢ Department of Computer Science

➢ Programme Outcomes: B.Sc. Computer Science:-

After successful completion of three-year degree program in Chemistry a student should be able

Sr. No.	Programme Outcomes (PO's)
PO's	Serve as the programmers or the software engineers with the sound knowledge of practical and theoretical concepts for developing software.
PO's	Serve as the computer Engineers with enhanced knowledge of computers and its building blocks.
PO's	Work as the Hardware Designers/Engineers with the knowledge of Networking concepts
PO's	To give Technical support for the various systems.
PO's	Work as the support Engineers and the Technical writers work as consultant and management officers for system management.
PO's	Serve as the IT officers in Banks and cooperative societies.

PO's	Work as a DTP operator in small-scale industries.
PO's	Serve as the web designers with the latest web development technologies.

➢ Programme Specific Outcomes for B.Sc. Computer Science:-

Sr. No.	Programme Specific Outcomes (PSO's)
PSO1	Apply fundamental principles and methods of Computer Science to a wide range of applications.
PSO2	Design, correctly implement and document solutions to significant computational problems.
PSO3	Impart an understanding of the basics of our discipline
PSO4	Prepare for continued professional development
PSO5.	Develop proficiency in the practice of computing.

Course Outcomes for B.Sc. Computer Science:-

Sr. No	Class	Course	Course Outcomes
CO1	FYBSC	Essential of Computer	1.Explain how a computer works, including but not limited to hardware, network, and security features. 2.Describe how an operating system interacts with hardware and software and principal differences in various operating systems. 3.Explain how computers are networked, and the protocols that govern internet and application communication. 4.Explain basic cyber security issues regarding computer operating systems and networks. 5.Identify computer systems components and their functions and how the fundamentals of a processor function. 6.Summarize the assembly and configurations of computer

			systems, networks, and applications.
CO2	FYBSC	C Programming language -l	1.Develops basic understanding of computers, the concept of algorithm and algorithmic thinking. 2.Develops the ability to analyze a problem, develop an algorithm to solve it. 3.Develops the use of the C programming language to implement various algorithms, and develops the basic concepts and terminology of programming in general. 4. Introduces the more advanced features of the C language.
CO3	FYBSC	Internet computing	1.Describe the architectures of computer networks and operations of some standardized and popular networks 2.Explain the Internet architecture, the fundamental principles of Internet communication and the principles of world wide web and web systems 3.To learn the principles of the Internet and world wide web
CO4	FYBSC	C Programming language -ll	1. Describe the procedural and object oriented paradigm with concepts of streams, classes, functions, data and objects. 2. Understand dynamic memory management techniques using pointers, constructors, destructors, etc 3. Describe the concept of function overloading, operator overloading, virtual functions and polymorphism. 4. Classify inheritance with the understanding of early and late binding, usage of exception handling, generic programming. 5. Demonstrate the use of various OOPs concepts with the help of programs.

CO5	SYBSC	Data Structure - l & Data Structure -ll	1.Understand the concept of Dynamic memory management, data types, algorithms, Big O notation. 2.Understand basic data structures such as arrays, linked lists, stacks and queues. 3.Describe the hash function and concepts of collision and its resolution methods. 4. Solve problem involving graphs, trees and heaps 5.Apply Algorithm for solving problems like sorting, searching, insertion and deletion of data
CO 6	SYBSC	Programming in C++ - I	1. Introduces Object Oriented Programming concepts using the C++ language 2.Able to Understanding and applying various Data types, Operators, Conversions in program design. 3.Understanding the principles of data abstraction, inheritance and polymorphism 4.Apply the principles of virtual functions and polymorphism. 5. Analyzing the handling formatted I/O and unformatted.
CO 7	SYBSC	Software & Hardware Installation Skills	1. Students will learn to build computers, troubleshoot hardware and software problems, networking, safety in the workplace, and basic electronics related to computer hardware.
CO 8	SYBSC	Programming in C++ - II	1. Describe the procedural and object oriented paradigm with concepts of streams, classes, functions, data and objects. 2. Understand dynamic memory management techniques using pointers, constructors, destructors, etc 3. Describe the concept of function overloading, operator overloading, virtual functions and polymorphism. 4. Classify inheritance with the understanding of early and late binding, usage of exception handling, generic programming.

CO 9	SYBSC	Network Security	1.Identify some of the factors driving the need for network security 2. Identify and classify particular examples of attacks 3.Define the terms vulnerability, threat and attack 4.Identify physical points of vulnerability in simple networks 5.Compare and contrast symmetric and asymmetric encryption systems and their vulnerability to attack, and explain the characteristics of hybrid systems.
CO 10	TYBSC	System Programming	1.To understand the basics of system programs like editors, compiler, assembler, linker, loader, interpreter and debugger. 2.Describe the various concepts of assemblers and macro processors. 3.To understand the various phases of the compiler and compare its working with the assembler. 4.To understand how linker and loader create an executable program from an object module created by assembler and compiler. 5.To know various editors and debugging techniques.
CO 11	TYBSC	Database Management System	1.Demonstrate the basic elements of a relational database management system. 2.Identify the data models for relevant problems. 3.Design entity relationship and convert entity relationship diagrams into RDBMS and formulate SQL queries on the respective data into RDBMS and formulate SQL queries on the data. 4.Extend normalization for the development of application software.

CO 12	TYBSC	Software Engineering	1.Plan a software engineering process life cycle , including the specification, design, implementation, and testing of software systems that meet specification, performance, maintenance and quality requirements 2.Able to elicit, analyze and specify software requirements through a productive working relationship with various stakeholders of the project Analyze and translate a specification into a design, and then realize that design practically, using an appropriate software engineering methodology. 3.Know how to develop the code from the design and effectively apply relevant standards and perform testing, and quality management and practice 4.Able to use modern engineering tools necessary for software project management, time management and software reuse.
CO 13	TYBSC	Computer Aided Graphics	1.Understand the basics of computer graphics, different graphics systems and applications of computer graphics. 2.Discuss various algorithms for scan conversion and filling of basic objects and their comparative analysis. 3.Use of geometric transformations on graphics objects and their application in composite form. 4.Extract scene with different clipping methods and its transformation to graphics display device. 5.Explore projections and visible surface detection techniques for display of 3D scenes on 2D screen. 6. Render projected objects to naturalize the scene in 2D view and use of illumination models for this

CO 14	TYBSC	Python Programming - I & Python Programming - II	1.Interpret the fundamental Python syntax and semantics and be fluent in the use of Python control flow statements. 2.Express proficiency in the handling of strings and functions. 3.Determine the methods to create and manipulate Python programs by utilizing the data structures like lists, dictionaries, tuples and sets. 4.Identify the commonly used operations involving file systems and regular expressions. 5.Articulate the Object-Oriented Programming concepts such as encapsulation, inheritance and polymorphism as used in Python.
CO 15	TYBSC	JAVA Programming -I & JAVA Programming -ll	1.Able to apply object oriented programming features and concepts for solving given problems. 2.Able to use java standard API library to write complex programs. 3.Able to implement object oriented programming concepts using java 4.Able to develop interactive programs using applets and swings. 5.Study how to handle events and multi-threaded programming in java.
CO 16	TYBSC	Operating System	1.Understand the basics of operating systems like kernel, shell, types and views of operating systems 2.Describe the various CPU scheduling algorithms and remove deadlocks. 3.Explain various memory management techniques and concept of thrashing 4.Use disk management and disk scheduling algorithms for better utilization of external memory. 5.Recognize file system interface, protection and security mechanisms. 6.Explain the various features of distributed OS like Unix, Linux, windows etc.

CO 17	TYBSC	R -DBMS	1.Describe DBMS architecture, physical and logical database designs, database modeling, relational, hierarchical and network models. 2.Identify basic database storage structures and access techniques such as file organizations, indexing methods including B‑tree, and hashing. 3.Learn and apply Structured query language (SQL) for database definition and database manipulation. 4.Demonstrate an understanding of normalization theory and apply such knowledge to the normalization of a database. 5.Understand various transaction processing, concurrency control mechanisms and database protection mechanisms.
CO 18	TYBSC	Computer Network	1.Understand and describe the layered protocol model 2.Describe, analyze and evaluate a number of data link, network, and transport layer protocols. 3.Program network communication services for client/server and other application layouts. 4.Describe, analyze and evaluate various related technical, administrative and social aspects of specific computer network protocols from standards documents and other primary materials found through research. 5.Design, analyze, and evaluate networks and services for homes, data centers, IoT/IoE, LANs and WANs.
CO 19	TYBSC	Theoretical Computer Science	1.Understand the basic concepts of formal languages, automata and grammar types, as well as the use of formal languages and reduction in normal forms, 2.Demonstrate the relation between regular expressions, automata, languages and grammar with formal mathematical methods 3.Design push down automata, cellular automata and turing machines performing tasks of moderate complexity 4.Analyze the syntax and formal properties, parsing of various grammars such as LL(k) and LR(k) 5.Describe the rewriting systems and derivation languages

➢ Department of Information Technology

➢ Programme Outcomes: B.Sc. Information Technology:-

After successful completion of three-year degree program in Chemistry a student should be able to

Sr. No.	Programme Outcomes (PO's)
PO's	Design and develop software solutions for contemporary business environments by employing appropriate problem solving strategies.
PO's	Comprehend and resolve common desktop and network issues.
PO's	Analyze common business functions and identify, design, and develop appropriate information technology solutions (in web, desktop, network, and/or database applications).
PO's	Learn future technologies through acquired foundational skills and knowledge and employ them in new business environments.
PO's	Practice communication, problem solving and decision-making skills through the use of appropriate technology and with the understanding of the business environment.
PO's	An ability to design a system, component or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, healthy and safety, manufacturability and sustainability.
PO's	An ability to acquire required programming skills, formulate and solve practical problems.

➢ Programme Specific Outcomes: B.Sc. Information Technology:

Sr. No.	Programme Specific Outcomes (PSO's)
PSO1	To transform and empower women graduates to meet global challenges through holistic

	education in terms of recent Teaching-Learning methodologies.
PSO2	To groom the graduates towards excellence through building communication skills, handling leadership challenges.
PSO3	To heighten the conscious of the graduates on socio-economic concern and to inculcate moral and ethical values to chisel them as better human being
PSO4	To train the student on the state-of-the-art tools and techniques and facilitate them to comprehend, analyze, design and create feasible solutions/innovative products for real life problems
PSO5	To pursue higher studies with good knowledge in core areas of Information Technology, by being aware of modern tools, techniques and good interpersonal skills.

Course Outcomes: B.Sc. Information Technology:-

Sr. No	Class	Course	Course Outcomes
CO1	FYBSC	IT 101: Web Design	1.Be able to use the HTML programming language. 2.Resolves written HTML codes. 3.Runs the page he/she has designed using HTML codes. 4.Be able to use the Design Programs.

CO2	FYBSC	IT 102: OOP in CPP	1. *The students will be able* to Understand OOPs Concept, C++ language features. Able to Understanding and Applying various Data types, Operators, Conversions in program design. 2. Able to Understand and Apply the concepts of Classes & Objects, friend function, constructors & destructors in program design.
CO3	FYBSC	IT 201: Advanced Web Design	1.Develop basic programming skills using Java script and jQuery. 2. Be able to embed social media content into web pages. 3. Evaluate common errors in the web languages and repair them to meet standards
CO4	FYBSC	IT 102: Programming in C++	1. Describe the procedural and object oriented paradigm with concepts of streams, classes, functions, data and objects. 2. Understand dynamic memory management techniques using pointers, constructors, destructors, etc 3. Describe the concept of function overloading, operator overloading, virtual functions and polymorphism. 4. Classify inheritance with the understanding of early and late binding, usage of exception handling, generic programming. 5. Demonstrate the use of various OOPs concepts with the help of programs.
CO5	SYBSC	Data Structure - l & Data Structure -ll	1.Understand the concept of Dynamic memory management, data types, algorithms, Big O notation. 2.Understand basic data structures such as arrays, linked lists, stacks and queues. 3.Describe the hash function and concepts of collision and its resolution methods. 4.Solve problem involving graphs, trees and heaps 5.Apply Algorithm for solving problems like sorting, searching, insertion and deletion of data

CO 6	SYBSC	Programming in C#	1.Knowledge of the structure and model of the programming language C # 2.Use the programming language C # for various programming technologies 3. Develop software in C # 4.Evaluate user requirements for software functionality required to decide whether the programming language C # can meet user requirements 5. Propose the use of certain technologies by implementing them in the 6. C # programming language to solve the given problem 7.Choose an engineering approach to solving problems, starting from the acquired knowledge of programming and knowledge of operating systems.
CO 7	SYBSC	Software & Hardware Installation Skills	1. Students will learn to build computers, troubleshoot hardware and software problems, networking, safety in the workplace, and basic electronics related to computer hardware
CO 8	SYBSC	Programming in ASP Dot Net	1. Develop working knowledge of C# programming constructs and the .NET Framework. 2. Build and debug well-formed Web Forms with ASP. NET Controls. 3. Perform form validation with validation controls. 4. Create custom controls with user controls. 5. Use ADO.NET in a web application to read, insert, and update data in a database.
CO 9	SYBSC	Network Security	1. Identify some of the factors driving the need for network security 2. Identify and classify particular examples of attacks 3. Define the terms vulnerability, threat and attack 4.Identify physical points of vulnerability in simple networks 5.Compare and contrast symmetric and asymmetric encryption systems and their vulnerability to attack, and explain the characteristics of hybrid systems.

CO 10	TYBSC	System Programming	1. To understand the basics of system programs like editors, compiler, assembler, linker, loader, interpreter and debugger. 2. Describe the various concepts of assemblers and macro processors. 3. To understand the various phases of the compiler and compare its working with assembler. 4. To understand how linker and loader create an executable program from an object module created by assembler and compiler. 5. To know various editors and debugging techniques.
CO 11	TYBSC	Database Management System	1.Demonstrate the basic elements of a relational database management system. 2.Identify the data models for relevant problems. 3. Design entity relationship and convert entity relationship diagrams into RDBMS and formulate SQL queries on the respective data into RDBMS and formulate SQL queries on the data. 4.Extend normalization for the development of application software.
CO 12	TYBSC	Software Engineering	1. Plan a software engineering process life cycle , including the specification, design, implementation, and testing of software systems that meet specification, performance, maintenance and quality requirements 2. Able to elicit, analyze and specify software requirements through a productive working relationship with various stakeholders of the project Analyze and translate a specification into a design, and then realize that design practically, using an appropriate software engineering methodology. 3. Know how to develop the code from the design and effectively apply relevant standards and perform testing,

			and quality management and practice 4. Able to use modern engineering tools necessary for software project management, time management and software reuse.
CO 13	TYBSC	Cyber Law & IT Act	1. Understand the different theoretical and cross-disciplinary approaches (criminological, political, legal and information security/management) to the study of cyber-security and the regulation of the Internet and the Internet of Things. 2. Understand the structure, mechanics and evolution of the Internet in the context of emerging crime threats and technological and other trends in cyberspace. 3. Distinguish and classify the forms of cybercriminal activity and the technological and 'social engineering' methods used to undertake such crimes. 4. Investigate assumptions about the behavior and role of offenders and victims in cyberspace, and use basic web-tools to explore behavior on-line. 5. Analyze and assess the impact of cybercrime on government, businesses, individuals and society. 6. Evaluate the effectiveness of cyber-security, cyber-laws (e.g. the Budapest Convention) and other countermeasures against cybercrime and cyber warfare
CO 14	TYBSC	Android Application Development – I & Android Application Development - II	1. Build enterprise level mobile applications with Kotlin on Android 2. Understand both the basic and advanced concepts of Kotlin 3. Understand why use Kotlin over Java 4. Install and configure Android Studio 5. Explain and use key Android programming concepts 6. Design and develop user Interfaces for the Android

			platform. 7. Save state information across important operating system events. 8. Apply Java programming concepts to Android application development
CO 15	TYBSC	JAVA Programming-I & JAVA Programming-ll	1. Able to apply object oriented programming features and concepts for solving given problems. 2.Able to use the Java standard API library to write complex programs. 3.Able to implement object oriented programming concepts using java 4. Able to develop interactive programs using applets and swings. 5.Study how to handle events and multi-threaded programming in java.
CO 16	TYBSC	Operating System	1. Understand the basics of operating systems like kernel, shell, types and views of operating systems 2. Describe the various CPU scheduling algorithms and remove deadlocks. 3. Explain various memory management techniques and concept of thrashing 4. Use disk management and disk scheduling algorithms for better utilization of external memory. 5. Recognize file system interface, protection and security mechanisms. 6. Explain the various features of distributed OS like Unix, Linux, windows etc.

CO 17	TYBSC	R -DBMS	1. Describe DBMS architecture, physical and logical database designs, database modeling, relational, hierarchical and network models. 2. Identify basic database storage structures and access techniques such as file organizations, indexing methods including B‑tree, and hashing. 3. Learn and apply structured query language (SQL) for database definition and database manipulation. 4. Demonstrate an understanding of normalization theory and apply such knowledge to the normalization of a database. 5. Understand various transaction processing, concurrency control mechanisms and database protection mechanisms.
CO 18	TYBSC	Computer Network	1. Understand and describe the layered protocol model. 2. Describe, analyze and evaluate a number of data link, network, and transport layer protocols. 3.Program network communication services for client/server and other application layouts. 4. Describe, analyze and evaluate various related technical, administrative and social aspects of specific computer network protocols from standards documents and other primary materials found through research. 5. Design, analyze, and evaluate networks and services for homes, data centers, IoT/IoE, LANs and WANs.
CO 19	TYBSC	Theoretical Computer Science	1.Understand the basic concepts of formal languages, automata and grammar types, as well as the use of formal languages and reduction in normal forms, 2.Demonstrate the relation between regular expressions, automata, languages and grammar with formal mathematical methods 3.Design push down automata, cellular automata and turing machines performing tasks of moderate complexity 4.Analyze the syntax and formal properties, parsing of

			various grammars such as LL(k) and LR(k) 5.Describe the rewriting systems and derivation languages

Course Outcomes: B.Sc Microbiology

Sr. No	Class	Course	Course Outcomes
CO 1	F.Y. BSc Sem-I	Microbial diversity (theory)	·After successful completion of this students are expectedto: 1.Understand the basic microbial structure and study the comparative characteristics of prokaryotes and eukaryotes and also understand the structure similarities and difference among various physiological group of bacteria /archaea .2.Know general bacteriology and microbial aspect pertinent to bacteria , fungi and algae
CO 2	F.Y. BSc Sem-I	microscopy and BASIC BACTERIOLOGY (THEORY)	1·Demonstration theory in microscopy and also Understand techniques and staining procedures know various cultures media and their application and also understand various physical and chemical means of sterilization Know general bacteriology and microbial techniques for isolation of pure cultures of bacteria, fungi and algae.
CO 3	F.Y. BSc Sem-I	cc-1 a microbial practical paper-i	1.fully completion of this course students are expected to Inculcate the ability to apply the process of science Demonstrated ability to formulate hypotheses and design experiments based on the scientific method .Analyze and interpret results from a variety of microbiology methods and apply these methods to analogous situations.

CO 4	F.Y. BSc Sem-II	mb 201 basic biochemistry and cytology (theory)	1.Understand the basic microbial structure and function and study the comparative characteristics of prokaryotes and eukaryotes and also understand the structure architecture among bacteria/archaea
CO 5	F.Y. BSc Sem-II	mb 202 microbial techniques	1.know the general bacteriology and introduce microbial technique for isolation of pure cultures of Bacteria,fungi ,algae and virus demonstration theory and practical skills in handling microbial culture know various bacteria based on nutritional needs and also understand various .
CO 6	F.Y. BSc Sem-II	mb 203 microbiology practical ii	Inoculate scientific thinking 1.Student can adapt the ability to apply the process of science 2. Demonstration an ability to formulate a hypothesis and design experiment
CO 7	S.Y. BSc Sem-I	MB - 301: Basic Microbial Enzyme and Metabolism	1 Understand the basics of microbial enzymology, nature of enzymes, their nomenclature, working mechanism, classification based on their action etc. 2. know about different parameters affecting the activity of enzymes.
CO 8	S.Y. BSc Sem-I	MB - 302: Microscopy and Microbial Ecology	1.Demonstrate theory in microscopy and acquaintance with advanced microscopy. 2.Know the basic concepts of microbial ecology such as biotic and abiotic factors. 3. Microbial interactions .
CO 9	S.Y. BSc Sem-I	MB - 303: Practical Paper-III	1.Learn proper handling of micropipette, pH meter, graduated pipette and volumetric 2.Flask along with their calibrations. 3.Perform specific staining techniques and acquired skill of handling microscope 4.While observing stained preparations. Able to demonstrate basic biochemical

			characteristics of bacteria.
CO 10	S.Y. BSc Sem-II	MB SEC- I: Microbiological Analysis of Air, Water and Soil	1.To highlight the number and range of pathogens that may be found in air, water and soil. 2.To describe some of the key preventatives and monitors.
CO 11	S.Y. BSc Sem-II	MB - 401: Genetics and Immunology	1.Understand the basic of microbial enzymology, nature of enzyme, their 2.Nomenclature, working mechanism, classification based on their actions etc. 3.Understand the concepts like gene, chromosome, Structural organization 4. Know general terms used in genetics 5.Aware about genetics.
CO 12	S.Y. BSc Sem-II	MB - 402: Basic Industrial Microbiology	1.Understand the basics of fermentation technology, screening techniques, microbial 2.Culture preservation techniques etc. 3.Know the concepts of inoculum development and media sterilization for 4.Fermentation process. 5.Fearn about the typical structure of fermenter and its parts, types of fermentation 6.Processes and synchronous growth
CO 13	S.Y. BSc Sem-II	MB - 403: Practical Paper - IV	1. Able to carry out titrations skillfully. 2.Understand structure, working principle and significance of each and every part of 3.Fermenter. 4.Know chromatography techniques
CO 14	S.Y. BSc Sem-II	SEC-II: Biofertilizers and Biopesticides	1.Completion of the course will give an overview of relevant use of microbial 2.Biofertilizers and biopesticides.

			3.The students will become familiar with the vast reserves of available microbial 4.Biodiversity that provide abundant opportunities to harness the ability o
CO 15	T.Y. BSc Sem-I	MB 501- Microbial Genetics	1.Gene transfer and its Central Dogma. Able to learn the principles and applications of various molecular techniques. Students shall have the basic knowledge of operon and r-DNA technology
CO 16	T.Y. BSc Sem- I	MB 502- Bioprocess Technology	2.After successful completion of this course, students are expected to: Know a bioreactor, its parts, types and working.. Get knowledge about the significant processes in a bioreactor like strain improvement, inoculum development sterilization and scale-up
CO 17	T.Y. BSc Sem- I	MB 503- Metabolism	1.Get well versed with the catabolic and anabolic pathways. Understand the concept of ETC and principles of thermodynamics. Apply the principles of metabolism in various bacteria
CO 18	T.Y. BSc Sem- I	MB 504- Basic immunology	1.After successful completion of this course, students are expected to: 2.Get a clear vision about various aspects of infectious diseases. Understand the principles of immunological phenomena associated with infectious diseases. 3.Carry out fundamental or applied research in the field of Medical Microbiology.
CO 19	T.Y. BSc Sem- I	MB 505 -Medical microbiology I	1.Get a clear vision about various aspects of infectious diseases. 2.Carry out fundamental or applied research in the field of Medical Microbiology.

CO 20	T.Y. BSc Sem- I	MB 506 (A) - Food Microbiology	1.After successful completion of this course, students are expected to: Know the concepts related to popular milk products, milk examination and spoilage. Comprehend knowledge regarding fermented food products, food spoil Understand diverse strategies for food preservation.
CO 21	T.Y. BSc Sem- I	MB 506 (B)- Pharmaceutical Quality Control & Quality Assurance	1.Successful completion of this course, students are expected to: Understand microbial spoilage and preservation of pharmaceutical formulations during 2.Production and products. Get hands-on knowledge of various methods / processes required .
CO 22	T.Y. BSc Sem- I	MB 507 - Methods in Medical Microbiology – I	1.After successful completion of this course, students are expected to: Achieve skill in pure culture techniques. Learn principles underlying diagnostic tests and handle kits for diagnosis of diseases.
CO 23	T.Y. BSc Sem- I	MB-508: Methods in Industrial Microbiology-I	1.After successful completion of this course students are expected to: Understand the operations in fermentation processes Inculcate the salient features of quality management and regulatory processes.
CO 24	T.Y. BSc Sem- I	MB-509: Methods in Applied Microbiology-I	1. After completion of this course, students will be able to: Isolate and identify agriculturally important microbes like and cellulolytic 2.Microbes. Detect food poisoning causing microbes and perform the tests to determine quality 3.Control of dairy products (milk). Synthesize nanoparticles by biological method/s and characterize them using UV-
CO 25	T.Y. BSc Sem- II	MB 601- Molecular Biology	1.After successful completion of this course, students are expected to: Get well versed with the regulatory mechanisms of Lactose and Tryptophan operon. Understand the principles

			and applications of advanced molecular techniques. Know the methodology involved in engineering of genes and its practical
CO 26	T.Y. BSc Sem- II	MB 602- Fermentations	1.After successful completion of this course, students are expected to: Understand fermentation processes involved in the production of various products.
CO 27	T.Y. BSc Sem- II	MB 603- Enzymology	1.After successful completion of this course, students are expected to: Know the role of coenzymes in enzyme action.Understand the regulation of enzymatic reactions pertaining to allosteric proteins and 2.Covalent modification. Acquire knowledge about purification of enzymes by various methods, 3.Immobilization of enzymes and enzyme engineering techniques.
CO 28	T.Y. BSc Sem- II	MB 604: Advanced Immunology	1.After successful completion of this course, students are expected to: Be well versed with protective immunity and tolerance in the bodyKnow the path that may help to overcome the challenges in the synthesis of novel vaccines.
CO 29	T.Y. BSc Sem- II	MB 605-Medical Microbiology - II	2.Become aware about the various types of diseases and their sources. Justify the variation between viral, bacterial and other diseases. Explain prognosis of diseases and understand the role of medical microbiology in public health.
CO 30	T.Y. BSc Sem- II	MB 606 (A) - Agricultural Microbiology	1. After successful completion of this course, students are expected to: Understand classification of plant pathology with regional plant diseases Know the concepts related to methods of plant disease control. Comprehend knowledge regarding Agricultural Microbiology

co 31	T.Y. BSc Sem- II	MB 606 (B)- Regulatory Practices and IPR	1. Understand the role of regulatory practices in the Pharmaceutical Industry and become aware of the patents norms. Have knowledge pertaining to Intellectual Property Rights and their protection. Be endowed with the legislature to be followed during the generation of genetically modified plant and animals
CO 32	T.Y. BSc Sem- II	MB 607 - Methods Medical Microbiology – II	1.After successful completion of course, students are expected to: Perform pure culture techniques and apply them for pathogenic bacteria. Inculcate the technique involved in collection of mouth and skin samples using swabs for diagnostic purposes. Perform diagnostic tests for Syphilis and AIDS
CO 33	T.Y. BSc Sem- II	MB-608: Methods Industrial Microbiology-II	1.After successful completion of this course, students are expected to: Design bioprocesses for commercially valuable products. Learn techniques for validation of instruments used in the fermentation industry. Investigate the role of immobilization in enzyme activity and apply it for various purposes
CO 34	T.Y. BSc Sem- II	MB-609: Methods in Applied Microbiology-II	1.After successful completion of this course, students are expected to: Isolate and screen microbes involved in bioremediation processes like dyes and lignin degradation. Isolate and identify microbes which are important for crops

➢ Course Outcomes:B.Sc. Physics: -

Sr. No.	Class	Course	Course Outcomes

CO 1	F.Y.B.Sc Sem-I	PHY-101: Basic Mechanics	•Apply the concept of use of knowledge of mechanics to real life problems. •Understanding of the course will create scientific temperament. •The students would learn about the behavior of physical bodies. It provides the basic concepts related to the motion of all the objects around us in our daily life. •The velocity and acceleration parameters give the knowledge about how the vehicles Move.
CO 2	F.Y.B.Sc Sem-I	PHY-102: Dynamics and Elasticity	•Study the behavior of rigid body dynamics. •To make the students understand the dynamics involved in a rigid body. •Learn how Young's modulus and rigidity modulus are defines and how they are evaluated for different shapes of practical relevance
CO 3	F.Y.B.Sc Sem-II	PHY-201: Electricity and Electrostatics	● Gain knowledge of Gauss laws and solve the electric field for various geometric objects
			•To understand the basic concepts of Electric field and Electric Potential.
CO 4	F.Y.B.Sc Sem-II	PHY-202: Dielectrics, Magnetism And Electromagnetism	•Enable the concept of magnetic field. •Understand the faraday's laws of electromagnetic induction •Enable to familiarize with the laws of electromagnetic induction •Thorough knowledge in the basic concept of electromagnetic induction •Able to derive the Maxwell's equation in free space and material media

CO 5	S.Y.B.Sc Sem-III	PHY-301: Thermodynamic s and Kinetic theory of gasses	•Understand the concept of thermodynamics and their laws. •Understand the Heat Engine and their uses •Describe the thermodynamic function and their relations •To study Maxwell Relations and Application.
CO 6	S.Y.B.Sc Sem-III	PHY-302 (A): Electronics –I	•Understand the basics of diode and working of rectifier circuits and characteristics •Analyze the characteristics of transistor and transistor biasing circuits •Understand the basic knowledge of semiconductor physics •Learn how to construct a transistor amplifier and how its gain varies with frequency •Understand the fundamentals of codes and number system •Understand the binary arithmetic , logics and Boolean functions
CO 7	S.Y.B.Sc Sem-III	PHY 304: Skill Enhancement Course	•Know the need of renewable energy resources, historical and latest developments •Describe the use of solar energy and the various components used in the energy production with respect to applications like - heating, cooling, desalination, power generation, drying, cooking etc. •Appreciate the need of Wind Energy and the various components used in energy generation and know the classifications.

			• Understand the concept of Biomass energy resources

CO 8	S.Y.B.Sc Sem-IV	PHY 401: Waves, Oscillations and Acoustics	•Apply the concept of use of knowledge of Waves and Sound to real life problems. • Familiarize with general terms in acoustics like intensity, loudness, reverberation etc, and study in detail about production, detection, properties and uses of ultrasonic waves •Analyze waves and oscillations
CO 9	S.Y.B.Sc Sem-IV	PHY 402: Optics and LASERS	•Understand the natural behavior of aberration in lens •Study the theory and experiment of interference using air wedges, Newton's rings etc. •Study the theory of diffraction by Fresnel and Fraunhofer methods •Study the theories for production of polarization of light •Explain different Laser uses and make a comparison between them. •Apply the gained basic knowledge of laser and working of different type of lasers.
CO 10	S.Y.B.Sc Sem-IV	PHY 404: Electrical Circuits and Network Skills	•After the completion of the course the student will acquire necessary skills/ hands on experience /working knowledge on millimeters, voltmeters, ammeters, electric circuit elements, dc power sources, ac/dc generators, inductors, capacitors, transformers, single phase and three phase motors, interfacing dc/ac motors to control and measure, relays and basics of electrical wiring. •Study circuits in a systematic manner suitable for analysis and design. •Analyze the electric circuit using network theorem.

➢Course Outcomes:B.Sc. Mathematics: -

Sr. No.	Class	Course	Course Outcomes
CO 1	F.Y.B.Sc Sem-I	MTH 101: Matrix Algebra	•Understand concepts on matrix operations and rank of the matrix. •Understand the use of matrices for solving the system of linear equations. •Understand basic knowledge of the Eigenvalues and Eigenvectors. • Apply Cayley-Hamilton theorem to find the inverse of the matrix. •Know the matrix transformation and its applications in rotation, reflection, translation.
CO 2	F.Y.B.Sc Sem-I	MTH 102: Calculus	•Understand basic concepts on limits and continuity. •Understand use of differentiations in various theorems. •Know the Mean value theorems and its applications. •Make the applications of Taylor's,Maclaurin's theorem. •Know the applications of calculus.

CO 3	F.Y.B.Sc Sem-I	MTH-103(B) Graph Theory	•Make the applications Graph, Simple graph, Multigraph, Hand shaking lemma, Types of Graphs, Operations on graphs, Subgraphs, Isomorphism of graphs, Walk, path, cycles •Solving examples of Connected and disconnected Graphs, bridges, cut vertices, edge connectivity and vertex connectivity, Eulerian graph, Hamiltonian Graph, Planar Graph, Euler's Formula for planar graphs, Kuratowski's two graph, Geometrical dual •Solve problems on Definition and some properties of trees, Distance and Center in a tree, Definitions of Rooted and Binary trees, spanning trees, Minimal Spanning trees, Directed graphs, some types of digraphs.
CO 4	F.Y.B.Sc Sem-II	MTH 201: Ordinary Differential Equations	•Understand basic concepts in differential equations. •Understand method of solving differential equations •Understand the use of differential equations in various fields.
CO 5	F.Y.B.Sc Sem-II	MTH 202: Theory of Equations	•Students can find out the roots of any equation of degree less than or equal to five. Theory of equations is highly useful in various subjects like algebra, linear algebra, calculus, ordinary and partial differential equations etc.
CO 6	F.Y.B.Sc Sem-II	MTH 203 (B): Numerical Analysis	•Understand basic concepts of methods of solutions of equations viz. bisection, iteration, Newton-Raphson methods and method of false position. •Understand methods of curve fitting viz. Gauss's forward and backward difference formulae and Lagrange's interpolation formula. •Use of curve fitting such as least square, polynomial and exponential fittings set of given data. •Use Taylor's series, Euler's method. Modified Euler's method., Runge Kutta method.

CO 7	S.Y.B.Sc Sem-III	MTH -301: Calculus of Several Variables	• Limit and continuity of functions of several variables • Fundamental concepts of multivariable Calculus. • Series expansion of functions. •Extreme points of function and their maximum, minimum values at those points. •Meaning of definite integral as limit as sums. •How to solve double and triple integration and use them to find area by double integration and volume by triple integration.
CO 8	S.Y.B.Sc Sem-III	MTH-302(B): Theory of Groups and Codes	•Understand groups and their types which is one of the building blocks of pure and applied mathematics. •Understand Lagrange's, Euler and Fermat theorem •Understand concept of automorphism of groups •Understand concepts of homomorphism and isomorphism e) understand basic •Properties of rings and their types such as integral domain and field.
CO 9	S.Y.B.Sc Sem-III	MTH 304: Complex Variable	•Uses of the language of set theory, designing issues in different subjects of mathematics •Understand the issues associated with different types of finite and infinite sets via countable uncountable sets •Knowledge of the concepts and methods of mathematical logic, set theory, relation calculus, and concepts concerning functions which are included in the fundamentals of various disciplines mathematics •Understanding the role of propositional and predicate calculus able to provide •The logical mathematical reasoning, formulate theorems and definitions

CO 10	S.Y.B.Sc Sem-IV	MTH -401: Complex Variables	•The course is aimed to introduce the theory for functions of complex variables • Students will understand the concept of analytic function •Students will understand the Cauchy Riemann Equations •Students will understand harmonic functions •Students will understand complex integrations •Students will understand the calculus of residues. •Students will acquire the skill of contour integrations.
CO 11	S.Y.B.Sc Sem-IV	MTH 402(B): Differential Equations and Numerical Methods	•Students will aware of formation of differential equations and their solutions •Students will understand the concept of Lipschitz condition •Students will understand the method of variation of parameters for second order L.D.E. •Students will understand simultaneous linear differential equations and method of their solutions •Students will understand Pfaffian differential equations and method of their solutions •Students will understand difference equations and their solutions

➢ Course Outcomes:B.Sc Zoology: -

Sr. No	Class	Course	Course Outcomes
CO 1	F.Y.B. Sc Sem-I	ZOO: 101 Animal Diversity I	•Understand classification of Protista. •Study General Characters and classification up to classes. •Describe and classify phylum Platyhelminthes and identify the problems caused by parasitic forms •Understand the anatomical features of non- chordates through type study of Phylum Arthropoda.

CO 2	F.Y.B.Sc Sem-I	ZOO: 102 Animal Diversity II	•Describe and classify branch Pisces, with examples and salient features •Study the Generate an understanding about phyla. •Classify mammals and interpret general evolutionary relationships among and between these animal groups.

CO 3	F.Y.B.Sc Sem-II	ZOO: 201 Comparative Anatomy of Vertebrates	•Understand Derivatives of integument w.r.t. glands and digital tips. •Describe comparative anatomy of Vertebrates. •Discuss Brief account of alimentary canal and digestive glands. •Identify Types of receptors.
CO 4	F.Y.B.Sc Sem-II	ZOO: 202 Developmental Biology of Vertebrates	•Describe Early Embryonic Development. •Differ Fundamental processes in development •Explain in brief Types of placenta on the basis of histology •Understand Developmental biology of Vertebrates
CO 5	S.Y.B.Sc Sem-III	ZOO:301 Physiology	•Understand Structure of a neuron. •Understand about Absorption of carbohydrates, proteins, lipids. •Describe Respiratory volumes and capacities. •Acquire knowledge regarding Structure of Heart and Endocrine glands.
CO 6	S.Y.B.Sc Sem-III	ZOO:302 Biochemistry	•Describe Biosynthesis and β oxidation of palmitic acid. •Understand Classification of Enzymes •Develop knowledge of Enzyme Kinetics
CO 7	S.Y.B.Sc Sem-III	ZOO: 303 Physiology & Biochemistry	•Understand Preparation of hemin and hem chromogens •Understand about Estimation of total protein in given solutions by Lowry's method •Describe Study of permanent slides of spinal cord, duodenum, liver, lung, kidney, bone, cartilage

CO 9	S.Y.B.Sc Sem-IV	ZOO 401 Genetics	•Understand about Mendel's work on transmission of traits
			•Understand Chromosome theory of inheritance •Describe definition of gene mapping & mutation •Students become familiar with Chromosomal mechanisms and methods
CO 10	S.Y.B.Sc Sem-IV	ZOO 402 Evolutionary Biology	•Understand about Major Events in History of Life •Describe Types of natural selection •Acquire knowledge regarding Biological species concept
CO 11	S.Y.B.Sc Sem-IV	ZOO 403 Genetics & Evolutionary Biology	•Describe Study of Linkage, recombination, gene mapping using the data •Understand about Study of homology and analogy from suitable specimens/ pictures •Students become familiar with the Study of Mendelian Inheritance and gene interactions.
			•Students are taught the detailed concepts of digestion, respiration excretion and the functioning of nerves and muscles. •Students gain fundamental knowledge of animal physiology.

Course Outcomes: Electronics

Sr. No.	Class	Course	Course Outcomes
CO 1	F.Y. B.Sc Sem-I	Paper-I- Network Analysis & Semiconductor Diodes Paper-II -	Verify the network theorems and operation of typical electrical and electronic circuits. Choose the appropriate equipment for measuring electrical quantities and verify the same for different circuits.

		Digital Integrated Circuits	
CO 2	F.Y.B.Sc Sem-I	Practical Electronics	Prepare the technical report on the experiments carried. Use mathematics as a tool for solving/modeling systems in electronics. Solve non-homogeneous linear differential equations of any order using a variety of methods, solve differential equations using power series and special functions
CO 3	F.Y.B.Sc Sem-II	Paper-I- Analog Electronics Paper-II- Linear Integrated Circuits	Understand methods to diagonalize square matrices and find eigenvalues and corresponding eigenvectors for a square matrix, and check for its diagonalizability. Familiarize with the concept of sequences, series and recognize convergent, divergent, bounded, Cauchy and monotone sequences.
CO 5	S.Y.B.Sc Sem-I	Paper-I- Analog Communication & Paper-II -Microprocessor & Applications	1.Apply knowledge of analog modulation and demodulation. 2. Apply the concept and knowledge of microprocessors to real life problems 3.Review, prepare and present technological developments.
CO 6	S.Y.B.Sc Sem-II	Paper-I-Digital Communication & Paper-II Microcontroller & Applications	1. Apply the concept and knowledge of digital communication to develop new systems. 2. Gain knowledge of microcontroller programming. 3. Handle hardware and software to shoot problems of the society.