Programme Specific Outcomes (PSO)

2021-22

Name of the Faculty – Arts

Name of Faculty : Arts

Name of Department : Marathi

U.G. Programme : F.Y.B.A. to T.Y.B.A. ,& F.Y.B.Com, S.Y.B.Sc

Programme Specific Outcomes

F.Y.B.A. (SEM 1)

❖ **विषय : मराठी साहित्य : कथा आणि भाषिक कौशल्य विकास : (CC-1A)**

अभ्यास क्रमाची उद्दिष्ट्ये :

१. कथा या साहित्य प्रकारची ओळख करून देणे.
२. कथा या साहित्य प्रकारचे स्वरूप, घटक आणि प्रकार यांची ओळख करून देणे.
३. विविध साहित्य प्रवाहांमधील कथा या साहित्य प्रकारातील निवडक कथांचे अध्ययन करणे.
४. भाषिक कौशल्य विकास करणे.

F.Y.B.A. (SEM 2)

❖ **विषय : मराठी साहित्य : एकांकिका आणि भाषिक कौशल्य विकास : (CC-1A)**

अभ्यास क्रमाची उद्दिष्ट्ये :

१. एकांकिका या साहित्य प्रकारची ओळख करून देणे.
२. एकांकिका या साहित्य प्रकारचे स्वरूप, घटक आणि प्रकार यांची ओळख करून देणे.
३. विविध साहित्य प्रवाहांमधील एकांकिका या साहित्य प्रकारातील निवडक एकांकिकाचे अध्ययन करणे.
४. भाषिक कौशल्य विकास करणे.

S.Y.B.A.

- **विषय :भाषिक कौशल्यविकास आणि आधुनिक मराठी साहित्यप्रकार : कादंबरी (CC-1 C)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. कादंबरी साहित्यप्रकाराचे स्वरूप ,घटक,प्रकार आणि वाटचाल समजून घेणे .
२. नेमलेल्या कादंबरीचे आकलन ,आस्वाद आणि विश्ल्येषण करणे .
३. भाषिक कौशल्यविकास करणे .

S.Y.B.A.

- **विषय :भाषिक कौशल्यविकास आणि आधुनिक मराठी साहित्यप्रकार : ललित गद्य : (CC-1 D)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. ललित गद्य साहित्यप्रकाराचे स्वरूप ,घटक,प्रकार आणि वाटचाल समजून घेणे .
२. नेमलेल्या कादंबरीचे आकलन ,आस्वाद आणि विश्ल्येषण करणे .
३. भाषिक कौशल्यविकास करणे

S.Y.B.A.

- **विषय :आधुनिक मराठी साहित्य –प्रकाशवाटा (DSE-1A) (SEM –3)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. आत्मचरित्र या साहित्यप्रकाराचे स्वरूप ,संकल्पना समजून घेणे .
२. आत्मचरित्र या साहित्यप्रकाराच्या प्रेरणा आणि वाटचाल यांची ओळख करून देणे .
३. ललित गद्यातील अन्य साहित्यप्रकाराचा तुलनेत आत्मचरित्राचे वेगळेपण समजून घेणे .
४. नेमलेल्या या आत्मचरित्राचे आकलन ,आस्वाद विश्लेषण करणे .

S.Y.B.A.

- **विषय:मध्ययुगीन मराठी साहित्य : निवडक मध्ययुगीन गद्य – पद्य (DSE-2A)(SEM – 4)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. मध्यायुगीन गद्य-पद्य साहित्य प्रकारची ओळख करून घेणे.
२. नेमलेल्या अभ्यास पुस्तकातील मध्ययुगीन गद्य-पद्याचे आकलन, आस्वाद आणि विश्लेषण करणे.

S.Y.B.A.

❖ **विषय :साहित्य विचार : (DSE-1B) (SEM –3)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. भारतीय आणि पाच्यात्य साहित्य विचाराच्या आधारे साहित्यची संकल्पना स्वरूप आणि प्रयोजन विचार समजून घेणे .
२. साहित्याची निर्मिती प्रक्रिया समजून घेणे.
३. साहित्याची भाषा आणि शैली विषयक विचार समजून घेणे.

S.Y.B.A.

❖ **विषय : साहित्य समीक्षा : (DSE-2B) (SEM –4)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. साहित्य समीक्षेची संकल्पना, स्वरूप यांचा परिचय करून घेणे.
२. साहित्य आणि समीक्षा यांचे परस्पर संबंध समजावून घेणे व अभ्यास करणे.
३. साहित्य प्रकारानुसार समीक्षेचे स्वरूप समजावून घेणे व अभ्यासणे.
४. ग्रंथ परिचय, परीक्षण व समीक्षण यातील फरक समजावून घेणे.

S.Y.B.A.

❖ **विषय : प्रकाशन व्यवहार आणि संपादन : (SEC – 2A) (SEM –3)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. प्रकाशनव्यवहार आणि संपादन यासाठी आवश्यक कौशल्ये प्राप्त करणे.
२. प्रकाशनव्यवहार आणि संपादन यासाठी आवश्यक प्रशिक्षण घेणे.

३. प्रकाशनव्यवहार आणि संपादन यासाठी आवश्यक प्रात्यक्षिकासह उपयोजनाची कौशल्ये प्राप्त करणे.
४. प्रकाशन संस्था, जाहिरात संस्था, छापखाने, वृत्तपत्र कार्यालये, वितरण संस्था, ग्रंथ विक्री दुकाने, फ्लेक्स निर्मिती केंद्र, वार्ताहर यांना भेटी देऊन प्रशिक्षण घेणे.

S.Y.B.A.

❖ **विषय : उपयोजित लेखन कौशल्य : (SEC – 2B) (SEM –4)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. जाहिरात, मुलाखत लेखन आणि संपादन यासाठी आवश्यक कौशल्ये प्राप्त करणे
२. जाहिरात, मुलाखत लेखन आणि संपादन यासाठी आवश्यक प्रशिक्षण घेणे.
३. जाहिरात, मुलाखत लेखन आणि संपादन यासाठी प्रात्यक्षिकासह उपयोजनाची कौशल्ये प्राप्त करणे.

S.Y.B.A.

❖ **विषय : मराठी भाषिक संज्ञापन कौशल्ये : (MIL -2) (SEM –3)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. प्रगत भाषिक कौशल्याचे क्षमता विकसित करणे.

२. प्रसार माध्यमातील सज्ञापनातील स्वरूप आणि स्थान स्पष्ट करणे.

३. व्यक्तिमत्व विकास आणि भाषा यांच्यातील सह संबंध स्पष्ट करणे.

४. लोकशाहीतील जीवन व्यवहार आणि प्रसार माध्यमे यांचे परस्पर संबंध स्पष्ट करणे.

५. प्रसार माध्यमांसाठी लेखन क्षमता विकसित करणे.

S.Y.B.A.

❖ **विषय : नव माध्यमे आणि समाज माध्यमांसाठी मराठी : (MIL -2) (SEM –4)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. सज्ञापानातील नव माध्यमे आणि समाज माध्यमांचे स्वरूप आणि स्थान स्पष्ट करणे.

२. भाषा, जीवन व्यवहार आणि नव माध्यमे, समाज माध्यमांचे परस्पर सहसंबंध स्पष्ट करणे.
३. नव माध्यमे आणि समाज माध्यमांसाठी लेखन क्षमता विकसित करणे.
४. नव माध्यमे आणि समाज माध्यमाविषयक साक्षरता निर्माण करणे.
५. नव माध्यमे आणि समाज माध्यमांचा वापर आणि परिणाम यांच्या बद्दल चर्चा करणे.

T.Y.B.A.

❖ **विषय : आधुनिक मराठी साहित्य आणि व्यावहारिक व उपयोजित मराठी : (G-3)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. आधुनिक मराठी साहित्यातील विविध साहित्य प्रकारांचा परिचय वाढविणे व आकलन करून घेणे.
२. नेमलेल्या कलाकृतींच्या संदर्भात साहित्य परंपरेचा स्थूल परिचय करून देणे.
३. भाषेचे यथोचित आकलन करण्याची व वापर करण्याची यथायोजित क्षमता विकसित करणे.
४. निबंध व प्रवास वर्णन या साहित्य प्रकारचे तात्विक विवेचन करणे.

T.Y.B.A.

❖ **विषय : साहित्य विचार : (S-3)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. साहित्याचे स्वरूप समजून घेणे.
२. साहित्याचे प्रयोजन समजून घेणे.
३. साहित्याची भाषा समजून घेणे.
४. साहित्याची आस्वाद प्रक्रिया समजून घेणे.
५. साहित्याची अभिरुची समजून घेणे.

साहित्य प्रकारची संकल्पना समजून घेणे.

T.Y.B.A.

❖ **विषय : भाषा विज्ञान : (S-4)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. भाषेचे स्वरूप व कार्ये, भाषेच्या अभ्यासाचे महत्व समजून घेणे.

२. भाषा म्हणजे काय व तिचे मानवी जीवनातील कार्ये जाणून घेणे.
३. स्वन निर्मितीची प्रक्रिया समजून घेणे.
४. मराठीची रुपिम व्यवस्था समजून घेणे.
५. ऐतिहासिक भाषा पद्धतींचे स्वरूप व महत्व लक्षात घेणे.

F.Y.B.Com.

❖ **विषय :भाषा,साहित्य आणि कौश्यल्येविकास :(११७) (सेमी १)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. विविध क्षेत्रातील भाषाव्यवहाराचे स्वरूप समजून घेणे
२. व्यवहार क्षेत्रातीलमराठी भाषेचे स्तान स्पष्ट करणे व त्यातील मराठीच्या प्रत्यक्ष वापराचा अभ्यास करणे
३. विविध क्षेत्रीय मराठी भाषेच्या वापराची कौशल्ये विकसित करणे.

F.Y.B.Com.

❖ **विषय :भाषा आणि कौश्यल्येविकास : (११७) (सेमी २)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. विविध लेखन प्रकारांचा अभ्यास व प्रत्यक्ष लेखनाची कौशल्ये वापरण्यास सक्षम करणे .
२. विविध क्षेत्रातील कर्तृत्ववान व्यक्तींच्या कार्याची विचाराची ओळख करून देणे.
३. विध्यार्थ्यामध्ये नेतिक व्यावसायिक वैचारिक मुल्यांची जोपासना करणे .

S.Y.B.Sc.

❖ **विषय :उपयोजित मराठी : (AECC-2A) सेमी -१**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. मराठी भाषा साहित्य यांच्या परस्पर संबंधाची जाणीव करून देणे .
२. मराठी भाषेचा परिभाषा सापेक्ष आणि शेलीसापेक्ष विकास विध्यार्थ्याच्या लक्ष्यात आणून देणे .
३. मराठी भाषेची उपयोजनात्मक कौशल्ये विकसित करणे .

विषय :मराठी साहित्य : (AECC-2B)सेमी -२

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१.साहित्यविषयक अभिरुची विकसित करणे.

२. मराठी भाषा साहित्य यांच्या परस्पर संबंधाची जाणीव करून देणे .

३.साहित्यविषयक अभ्यासातून जीवनविषयक समज विकसित करणे.

४. विज्ञान साहित्य विषयक आकलन क्षमता वाढविणे.

- **<u>अभ्यासक्रमाचे विद्यार्थ्यावर होणारे परिणाम (Outcomes) :</u>**

१. विद्यार्थ्यांमध्ये कथा साहित्य बद्दल रुची निर्माण झाली.
२. स्पर्धा परीक्षेच्या दृष्टीने मराठी व्याकरण महत्वपूर्ण ठरले.
३. विद्यार्थ्यांच्या व्यावहारिक ज्ञानात भर पडली.
४. विद्यार्थ्यांमध्ये साहित्य निर्मितीबद्दल जिज्ञासा निर्माण झाली.
५. विद्यार्थ्यांमध्ये साहित्य वाचनाच्या माध्यमातून अवांतर वाचनाची गोडी निर्माण झाली.
६. विद्यार्थ्यांमध्ये दृक-श्राव्य माध्यमांचे ज्ञान विकसित झाले.
७. विद्यार्थ्यांना कर्यालयीन व प्रशासकीय कामकाजासंदर्भात माहिती मिळून व्यावहारिक ज्ञानात भर पडली.
८. विद्यार्थ्यांमध्ये भाषिक प्रेम निर्माण झाले.
९. विद्यार्थ्यांना मराठी साहित्याच्या इतिहासाबद्दल ज्ञान मिळाले.
१० विद्यार्थ्यांना मराठीतील विविध साहित्य प्रकारांची माहिती मिळाली.

Name of Faculty : Arts

Name of Department : Marathi

P.G. Programme : M.A. I & II

<u>Programme Specific Outcomes</u>

M.A.I (प्रथम सत्र)

- **विषय :भाषा व्यवहार आणि भाषिक कौशल्य भाग – १ : (CC-1)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

५. भाषिक जाणीव विकसित करणे.
६. भाषिक कौशल्यात्मक उपाययोजना सिद्ध करणे.
७. मुद्रित शोधनाची विद्यार्थ्यांमध्ये प्रावीण्याची निर्मिती करणे.
८. साहित्य प्रकाशन व्यवसाया संदर्भात जाणीव समृद्ध करणे.

❖ **विषय : मराठी वाडमयाचा इतिहास इ.स. १८१८ – १९२० : (CC-2)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. वाडमयीन मूल्यांचे संस्कार करणे.
२. साहित्याचे नेमके आकलन करणे.
३. साहित्य निर्मितीच्या प्रेरणा लक्षात घेणे.
४. वाडमयीन इतिहासाच्या प्रेरणा समजून घेणे.

❖ **विषय :ऐतिहासिक भाषा विज्ञान : (CC-3)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. भाषा अभ्यास पद्धतीतून साहित्याच्या अभ्यासाला परिपूर्णता आणून देण्याचा प्रयत्न करणे.
२. भाषिक अभ्यासाद्वारे साहित्याच्या अभ्यासाला परिपूर्णता आणून देण्याचा प्रयत्न करणे.
३. भाषा कुल संकल्पनेतून विद्यार्थ्यांना उपाययोजनेसाठी सिद्ध करणे.

❖ **विषय : ग्रामीण साहित्य : (CBOP-4)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. स्वातंत्र्य प्राप्तीनंतरच्या कालखंडात ग्रामीण साहित्याच्या निर्मितीची कारण परंपरा समजून घेणे.
२. ग्रामीण साहित्याचे स्वरूप व कार्ये यांची चिकित्सा करणे.
३. ग्रामीण साहित्यातील विविध वाडमय प्रकारचा विकास कसा होत गेला याचे मूल्यमापन करणे.
४. ग्रामीण साहित्याने दिलेल्या योगदानाची मीमांसा करणे.

M.A.I (द्वितीय सत्र)

❖ **विषय :भाषा व्यवहार आणि भाषिक कौशल्य भाग – २ : (CC-5)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. भाषिक व्यवहाराबद्दल जाणीव विकसित करणे.
२. निवेदन कौशल्यात्मक उपाययोजना सिद्ध करणे.
३. दृक श्राव्य माध्यमांची विद्यार्थ्यांमध्ये जागृती निर्माण करणे.

❖ **विषय :अर्वाचीन मराठी वाडमयाचा इतिहास इ.स. १९२० – २०१० : (CC-6)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. विशिष्ठ कालखंडातील साहित्य निर्मितीच्या प्रेरणा व प्रवृत्ती लक्षात घेऊन साहित्याचे आकलन करणे.
२. जीवन मूल्यांचे संस्कार करणे.
३. या कालखंडातील साहित्य कलाकृतींचे आकलन करणे.

❖ **विषय : सामाज भाषा विज्ञान : (CC-7)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. लेखकांच्या समग्र अभ्यासातून लेखकांच्या साहित्य कृतींचे मूल्यमापन करणे.
२. समाजांतर्गत निर्माण झालेल्या नव साहित्याचा स्थूल परिचय करून देणे.
३. साहित्य आणि संस्कृती यांचा परस्पर संबंध लक्षात घेऊन क्षमता व कौशल्य निर्माण करणे.

❖ **विषय : दलित साहित्य : (CBOP-8)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. दलित साहित्यातून व्यक्त होणाऱ्या वेदनांचे व विद्रोहाचे स्वरूप समजून घेणे.
२. स्वातंत्र्य प्राप्तीनंतरच्या कालखंडात दलित साहित्याच्या निर्मितीची कारण परंपरा समजून घेणे.
३. दलित साहित्याने निर्माण केलेल्या विविध साहित्य प्रकारांचे मूल्यमापन करणे.
४. दलित साहित्याने दिलेल्या योगदानाची मीमांसा करणे.

M.A.II (तृतीय सत्र)

❖ **विषय : प्रसार माध्यमांसाठी लेखन कौशल्य : (P-09)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. मुद्रित माध्यामांकरिता लेखन कौशल्य आत्मसात करणे.
२. दूरदर्शन माध्यमाचे समाजातील महत्व विशद करणे.
३. श्राव्य माध्यमांसाठी लेखन कौशल्य आत्मसात करणे.

❖ **विषय : साहित्य समिक्षा व संशोधन : (P-10)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. साहित्य, समिक्षा व्यवहाराची समाज वाढीस लागणे.
२. समीक्षेची संकल्पना समजून घेणे.
३. समिक्षा व्यवहारातील मुल्यामापनांचा परिचय करून घेणे.
४. मराठी साहित्य समीक्षकांची परंपरा समजून घेणे.

❖ **विषय : विशेष लेखकाचा अभ्यास : (P-11)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. एकाच लेखकाचे वाडमयीन आकलन करून घेणे.
२. लेखकाचा काळ व चिंतन तत्वाचा मागोवा घेणे.
३. साहित्य निर्मितीचा क्रम लक्षात घेउन लेखकाच्या साहित्य कृतीचे वाडमयीन आकलन करणे.

❖ **विषय : लोकसाहित्याची मुलतत्वे आणि मराठी लोकसाहित्य : (P-12)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. लोकसाहित्याचे स्वरूप समजून घेणे.
२. लोकसाहित्याची संकल्पना समजून घेणे.
३. लोकसाहित्याचे अभ्यास क्षेत्र समजून घेणे.
४. लोकसाहित्य व ग्रांथिक साहित्य यातील साम्यभेद समजून घेणे.

M.A.II (चतुर्थ सत्र)

❖ **विषय : प्रसार माध्यमांसाठी लेखन कौशल्य : (P-13)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. प्रसारमाध्यामांचे समाजातील महत्व विशद करणे.
२. प्रसारमाध्यामांकरितालेखनकौशल्यआत्मसातकरणे.
३. प्रसारमाध्यामांत सेवेची संधी मिळविण्यासाठी विद्यार्थ्यांची भाषिक क्षमता विकसित करणे.

❖ **विषय : साहित्य समिक्षा व संशोधन : (P-14)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. संशोधनाची संकल्पना, प्रयोजने आणि विविध संशोधन पद्धती समजावून घेणे.
२. वाडमयीन संशोधनाच्या विविध अभ्यास क्षेत्रांचा परिचय करून देणे.
३. आंतरविद्याक्षेत्रीय संशोधनाचे स्वरूप आणि महत्व लक्षात घेणे.
४. मराठी साहित्य संशोधनाची परंपरा समजावून घेणे.

❖ **विषय : विशेष लेखकाचा अभ्यास : (P-15)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. लेखकाच्या व्यक्तिमत्वाची जडण घडण, सांस्कृतिक व वाडमयीन निर्मिती समजावून घेणे.
२. विविध वाडमय कृतीतून लेखकाचे योगदान व त्याचे तौलनिक आकलन करणे.
३. एकाच लेखकाचे वाडमयीन आकलन करून घेणे.
४. लेखकाचाकाळवत्याची साहित्यनिर्मिती यातील सहसंवान्धाचा मागोवाघेणे.
५. साहित्य निर्मितीचा क्रम लक्षात घेउन लेखकाच्या साहित्य कृतीचे वाडमयीन आकलन करणे.

❖ **विषय : लोकसाहित्याची मुलतत्वे आणि मराठी लोकसाहित्य : (P-16)**

<u>अभ्यास क्रमाची उद्दिष्ट्ये :</u>

१. लोकसाहित्याचे स्वरूप समजून घेणे.
२. लोकसाहित्याची व्यापकता व सर्वसमावेशाकता लक्षात आणून देणे.
३. लोकसाहित्यातील विविध प्रकार समजून घेणे.

४. लोकसाहित्यातील सामाजिक, धार्मिक, सांस्कृतिक जाणीव स्पष्ट करणे.

- **<u>अभ्यासक्रमाचे विद्यार्थ्यावर होणारे परिणाम (Outcomes) :</u>**

१०. विद्यार्थ्यांमध्ये लोकसाहितत्याबद्दल रुची निर्माण झाली.

११. विद्यार्थ्यांच्या ज्ञानात संत साहित्याबद्दल भर पडली.

१२. विद्यार्थ्यांमध्ये साहित्य निर्मितीबद्दल जिज्ञासा निर्माण झाली.

१३. विद्यार्थ्यांमध्ये मुद्रित माध्यम बद्दल आकलन झाले.

१४. विद्यार्थ्यांमध्ये दृक-श्राव्य माध्यमांबद्दल रुची निर्माण झाली

१५. विद्यार्थ्यांना जाहिरातीबद्दल व वृत्तासंकलना द्दल माहिती मिळून व्यावहारिक ज्ञानात भर पडली.

१६. साहित्तिक अभ्यासामुळे विद्यार्थ्यांमध्ये समीक्षात्मक दृष्टीकोन निर्माण झाला.

१७. विद्यार्थ्यांमध्ये संशोधनात्मक दृष्टीकोन निर्माण झाला

१८. विद्यार्थ्यांमध्ये भाषिक प्रेम निर्माण झाले.

१० विद्यार्थ्यांनामराठीसाहित्याच्या इतिहासाबद्दल ज्ञान मिळाले.

Name of Faculty : Arts
Name of Department : Hindi
U.G. Programme : F.Y.B.A./ F.Y.B.Com/S.Y.B.A./S.Y.B.Sc/
T.Y.B.A.
पाठ्यक्रम : वैकल्पपक हिन्दी प्रश्नपत्र : 1 A -F.Y.B.A. (Hindi – G1) (SEM 1)
पाठ्यक्रम का उद्देश :

१. छात्रो को हिन्दी काव्य साहित्य का परिचय देना |

२. हिन्दी किानी साहित्य से अवगत किाना |

३. हिन्दी भाषा द्वारा संवाद कौशल हवकहसत किना |

४. मौहलक लेखन की और रुझान बढाना |

५. हवज्ञापन लेखन कौशल हवकहसत किना |

६. अनुवाद संबंधी जानकारी देना |

७. हिन्दी कॉम्पुटि का परिचय देना |

८. हनबंध लेखन कौशल को हवकहसत किना |

९. छात्रो को हवज्ञापन लेखन से अवगत किना |

पाठ्यक्रम : वैकल्पपक हिन्दी प्रश्नपत्र : 1 A -F.Y.B.A. (Hindi – G1) (SEM 2)
पाठ्यक्रम का उद्देश :
१. छात्रो को हिन्दी काव्य साहित्य का परिचय देना |

२. हिन्दी किानी साहित्य से अवगत करना |

३. विज्ञापन लेखन कौशल विकसित करना |

४. हनबंध लेखन कौशल को विकसत करना |

- **पाठ्यक्रम : वैकल्पपक हिन्दी प्रश्नपत्र : 1 A -F.Y.B.Com. (Hindi – G1) (SEM 1)**

पाठ्यक्रम का उद्देश :
१. छात्रो को हिन्दी काव्य साहित्य का परिचय देना |

२. हिन्दी कहानी साहित्य से अवगत करना |

३. हिन्दी भाषा द्वारा संवाद कौशल विकसित करना |

४. मौलिख लेखन की और रुझान बढाना |

५. अनुवाद लेखन कौशल विकसित करना |

६. हिन्दी कम्प्युटर का परिचय देना |

- **पाठ्यक्रम : वैकल्पपक हिन्दी प्रश्नपत्र : 1 B -F.Y.B.Com. (Hindi – G1) (SEM 2)**

पाठ्यक्रम का उद्देश :
१. छात्रो को हिन्दी काव्य साहित्य का परिचय देना |

२. हिन्दी किानी साहित्य से अवगत किाना |

३. हिन्दी भाषा द्वारा संवाद कौशल विकसित करना |

४. अनुवाद का स्वरूप से अवगत करना |

५. पारिभाशीक शब्दावलीसे अवगत करना |

✞ **पाठ्यक्रम : विशेष हिन्दी प्रश्नपत्र : 1 DSC – 1A - S.Y.B. A. (Hindi – S1)**

काव्यशास्त्र सामान्य **(SEM – III)**

पाठ्यक्रम का उद्देश :

१. भारतीय काव्यशास्त्र का परिचय देना |

२. काव्य परिभाषा, तत्व आदी अवगत किना |

३. काव्य के तत्व, शब्दशक्तियो का परिचय देना |

४. रस का स्वरूप समझाना |

५. काव्यशास्त्र मे रुची पैदा करना तथा आलोचानात्मक दृष्टी को विकसित करना |

पाठ्यक्रम : विशेष हिन्दी प्रश्नपत्र : 1 DSC – 1B - S.Y.B. A. (Hindi – S1)

साहीत्य के भेद (SEM – IV)

पाठ्यक्रम का उद्देश :

१. छात्रो को साहित्य के भेद से अवगत करना

२. छात्रो को पद्य भेद से अवगत करना |

३. महाकाव्य, खंडकाव्य और मुक्तक काव्य का परिचय करना |

४. नाटक का स्वरूप समझाना |

५. छात्रो में नाट्य अभिनय की रुची विकसित करना |

✞ **पाठ्यक्रम : विशेष हिंदी प्रश्नपत्र : 2 DSC – 2A S.Y.B. A. (Hindi – S2)**

मध्ययुगीन काव्य तथा उपन्यास साहित्य (SEM – III)

पाठ्यक्रम का उद्देश :

१. कबीर के साहित्य का परिचय देना |

२. मीराबाई के काव्य से अवगत करना |

३. भारतीय उपन्यास की अवधारणा समझाना |

४. उपन्यास कृती का मूल यांकन कला विकसित करना |

५. साहित्यकृतियो प्रस्तुत जीवन मुलयो को आत्म विस्तृत करना |

पाठ्यक्रम : विशेष हिन्दी प्रश्नपत्र : 2 DSC – 2B S.Y.B. A. (Hindi – S2)
मध्ययुगीन काव्य तथा नाटक (SEM – IV)
पाठ्यक्रम का उद्देश :

१. रहीम के काव्य का बोध करना |

२. बिहारी की काव्य अभिव्यान्जना समझाना |

३. हिन्दी नाटकऔर रंगमंच से अवगत करना |

४. छात्रो मे अभीनय गुण विकसित करना |

५. नाट्यलोचना से अवगत करना |

- **पाठ्यक्रम : सामान्य हिन्दी प्रश्नपत्र : CC- 1C S.Y.B. A. (Hindi – G2)**

आधुनिक काव्य, कहानी तथा व्यावहारिक हिन्दी (SEM – III)
पाठ्यक्रम का उद्देश :

१. छात्रो को काव्य साहित्य से अवगत करना |

२. छात्रो को कहानी साहित्य से अवगत करना |

३. छात्रो मे लेखन कौशल विकसित करना |

४. छात्रो मे कहाणी लेखन कौशल विकसित करना |

५. छात्रो को हिन्दी कारक\ व्यवस्था समझाना |

६. शब्द युग्म का अर्थ लिख्कर प्रत्यक्ष वाक्य मे प्रयोग समझाना |

७. संक्षेपन लेखन का प्रत्यक्ष बोध करना |

- **पाठ्यक्रम : सामान्य हिन्दी प्रश्नपत्र : CC- 1D S.Y.B. A. (Hindi – G2)**

आधुनिक हिन्दी व्यंग्य साहित्य तथा व्यावहारिक हिन्दी (SEM – IV)
पाठ्यक्रम का उद्देश :

१. छात्रो को व्यंग्म पाठ से परिचीत करना |

२. छात्रो को कहानी व्यंग्म पाठ का बोध करना |

३. साक्षात्कर कला से अवगत करना |

४. भाषा का मोबाईल तंत्र समझाना |

५. पललवन कला से अवगत करना |

✞ **पाठ्यक्रम : हिन्दी प्रश्नपत्र : SEC- 2A** S.Y.B. A.

अनुवाद स्वरूप एवं व्यवहार (SEM – III)
पाठ्यक्रम का उद्देश :
१. अनुवाद कौशल से छात्रो को अवगत करना |

२. अनुवाद का स्वरूप समझाना |

३. अनुवाद क्षेत्र से परिचय करना |

४. हिन्दी से मराठी मे प्रत्यक्ष अनुवाद करना |

५. अंग्रेजी से हिन्दी, मराठी मे अनुवाद कौशल का विकसित करना |

✞ **पाठ्यक्रम : हिन्दी प्रश्नपत्र : SEC- 2B** S.Y.B. A.

माध्यम लेखन (SEM – IV)
पाठ्यक्रम का उद्देश :
१. छात्रो को माध्यम लेखन से परिहचत किाना |

२. सृजनात्मक लेखन कौशल विकसित करना |

३. माध्यम लेखन से अवगत करना |

४. श्रव्य – दृश्य मध्यमो की भाषा से अवगत करना |

✞ **पाठ्यक्रम : सामान्य हिन्दी प्रश्नपत्र : AECC-2A S.Y.B. BSc. (Hindi – G2)**

हिन्दी काव्य तथा कहाणी साहित्य (SEM III)
पाठ्यक्रम का उद्देश :
१. छात्रो को काव्य साहित्य से अवगत करना |

२. छात्रो को कहानी साहित्य से अवगत करना |

३. छात्रो मे काव्य लेखन कौशल विकसित करना |

४. छात्रो मे कहानी लेखन कौशल विकसित करना |

✞ **पाठ्यक्रम : सामान्य हिन्दी प्रश्नपत्र : AECC-2B S.Y.B. BSc. (Hindi – G2)**

हिन्दी काव्य तथा कहाणी साहित्य (SEM IV)
पाठ्यक्रम का उद्देश :

१. छात्रो को काव्य साहित्य से अवगत करना |

२. छात्रो को कहानी साहित्य से अवगत करना |

३. छात्रो मे काव्य लेखन कौशल विकसित करना |

४. छात्रो मे कहानी लेखन कौशल विकसित करना |

✞
पाठ्यक्रम : हिन्दी भाषा लशक्षण (MIL): S.Y.B. A (Arts Faculty) **(SEM III)**

पाठ्यक्रम का उद्देश :

१. छात्रो मे हिन्दी भाषा श्रवण कौशल विकसित करना |

२. छात्रो मे हिन्दी भाषा संवाद कौशल विकसित करना |

३. छात्रो मे हिन्दी भाषा वाचन कौशल विकसित करना |

४. छात्रो मे हिन्दी भाषा लेखन कौशल विकसित करना |

५. हिन्दी भाषा हवधी तथा भाषा – व्यवहार से अवगत करना |

६. लघुकथा सृजन कौशल विकसित करना |

✞ **पाठ्यक्रम : हिन्दी भाषा शिक्षण (MIL) :** S.Y.B. A (Arts Faculty) (SEM IV) **पाठ्यक्रम का उद्देश :**

१. छात्रो को वाक्य के भेद से अवगत करना |

२. छात्रो मे विशेष प्रकार के वाक्यो से परिचीत करना |

३. छात्रो मे हिन्दी भाषा श्रवण कौशल विकसित करना |

४. छात्रो मे हिन्दी भाषा संवाद कौशल विकसित करना |

५. छात्रो मे हिन्दी भाषा वाचन कौशल विकसित करना |

६. छात्रो मे हिन्दी भाषा लेखन कौशल विकसित करना |

७. हिन्दी भाषा वीधी तथा भाषा – व्यवहार से अवगत करना |

८. हिन्दी काव्य गीत सृजन कौशल विकसित करना |

Name of Faculty : Arts
Name of Department : Hindi
P.G.Programme : M.A. Part – I & Part – II
Programme Specific Outcomes

✞ **पाठ्यचया:** शोध प्रबध (M.A. Part -1)

पाठ्यक्रम का उद्देश :

१. छात्रो को शोध प्रहवहध से अवगत करना |

२. शोध दृष्टी का विकास करना |

✞ **पाठ्यचर्या :. पाश्चात्य काव्यशास्त्र** (M.A. Part -1)

पाठ्यक्रम का उद्देश :

१. पाश्चात्य काव्यशास्त्र के हवकासक्रम का परिचय देना |

२. पाश्चात्य हचंतको के हचंतन, हसद्धांत औ प्रमुख आंदोलनो से अवगत करना |

३. छात्रो को सृजन, आस्वादन एवं आलोचना दृष्टी देना |

✞ **पाठ्यचर्या : (वैकल्पपक) हिंदी उपन्यास साहित्य** (M.A. Part -1)

पाठ्यक्रम का उद्देश :

१. हिन्दी उपन्यास साहित्य के हवकासक्रम एवं प्रवृहतयो से परिहचत करना |

२. उपन्यासो के आस्वादन, अध्ययन की क्षमता विकसित करना |

३. पाठ्य िचनाओ मे प्रस्तुत साहिहिक मूल यो का संप्रेषण करना |

४. मूल यांकन की दृष्टी का विकसित करना |

पाठ्यचया :. सामान्य स्ति – आधुनिक काव्य (M.A. Part -2)
पाठ्यक्रम का उद्देश :

१. छात्रो को आधुनिक काव्य से परिचीत करना |

२. छात्रो मे आधुनिक काव्य – अध्ययन की दृष्टी विकसित करना |

३. काव्य मूल यांकन – दृष्टी विकसित करना |

४. काव्य – संवेदना एवं हशल पगत अध्ययन से छात्रो को अवगत करना |

५. छात्रो मे काव्य – सजथन कला विकसित करना |

✞ **पाठ्यचर्या : . भाषा विज्ञान (M.A. Part -2)**
पाठ्यक्रम का उद्देश :

१. भाषा विज्ञान के स्वरूप का परिचय देना |

२. भाषा विज्ञान की व्याक्ति समझाना |

३. भाषा विज्ञान अध्ययन की हदशाओ का परिचय देना |

४. भाषा विज्ञान के अनुप्रयोगात्मक पक्ष को समझाना |

५. साहित्य – अध्ययन मे भाषा हवज्ञान की उपयोहगता समझाना |

✞ **पाठ्यचर्या : . (वैकल्पपक) – क) हिन्दी आलोचना (M.A. Part -2)**

पाठ्यक्रम का उद्देश :

१. अलोचना के स्वरूप एवं विवीध प्रकार से अवगत करना |

२. हिन्दी के प्रमुख आलोचको के आलोचनात्मक प्रहतमानो का परिचय देना |

३. साहित्यालोचन एवं व्याविारिक सहमक्षा दृष्टी विकसित करना |

✞ **पाठ्यचर्या : . आधुनिक कविता (M.A. Part -2)**

पाठ्यक्रम का उद्देश :

१. छात्रो को आधुनिक हिन्दी काव्य की प्रवृहियो का परिचय करना |

२. छात्रो मे आधुहनक काव्य अध्ययन की दृष्टी विकसित करना |

३. सृजनात्मक कौशल से अवगत करना |

४. आलोचानात्मम्क दृष्टी हवकहसत करना |

✞ **पाठ्यचर्या :. हिन्दी भाषा का विकास (M.A. Part -2)**

पाठ्यक्रम का उद्देश :

१. हिन्दी भाषा की ऐतिहासिक पृष्ठभूमी का परिचय देना |

२. आधुनिक आयथ भाषाओ का परिचय देना |

३. हिन्दी के स्वनीम व्यवस्था का परिचय देना |

४. हिन्दी की रूपिना से अवगत करना |

५. हिन्दी भाषा के योगदान से अवगत करना |

✞ **पाठ्यचर्या : . हिन्दी साहित्य का इतिहास (M.A. Part -2)**

पाठ्यक्रम का उद्देश :

१. हिन्दी गद्य के उद्भाव और विकास से छात्रो को अवगत करना |

३. ऐतिहासिकक दृष्टी विकसित करना |

२✞ **पाठ्यचर्या : (वैकल्पपक) – क) भारतीय लोकसाहित्य (M.A. Part -2)**

पाठ्यक्रम का उद्देश :

१. लोकसाहित्य के स्वरूप तथा उसके मित्व से परिचीत करना |

२. लोकसाहित्य की हवहवध विधाओ की जानकारी देना |

३. लोकसाहित्य की व्यापकता समझाना |

४. महाराष्ट्र के लोकसाहित्य से परिचित करणा |

Department of Economics

Name of Faculty	**Mental, Moral & Social Sciences**
Name of Department	**Economics**
UG Programme	**BA**

Programme Specific Outcomes (PSO)
1. To familiarize the students with the recent developments in Economy 2. To provide the students with the background of the Indian Economy with focus on contemporary issues like economic environment. 3. To help the students to prepare for varied competitive examinations 4. Ability to develop an understanding of the economic environment and the factors affecting economic environment. 5. Ability to develop awareness on the various new developments in the different sectors of an economy – agriculture, industry, services, banking, etc. 6. Ability to compare and contrast Indian Economy with other world economies.

Name of Faculty : Arts
Name of Department : Philosophy & Logic
U.G. Programme : T.Y.B.A.
Course Outcomes
1. Class : TYBA Philosophy (2019 CBCS Pattern)

Semester V& VI
Course : Aesthetics and Religious Philosophy (Semester- V)
Objectives :

1. To introduce the students with theories and problems in realm with Aesthetics and Religious Philosophy.
2. To acquaint the students with rich Aesthetics and Religious Philosophical heritage,
3. To familiar to the students with various views and perspectives of various thinkers.

Outcomes :

1. To attract the attention of the students to words great heritage of Beauty, Art and Religion.
2. Aim to prepare eminent personality, thinkers, artist and devotee of religion.

Course : Socio-Political Philosophy (Semester- VI)
Objectives:

1. To introduce to the students Social and Political Philosophy as a branch of

Philosophy.

2. To aware the students with Socio-Political theories and Perspectives of such a

discourse.

3. To acquaint the students with issues and problem solving methods in such a realms.

Outcomes:

1. To educate the students how to study and find the remedies on socio-Political issues with the help of Philosophizing.
2. To prepare leadership of Philosopher king through syllabic conversation

2. Class : TYBA Logic (2019 CBCS Pattern)

Semester V& VI

Course : Logic and Methodology of science – I (Semester- V)

Objectives:

1. To teach students to acquire pleasures in logical thinking for social research.
2. To acquaint the student with the principles and techniques of hypothesis.
3. To acquaint the student with the principles and techniques of causation techniques.
4. To create awareness about the significance of logical thinking for academics and life in general.
5. To prepare students for university evaluation system and competitive examination.

Outcome:

1. To know and remember specific facts, terms, concepts, principles or theories.
2. To understand, interpret, compare, contrast, explain
3. To apply knowledge to new situation to solve problems using required knowledge or skills.

Course : Logic and Methodology of Science – II (Semester- VI)

Objectives:

1. To acquaint the student with explanation theory and techniques.
2. To equip students with the objectivity and value neutrality logic.
3. To acquaint the student to the pleasures in logical thinking.

Outcome:

1. To know and remember specific facts, terms, concepts, principles or theories.
2. To understand, interpret, compare, contrast, explain
3. To apply knowledge to new situation to solve problems using required knowledge or skills.

Name Of Faculty – Commerce

F.Y.B.COM.

Semester: I

A. Financial Accounting- I

Course Code – 112 No. of Credits :- 03 and for practical – 01

Objective of the Course:-

1. To impart knowledge of basic accounting concepts

2. To create awareness about application of these concepts in business world

3. To impart skills regarding Computerised Accounting

4. To impart knowledge regarding finalization of accounts of various establishments.

Programme Specific Outcomes

1. The system will focus on student centric learning methods, which include use of Information and Communication Technology, innovative methods of teaching and learning and emphasis on industry interaction to enable the learners to take up professional challenges more effectively.

2. To meet the needs of impart knowledge of basic accounting concepts

3. To provide awareness about application of these concepts in business world

4. To meet the skills regarding Computerised Accounting

5. To meet the knowledge regarding finalization of accounts of various establishments.

6. To provide the Knowledge about various accounting Concepts, Conventions and Principles.

7. To Understanding emerging trends in accounting and its effect on accounting Practices.

8. To provide the Knowledge about process of dissolution of partnership firm.

B. Business Economics (Micro) – I

Course Code – 113 No. of Credits :- 03

Objectives of the course:-

1. To impart knowledge of business economics

2. To clarify micro economic concepts

3. To 2rganis and interpret charts and graphs

4. To understand basic theories, concepts of micro economics and their application

Programme Specific Outcomes

1. The system will focus on student centric learning methods, which include use of Information and Communication Technology, innovative methods of teaching and learning and emphasis on industry interaction to enable the learners to take up professional challenges more effectively.

2. To make the students aware of concepts in micro economics

3. To help the students understand the difference between micro and macro economics

4. To make the students understand economic and noneconomic goals of firms.

5. **Skills :** Analyze and think critically, develop writing skills

C. Computer Concepts and Application – I

Course Code – 114 (B) No. of Credits :- 03

Objective:

1. To make the students familiar with Computer environment.

2. To make the students familiar with the basics of Operating System and business communication tools.

3. To make the students familiar with basics of Network, Internet and related concepts.

4. To make awareness among students about applications of Internet in Commerce.

5. To enable make awareness among students about e-commerce and M commerce**.**

Programme Specific Outcomes

1. The system will focus on student centric learning methods, which include use of Information and Communication Technology, innovative methods of teaching and learning and emphasis on industry interaction to enable the learners to take up professional challenges more effectively.

2. To make the students familiar with Computer environment.

3. To make the students familiar with the basics of Operating System and business communication tools.

4. To make the students familiar with basics of Network, Internet and related concepts.

5. To make awareness among students about applications of Internet in Commerce.

D. Organizational Skills Development- I

Course Code – 115 – A No. of Credits :- 03

Objectives of the course

1. To introduce the students to the emerging changes in the modern office environment

2. To develop the conceptual , analytical , technical and managerial skills of students efficient office organization and records

management

3. To develop the organizational skills of students

4. To develop Technical skills among the students for designing and developing effective means to manage records , consistency

and efficiency of work flow in the administrative section of an 5rganisation

6. To develop employability skills among the students

Programme Specific Outcomes

1. The system will focus on student centric learning methods, which include use of Information and Communication Technology, innovative methods of teaching and learning and emphasis on industry interaction to enable the learners to take up professional challenges more effectively.

2. Conceptual Clarity on the meaning of modern office

3. Developing understanding on the internal and external factors of an office environment

4. Developing analytical and technical skills to contribute towards planning office location and layout

5. Conceptual clarity on the meaning of Scientific office management

E. BANKING & FINANCE- I

(Fundamentals of Banking I)

Course Code – 115 – B No. of Credits :- 03

Objectives –

1. To provide knowledge of fundamentals of Banking

2. To create awareness about various banking concepts

3. To conceptualize banking operations.

Programme Specific Outcomes

1. The system will focus on student centric learning methods, which include use of Information and Communication Technology, innovative methods of teaching and learning and emphasis on industry interaction to enable the learners to take up professional challenges more effectively.

2. Knowledge of evolution of banking.

3. Understanding structure of Indian Banking

4. Understanding primary and secondary functions of a bank.

5. Understanding the concepts related to lending and ratios.

F. Business Environment & Entrepreneurship – I

Course Code – 116 – E No. of Credits :- 03

Objectives of the course:

1) To understand the concept of Business Environment and its aspects

2) To make students aware about the Business Environment issues and problems of Growth

3) To examine personality competencies most common to majority of successful entrepreneurs and to show how these competencies can

be developed or acquired

4) To understand the difference between Entrepreneurial and non-Entrepreneurial behaviour

5) To provide knowledge of the significance of Entrepreneurship in economy

6) To familiarize the students with the contribution of selected institutes working

Programme Specific Outcomes

1. The system will focus on student centric learning methods, which include use of Information and Communication Technology, innovative methods of teaching and learning and emphasis on industry interaction to enable the learners to take up professional challenges more effectively.

2. Understanding the concept of Business Environment and its aspects

3. Skill-correlating aspects of business environment and entrepreneur

4. Making students aware about business environment issues and problems of growth

5. Skills-capable of understanding and analysing environment issues and finding out solutions to resolve these issues

F.Y.B.COM.

Semester-II,

A. Subject Name: - Financial Accounting- II Course Code - 122

Objective of the Program

1. To impart knowledge of various software used in accounting

2. To impart knowledge about final accounts of charitable trusts

3. To impart knowledge about valuation of intangible assets

4. To impart knowledge about accounting for leases

Programme Specific Outcomes

1. The system will focus on student centric learning methods, which include use of Information and Communication Technology, innovative methods of teaching and learning and emphasis on industry interaction to enable the learners to take up professional challenges more effectively.

2. Students are expected to acquaint themselves with Computerised accounting, its application and utility. Understanding the accounting process of accounting of charitable trusts

3. Recording basic accounting transactions and prepare annual financial statements; and Analyzing , interpreting and communicating the information contained in basic financial statements and explain the limitations of such statements

Semester-II Course Code - 123

B. Business Economics (Micro) - II

Objectives:

1. To understand the basic concepts of micro economics.

2. To understand the tools and theories of economics for solving the problem of decision making by consumers and producers.

3. To understand the problem of scarcity and choices.

Programme Specific Outcomes

1. The system will focus on student centric learning methods, which include use of Information and Communication Technology, innovative methods of teaching and learning and emphasis on industry interaction to enable the learners to take up professional challenges more effectively.

2. To impart knowledge of business economics

3. To clarify micro economic concepts

4. To analyze and interpret charts and graphs

5. To understand basic theories, concepts of micro economics and their application

C. Computer Concepts & Applications - II Course Code -124 (B)

Objective:

1. To make the students familiar with Computer environment.

2. To make the students familiar with the basics of Operating System and business communication tools.

3. To make the students familiar with basics of Network, Internet and related concepts.

4. To make awareness among students about applications of Internet in Commerce.

5. To enable make awareness among students about e-commerce and M commerce**.**

Programme Specific Outcomes

1. The system will focus on student centric learning methods, which include use of Information and Communication Technology, innovative methods of teaching and learning and emphasis on industry interaction to enable the learners to take up professional challenges more effectively.

2. To make the students familiar with Computer environment.

3. To make the students familiar with the basics of Operating System and business communication tools.

4. To make the students familiar with basics of Network, Internet and related concepts.

5. To make awareness among students about applications of Internet in Commerce.

D. Subject : - Organizational Skill Development- II Course Code - 125 (A)

Objectives of the course

1. To imbibe among the students the qualities of a good manager and develop the necessary skill sets

2. To develop the technical skills of the students to keep up with the technological advancements and digitalization

3. To develop the communication skills of students and introducing them to the latest tools in communication

4. To develop writing, presentation, interpersonal skills of the students for effective formal corporate reporting.

5. To educate the students on the recent trends in communication technology and tools of office automation

Course Outcomes:-

1. Commerce education is that area of education, which develops the required knowledge, skills and attitudes for the handling of Trade, Commerce and Industry. Commerce educationist entirely different from other disciplines. Hence, it must charter Course routes to service the aspirations of the nation.

2. To meet the growing needs of the business society, there is greater demand for sound development of commerce education. The relevance of commerce education has become more imperative, this means a marked change in the way commerce and management education is perceived in India. The Commerce education is dedicated to developing tomorrow's leaders, managers, and professionals.

3. The existing education system of imparting commerce education needs to be more dynamic to incorporate all local and global changes in the field of trade and commerce. The curriculum needs to be restructured accordingly.

4. The learning inputs are required to be more update, skill based and with appropriate applications. This will be achieved through the introduction of Choice based Credit System at undergraduate level.

Name of Faculty	**Commerce**
Name of Department	**Commerce and Management**
UG Programme	**Bachelor of Business Administration- B.B.A.**
Programme Specific Outcomes (PSO)	
1. To develop right understanding about the business environment and different types of organizations 2. To develop leadership aptitude to work independently and in the organized group. 3. To cultivate desired qualities of as effective a manger capable of taking decisions and communicating effectively with different types of publics 4. To develop a right understanding regarding various financial institutions and agencies governing aspects of business the business.	

Name of Faculty - Science and Technology

UG Programme – B.Sc.

Subject – Chemistry

Semester-V

Course: 1) DSEC-I: CH-501: Physical Chemistry- I [Credit -2, 36 L]

Chapter 1. Quantum Chemistry

The learner will be acquired with sound knowledge of –

1. Know historical of development of quantum mechanics in chemistry.

2. Understand and explain the differences between classical and quantum mechanics.

3. Understand the idea of wave function

4. Understanding of De Broglie hypothesis and the uncertainty principle

5. Understanding the operators: Position, momentum and energy

6. Solving Schrodinger equation for 1D, 2D and 3D model

7. Physical interpretation of the ψ and ψ2 and sketching the wave function

8. Applications to conjugated systems, zero-point energy and quantum tunnelling, Numerical Problems.

Chapter 2. Investigation of Molecular structure

After studying this chapter, the student will be able to:

1. Understand the term additive and constitutive properties.

2. Understand the term specific volume, molar volume and molar refraction.

3. Understand the meaning of electrical polarization of molecule, induced and orientation polarization.

4. Dipole moment and its experimental determination by temperature variation method.

5. Electromagnetic spectrum, Nature of wave and its characteristics such as wavelength, wave number, frequency and velocity, Energy level diagram.

6. Classification of molecules on the basis of moment of Inertia.

7. Rotational spectra of rigid diatomic molecules, selection rules, nature of spectral lines.

8. Simple Harmonic oscillator model, Born-Oppenheimer approximation.Vibration spectra of diatomic molecules selection rules, nature of spectral lines.

9. Explain the difference between Rayleigh, Stokes and anti-Stokes lines in a Raman spectrum.

10. Justify the difference in intensity between Stokes and anti-Stokes lines.

11. Draw the Stokes and anti-Stokes lines in a Raman spectrum

12. Raman spectra: Concept of polarizability.

13. Pure rotational Raman spectra of diatomic molecules, Energy Expression, Selection rule, Rotational energy level diagram, Rotational Raman spectrum and Problems.

Chapter 3.Photochemistry

After studying this chapter, the student will be able to know and understand:

1. Difference between thermal and photochemical processes.

2. Photochemical laws: Grothus - Draper law, Stark-Einstein law.

3. Quantum yield and reasons for high and low quantum yield.

4. Factors affecting the quantum yield.

5. Experimental method for the determination of quantum yield

6. Photochemical reactions: photosynthesis, photolysis, photocatalysis, photosensitization.

7. Various photochemical phenomena like fluorescence and phosphorescence, Chemiluminescence.

8. Problems.

Course: 2) DSEC-I: CH-502: Analytical Chemistry- I [Credit -2, 36 L]

After completion of the course student should be able to

1. Define basic terms in gravimetry, spectrophotometry, qualitative analysis and parameters in instrumental analysis. Such as: Gravimetry, precipitation, solubility product, ionic product, common ion effect, precipitating agent, washing of ppt., drying and ignition of ppt., linearity range, detection limit, precision, accuracy, Sensitivity, Selectivity, Robustness and Ruggedness, electromagnetic radiations, spectrophotometry, Beers law, absorbance, transmittance, molar absorptivity, monochromator, wavelength of maximum absorbance, metal ligand ration, qualitative analysis, group reagent, dry tests, wet test, confirmatory test, precipitation, thermogravimetry, thermogram, percent wt. loss, differential thermal analysis, etc.

2. Identify important parameters in analytical processes or estimations. Example: minimum analyte concentration in particular method, reagent concentration in particular analysis (gravimetry, spectrophotometry, thermogravimetry), reagent for particular analysis, reaction condition to convert analyte into measurable form, drying and ignition temperature for ppt in gravimetry, heating rate thermogravimetry, wavelength in spectrophotometry, group reagent, removal borate and phosphate in qualitative analysis, etc.

3. Explain different principles involved in the gravimetry, spectrophotometry, parameters in instrumental analysis, qualitative analysis.

4. Perform quantitative calculations depending upon equations student has studied in the theory. Furthermore, student should able to solve problems on the basis of theory.

5. Discuss / Describe procedure for different types analyses included in the syllabus.

6. Select particular method of analysis if analyte sample is given to him.

7. Differentiate / distinguish / Compare among the different analytical terms, process and analytical methods.

8. Demonstrate theoretical principles with help of practical.

9. Design analytical procedure for given sample. 10. Apply whatever theoretical principles he has studied in theory during practical session in laboratory.

Course:3) DSEC-II: CH-504: Inorganic Chemistry - I [Credit -2, 36 L]

Chapter1.Molecular Orbital Theory of Coordination Compounds

After completion of the course student should be able to

1. Explain electroneutrality principle and different types of pi bonding. Able to explain Nephelauxetic effect towards covalent bonding.

2. Explain MOT of Octahedral complexes with sigma bonding.

3. Able to explain Charge Transfer Spectra.

4. Able to compare the different approaches to bonding in Coordination compounds.

Chapter 2. Inorganic Reaction Mechanism

After completion of the course student should be able to

1. To understand about inert and labile complexes and stability of complexes in aqueous solutions

2. Classification of reactions of coordination compounds.

3. The basic mechanisms of ligand substitution reactions.

4. Substitution reactions of square planer complexes.

5. Tran's effect and applications of Trans effect.

6. Stereochemistry of mechanism.

7. Gain the knowledge of inorganic reaction mechanisms available in the literature to solve chemical problems.

Chapter 3. Chemistry of Transition elements

After completion of the course student should be able to

1. To know position of d-block elements in periodic table.

2. To know the general electronic configuration & electronic configuration of elements.

3. To know trends in periodic properties of these elements w.r.t. size of atom and ions,

reactivity, catalytic activity, oxidation state, complex formation ability, color, magnetic

properties, non-stoichiometry, density, melting point, boiling point.

Chapter 4. Chemistry of f-block elements

After completion of the course student should be able to

1. The meaning of term f-block elements, Inner transition elements, lanthanides, actinides.

2. Electronic configuration of lanthanides and actinides.

3. Oxidation states of lanthanides and actinides and common oxidation states.

4. Separation lanthanides by modern methods.

5. Lanthanide contraction and effects of lanthanide contraction on post-lanthanides.

6. Use of lanthanide elements in different industries.

7. Transuranic elements.

8. Preparation methods of transuranic elements.

9. Nuclear fuels and their applications.

10. Why transuranic elements are called as the synthetic elements?

11. IUPAC nomenclature for super heavy elements with atomic no. 100 onwards.

Chapter 5. Metals, Semiconductors and Superconductors

After completion of the course student should be able to

1. The meaning of metal & semiconductor.

2. The difference between metal, semiconductor and insulator.

3. Metallic bond on the basis of band theory.

4. The energy band and energy curve.

5. Draw n (E) & N (E) curves.

6. Explain the electrical conductivity of metals with respect to valence electrons.

7. Explain the effect of temperature and impurity on conductivity of metals and semiconductors.

8. Intrinsic and extrinsic semiconductor.

9. The term valance band and conduction band.

10. n and p type of semiconductors.

11. Non-stoichiometry and semi conductivity.

12. Insulators on the basis of band theory.

13. The difference between Na, Mg, and Al in terms of valence electrons and conductivity.

14. Meaning of super conductors and their structure. o. Discovery and applications of superconductors.

Course: 4) DSEC-II: CH-505: Industrial Chemistry - I [Credit -2, 36 L]

Chapter 1. Modern Approach to Chemical Industry

After completion of the course student should be able to

1. Importance of chemical industry.

2. Meaning of the terms involved.

3. Comparison between batch and continuous process.

4. Knowledge of various industrial aspects.

Chapter 2. Manufacture of Basic Chemicals

After completion of the course student should be able to know

1. Concept of basic chemicals.

2. Their uses and manufacturing process.

3. They should also know the physico-chemical principals involved in manufacturing process.

Chapter 3. Sugar and Fermentation Industry

The students are expected to learn

1. Importance of sugar industry.

2. Manufacture of direct consumption (plantation white) sugar with flow diagram.

3. Cane juice extraction by various methods.

4. Clarification by processes like carbonation.

5. Sulphitation.

6. Phosphatation, etc. v. Concentration of juice by using multiple effects

evaporator system.

7. Crystallization of sucrose by using vacuum pan.

Chapter 4. Soap and detergents

The students are expected to learn

1. Different types of soap products.

2. Chemistry of soap.

3. Raw materials required for soap manufacture.

4. Meaning of the term's Surfactants, Types of surfactants.

5. Raw materials for detergents.

6. Detergent builders, additives.

7. Washing action of soap and detergents.

Chapter 5. Dyes and Pigments

Students should know about

1. Dyes: introduction.

2. Dye intermediates.

3. Structural features of a dye.

4. Classification of dyes.

5. Synthesis, Structures, properties and applications of dyes

6. Pigments: Introduction.

7. Classification and general properties of pigment.

8. Production processes of zinc oxide and iron oxide.

Course: 5) DSEC-III: CH-507: Organic Chemistry - I [Credit -2, 36 L]

Chapter 1. Polynuclear and Heteronuclear Aromatic Compounds

Students should know about

1. Define and classify polynuclear and hetreonuclear aromatic hydrocarbons.

2. Write the structure, synthesis of polynuclear and hetreonuclear aromatic hydrocarbons.

3. Understand the reactions and mechanisms.

4. Explain the reactivity of polynuclear and hetreonuclear aromatic hydrocarbons.

5. Describe the synthesis of chemical reactions of polynuclear and hetreonuclear aromatic Hydrocarbons.

Chapter 2. Active Methylene Compounds

Students should be able to understand

1. Meaning of active methylene group.

2. Reactivity of methylene group.

3. Synthetic applications ethyl acetoacetate and malonic ester

4. To predict product with panning or supply the reagent/s for these reactions

Chapter 3. Rearrangement Reactions

Students should be able to understand

1. What is rearrangement reaction?

2. Different types of intermediate in rearrangement reactions?

3. To write the mechanism of some named rearrangement reactions and their applications.

4. Electrocyclic rearrangement with their mechanisms.

Chapter 4. Elimination reactions

Students should be familiar with

1. 1,1 and 1,2 elimination.

2. E1, E2 and E1cB mechanism with evidences of these reactions.

3. Understand stereochemistry by using models and learn reactivity of geometrical isomers.

4. Orientation and reactivity in E1 and E2 elimination.

5. Hoffmann and Saytzeff's Orientation.

6. Effect of factors on the rate elimination reactions.

Course: 6) DSEC-III: CH-508: Chemistry of Biomolecules [Credit -2, 36 L]

Chapter 1. Introduction to molecular logic of life.

Students should be familiar with

1. Cell types, Difference between a bacterial cell, Plant cell and animal cell.Biological composition and organization of cell membrane, structure and function of various cell organelles of plant and animal cell. Concepts of biomolecules, Bonds that link monomeric units to form macromolecules

Chapter 2. Carbohydrates

1.The student will understand the types of carbohydrates and their biochemical significance in living organisms, structure of carbohydrates and reactions of carbohydrates with Glucose as example. Properties of carbohydrates.

Chapter 3. Lipids

1. The student needs to know the types of lipids with examples, structure of lipids, properties of lipids .

Chapter 4. Amino acids and proteins

1. The student will understand the structure and types of amino acids. Reactions of amino acids. Properties of amino acids. Peptide bond formation. Types of proteins. Structural features in proteins. Effect of pH on structure of amino acid, Determination of N and C terminus of peptide chain.

Chapter 5. Enzymes

1. The student know the classes of enzymes with subclasses and examples. Enzyme specificity, Equations of enzyme kinetics Km and its significance, features of various types of enzyme inhibitions, industrial applications of enzymes.

Chapter 6. Hormones

Students should be familiar with

1.Basic concepts of Endocrinology. Types of Endocrine glands and their hormones. Biochemical nature of hormones. Mechanism of action of lipophilic and hydrophilic hormones.

SEC-I: CH-510: Skills Enhancing Course-I [Credit -2, 36 L]

Course7) CH-510 (B) : Polymer Chemistry

The students are expected to learn the following aspects of Polymer Chemistry:

1) History of polymers.

2) Difference between simple compounds and polymer.

3) Names of polymers.

4) Various ways of nomenclature.

5) Difference between natural, synthetic, organic and inorganic polymers.

6) Terms-Monomer, Polymer, Polymerization, Degree of polymerization, Functionality, Number average, Weight average molecular weight.

7) Mechanisms of polymerization.

8) Polymerization techniques.

9) Uses & properties of polymers.

10) Role of polymer industry in the economy.

11) Advantages of polymers.

SEC-II: CH-511: Skills Enhancing Course-II [Credit -2, 36 L]

Course8) CH-511 (A): Environmental Chemistry

Students should know:

1.Importance and conservation of environment.

2. Importance of biogeochemical cycle

3.Water resources

4. Hydrological Cycle

4.Organic and inorganic pollutants

5. Water quality parameters

Theory Courses:

Course1: DSEC-IV: CH-601: Physical Chemistry-II [Credit -2, 36 L]

Chapter1. Electrochemical Cells

After studying this chapter, the student will be able to know and understand:

1. Electrochemical cells: Explanation of Daniell cell, Conventions to represent electrochemical cells
2. Thermodynamic conditions of reversible cell, Explanations of reversible and irreversible electrochemical cell with suitable example,

3. EMF of electrochemical cell and its measurement.

4. The Weston standard cell

5. The primary reference electrode: The standard hydrogen electrode (SHE) with reference to diagram, Construction, representation, working and limitation,

6. Secondary reference electrodes: (a) The calomel electrode, (b) The glass electrode (c) The silver-silver chloride electrode. Understanding of these electrodes with reference to diagram, representation, Construction, working

7. Nernst Equation for theoretical determination of EMF

8. Types of Reversible electrodes: Metal-metal ion electrodes, Amalgam electrodes, Gas electrodes, Metal-metal insoluble salt electrodes, Oxidation-reduction electrodes with respect to examples, diagram, representation, construction, working (electrode reactions) and electrode potential.

9. Sign convention for electrode potentials and Electrochemical series

10. Standard electrode potentials,

11. Types of concentration cells: Concentration cells without and with transference Concentration cells with liquid junction potential

12. Liquid junction potential and salt bridge

13. Applications of emf measurements: 1. Determination of pH of a solution by using hydrogen electrode, quinhydrone electrode and glass electrodes 2. Potentiometric titrations: i) Acid-base titrations, (ii) Redox titrations and (iii) Precipitation

14. Primary Batteries: Dry Cells, alkaline batteries with respect to construction, diagram and working

15. Secondary Batteries: Nickel-cadmium, Lithium-ion batteries, the lead acid battery with respect to construction, diagram and working

16. Applications for Secondary Batteries

17. Fuel Cells: Types of fuel cells, advantages, disadvantages of these fuels cells, comparison of battery Vs fuel cell

18. Problems.

Chapter2. Crystal structure

After studying this topic students are expected to know and understand:

1. Distinguish between crystalline and amorphous solids / anisotropic and isotropic solids.

2. Explain the term crystallography and laws of crystallography.

3. Weiss and Millers Indices, determination of Miller Indices

4. Bravais lattices, space groups, seven crystal systems and fourteen Bravais lattices;

5. Cubic lattice and types of cubic lattice

6. Distance between the planes for 100, 110 and 111 for cubic lattice

7. Methods of Crystal structure analysis: The Laue method and Braggs method: Derivation of Bragg's equation,

8. Determination of crystal structure of NaCl by Bragg's method,

9. X ray analysis of NaCl crystal system and Calculation of d and λ for a crystal system,

10. Problems.

Chapter3. Nuclear Chemistry

After studying this topic students are expected to know

1. Radioactivity

2. Types and properties of radiations: alpha, beta and gamma

3. Detection and Measurement of Radioactivity: Cloud chamber, Ionization Chamber, Geiger-

Muller Counter, Scintillation Counter, Film Badges

4. Types of radioactive decay: α- Decay, β-Decay and γ-Decay

5. The Group Displacement Law, Radioactive Disintegration Series

6. Kinetics of Radioactive Decay, Half-life, average life and units of radioactivity

7. Energy released in nuclear reaction: Einstein's equation, Mass Defect, Nuclear Binding Energy,

8. Application of radioisotopes as a tracer: Chemical investigation- Esterification, Friedel - Craft reaction and structure determination w.r.t PCl_5, Age determination use of tritium and C14 dating.

9. Solve the problems based on this topic

Course 2: DSEC-IV: CH-602: Physical Chemistry-III [Credit -2, 36 L]

Chapter1.Colligative properties of dilute solutions

After studying this topic students are expected to know

1. Meaning of the terms-Solution, electrolytes, nonelectrolytes and colligative properties,

2. Lowering of vapour pressure of solvent in solution,

3. Elevation of B.P. of solvent in solution, Landsberger's method,

4. freezing point depression, Beckmann's method Osmosis and Osmotic pressure, Berkeley and Hartley method,

5. Application of colligative properties to determine molecular weight of nonelectrolyte, abnormal molecular weight,

6. Relation between Vant Hoff's factor and degree of dissociation of electrolyte by colligative property,

7. Problems.

2) Kinetics of Reactions in the Solid State

After studying this topic students are expected to know

1. Factors affecting on solid state reactions,

2. Rate laws for reactions in solid state

3. Applying rate laws for solid state reactions

4. Results of kinetics studies

3) Electronic structure and macroscopic properties

After studying this topic students are expected to know

1. Cohesive Energy of ionic crystals based on coulomb's law and Born Haber Cycle

2. Correspondence between energy levels in the atom and energy bands in solid

3. Band structure in solids – Na , Ca and diamond

4. Conductors and insulators – Its correlation with Extent of energy in energy bands

5. phenomena of photoconductivity

6. Semiconductors – Role of impurity in transformation of insulator into semiconductor

7. Temperature dependant conductivity semiconductors

8. Cohesive Energy in metals

9. Numericals based on cohesive energy.

4) Polymers

After studying this topic students are expected to know

1) History of polymers.

2) Classification of polymers

3) Chemical bonding & Molecular forces in Polymer

4) Molecular weight of polymers

5) Practical significance of polymer molecular weights

6) Molecular weight determination.

Course3: DSEC-V: CH-604: Inorganic Chemistry -II [Credit -2, 36 L]

1. Organometallic Chemistry

Students should be able:

1.To understand M-C bond and to define organometallic compounds

2.To define organometallic chemistry

3. To understand the multiple bonding due to CO ligand.

4.To know methods of synthesis of binary metal carbonyls.

5. To understand the structure and bonding using valence electron count (18 ele. rule)

6.To understand the catalytic properties of binary metal carbonyls.

7. To understand the uses of organometallic compounds in the homogenous catalysis.

8. Chemistry of ferrocene.

2. Homogeneous and Heterogeneous catalysis

A student should be able to:

1.Understand the phenomenon of catalysis, its basic principles and terminologies.

2. Define and differentiate homogeneous and heterogeneous catalysis.

3.Give examples and brief account of homogeneous catalysts.

4. Understand the essential properties of homogeneous catalysts-Give the catalytic reactions for Wilkinson's Catalysis, hydroformylation reaction, Monsanto acetic acid synthesis, Heck reaction

5.Understand the principle of heterogeneous catalyst and development in it.

6.Give examples of heterogeneous catalysts.

7. Understand the classification and essential properties of heterogeneous catalysts.

8. Give the brief account of Hydrogenation of olefins , Zeolites in catalysis, biodiesel

synthesis, Automotive Exhaust catalysts

9. Understand the catalytic reactions used in industries around.

3. Bioinorganic Chemistry

A student should:

1. Identify the biological role of inorganic ions & compounds.

2. Know the abundance of elements in living system and earth crust.

3. Give the classification of metals as enzymatic and non-enzymatic.

4. Understand the role of metals in non-enzymatic processes.

5. Know the metalloproteins of iron.

6. Explain the functions of hemoglobin and myoglobin in O2 transport and storage.

7. Understand the toxicity of CN- and CO binding to Hb.

8. Draw the structure of Vit.B12 and give its metabolism.

4. Inorganic Polymers

A student should be able to:

1. know thy types of Inorganic polymers

2. comparison with organic polymers

3. synthesis, structural aspects of Inorganic polymers

4. understand the polymers of Si, B, Si and P

5. Inorganic polymers and their use.

5. Inorganic solids/ionic liquids of technological importance

A student should know:

1. Understand Preparation of inorganic solids by various methods,

2. Inorganic liquid crystals

3. Ionic liquids, their preparations, and their significance w.r.t green chemistry.

4. Technological importance of ionic liquids.

Course:4 DSEC-V: CH-605: Inorganic Chemistry -III [Credit -2, 36 L]

1. Acid–Base and Donor–Acceptor Chemistry

A student should know:

1.The concept of acid base and their theories.

2. They will also come to know different properties of acids and bases.

3. Strength of various types acids. 4. How acid and base strengths get affected in non-aqueous solvents.

2. Ionic Solids

A student should know:

1. The nature of solids.

2. The crystal structures of solids.

3. Draw the simple cubic, BCC and FCC structures.

4. Identify the C.N. of an ion in ionic solid.

5. Identify the type of void.

6. Know the effect of radius ratio in determining the crystal structure.

7. Be able to define Pauling's univalent radius and crystal radius.

8. Be able to solve simple problems based on Pauling's univalent radii and crystal radii. 9. Know how to draw Born-Haber cycle.

10. Be able to solve simple problems based on Born- Haber cycle.

11. Know the defects in Ionic solids.

12. Be able to differentiate between the defects.

3. Chemistry of Zeolites

A student should know:

1. Different Zeolite Framework Types and their classification

2. Zeolite synthesis and their structure

3. Application of zeolites.

4. Introduction to Nanochemistry

A student should know:

1. Various methods of nanoparticle synthesis

2. Stabilization of Nanoparticles in solution

3. Properties and Application of Nanoparticles

4. Know about carbon nanotube and its application

5. Chemical Toxicology

A student should be able –

1. To know toxic chemical in the environment.

2. To know the impact of toxic chemicals on enzyme.

3. To know the biochemical effect of Arsenic, Cd, Pb, Hg.

4. To explain biological methylation.

Course 5: DSEC-VI: CH-607: Organic Chemistry-II [Credit -2, 36 L]

A student should know:

1. The principle of mass spectroscopy, its instrumentation and nature

of mass spectrum.

2. Students will understand the principle of UV spectroscopy and the nature of UV

spectrum. They will learn types of electronic excitations.

3. Students will be able to calculate maximum wavelength for any conjugated system. \

And from the value of λ-max they will be able to find out the extent of conjugation in the compound.

4. Students will understand the principle of IR spectroscopy, types of vibrations and the

nature of IR spectrum.

5. From the IR spectrum, they will be able to find out IR frequencies of different

functional groups. And thus, they will be able to find functional groups present in the compound.

6. Students will understand the principle of NMR spectroscopy and will understand

various terms used in NMR spectroscopy. They will learn measurement of chemical shift and coupling constants.

7. Students will be able to interpret the NMR data and they will be able to use it for

determination of structure of organic compounds.

8. Students will be able to determine the structure of simple organic compounds on the

basis of spectral data such as λ max values, IR frequencies, chemical shift (δ values).

Course 6: DSEC-VI: CH-608: Organic Chemistry-III [Credit -2, 36 L]

A student should know:

1. Different terms used – Disconnection, Synthons, Synthetic equivalence, FGI, TM. One group disconnection, Retrosynthesis and Synthesis of target molecules: Acetophenone, Crotonaldehyde, Cyclohexene, Benzylbenzoate, and Benzyl diethyl malonate.

2. Chemistry of reactive intermediates (carbocations, carbanions, free radicals, carbenes, nitrenes, benzynes etc…); 2. Wolff rearrangement (Step up),

3. Hofmann rearrangement (Step down), Simmons-Smith reaction, Michael reaction Wittig reaction and McMurry reaction, Diels-Alder reaction, Functional group interconversions and structural problems using chemical reactions.

4. Isolation, Classification. Citral- structure determination using chemical and spectral methods, Synthesis of Citral by Barbier and Bouveault Synthesis. Alkaloids:

Introduction, extraction, Purification, Some examples of alkaloids and their natural resources. Ephedrine- structure determination using chemical methods.Synthesis of Ephedrine by Nagai.

SEC-III: CH-610: Skill Enhancing Course-III [Credit -2, 36 L]

Course 7: CH-610 (A): Chemistry of Soil and Agrochemicals

After studying this course, student is expected to

1. Understood various components of soil and soil properties and their impact on plant

growth.

2. Understood the classification of the soil.

3. Explores the problems and potentials of soil and decide the most appropriate treatment

for land use.

4. Understood the Reclamation and management of soil physical and chemical

constraints.

5. Useful in making decisions on nutrient dose, choice of fertilizers and method of

application etc. practiced in crop production.

6.Got experience on advanced analytical and instrumentation methods in the estimation

of soil.

7.Understood various Nutrient management concepts and Nutrient use efficiencies of

major and micronutrients and enhancement techniques.

8. Proper understanding of chemistry of pesticides will be inculcated among the students.

9. Imparts knowledge on different pesticides, their nature and, mode of action and them

fate in soil so as to monitor their effect on the environment.

SEC-IV: CH-610: Skill Enhancing Course-IV [Credit -2, 36 L]

Course 8: CH-611(A): Analytical Chemistry-II

After completion of the course student should able to

1. Define basic terms in solvent extraction, basics of chromatography, HPLC, GC, and

AAS and AES. Some important terms are: solvent extraction, aqueous and organic phase, distribution ratio and coefficient, solute remain unextracted, percent extraction, ion association complex, theoretical plate, HETP, retention time, selectivity, resolution, stationary phase, normal and reverse phase, ion exchange, column efficiency, carrier gas, split and spitless injection, packed column, tubular column, atomic absorption and emission spectroscopy, electronic excitation in atoms, nebulization, atomization, reduction of metal ions in flame, absorbance by atoms in flame, flame atomizers, furnace atomizers, interference in AES and FES, HCL, hydride generator, etc.

2. Identify important parameters in analytical processes or estimations. Example: minimum analyte concentration in particular method, reagent concentration for particular analysis, reagent for particular analysis, reaction condition to convert analyte into measurable form, wavelength selection in HPLC with spectrophotometric and fluorometric detector, solvent or carrier gas in HPLC and GC, choice method for the sample preparation in atomic spectroscopic methods, choice of filter and HCL in atomic spectroscopic methods, etc.

3. Explain different principles involved in the analyses using solvent extraction, basics of instrumental chromatography, HPLC, GC, and atomic spectroscopic techniques.

4. Perform quantitative calculations depending upon equations students has studied in the theory. Furthermore, student should able to solve problems on the basis of theory.

5. Discuss / Describe procedure for different types analyses included in the syllabus.

6. Select particular method of analysis if analyte sample is given to him.

7. Differentiate / distinguish / compare among the different analytical terms, process and analytical methods.

8. Demonstrate / explain theoretical principles with help of practical.

9. Design analytical procedure for given sample.

10. Apply whatever theoretical principles he has studied in theory during practical in laboratory.

Subject – Zoology

1. To foster curiosity in the students for Zoology
2. To create awareness amongst students for the basic and applied areas of Zoology
3. To orient students about the importance of abiotic and biotic factors of environment and their conservation.

4. To provide an insight to the aspects of animal diversity.
5. To inculcate good laboratory practices in students and to train them about proper handling of lab instruments.

Subject - Mathematics

6. **F.Y.B.Sc. :-**
7. **Algebra –**
8. Studying algebra helps our mind to think logically and break down and solve problems. Use algebraic methods to solve a variety of problems involving system of equations, inequalities, exponential, logarithmic, inverse, polynomial and rational functions.
9. **Calculus –**
10. Calculus is the foundation for most of the matimatics studied at the university level. Main concepts of calculus are derivatives (rate of change of a function) and integrals.
11. (a function of which a given function is the derivative i.e. which gives that function when differentiated)
12. **Analytical Geometry –**
13. The importance of analytical geometry is that it establishes a correspondence between geometric curves and algebraic equations. This is a subject of mathematics in which algebraic symbolism and methods are used to represent and solve problems in geometry.

14. **S.Y.B.Sc :-**
15. **Calculus of Several variables** –
16. This course is aimed of students majoring in mathematical and physical sciences, engineering and students minoring in mathematics or mathematical education. Calculus of Several variables extends the concepts of limit, Continuity, derivatives , integrals from one dimension to higher dimensional settings.
17. **Numerical Methods and its applications** –
18. It is widely used for forecasting and predicting in the field of machine learning. Most mathematical methods are based on the solutions obtained by partial differential equations, ordinary differential equations and integral equations. Numerical methods provide a way to solve problems quickly and easily compared to analytic solutions.
19. **Linear Algebra** –
20. Linear algebra helps us to understand geometric concepts such as planes in higher dimensions and perform mathematical operations on them. This is an extension of algebra into an arbitrary number of dimensions. Rather than working with scalars , it works with matrices and vectors.
21. **Vector Calculus** -

22. Vector Calculus plays an important role in differential geometry and the study of partial differential equations. It is used extensively in physics, engineering . Vectors have many real life applications, including situations involving force or velocity.

Subject - Botany

PROGRAMME SPECIFIC OUTCOME [P.S.O]:-

1: Understand the importance of plants, their diversity and its conservation.

2: Achieve knowledge of pure and applied botany.

3: Understand contribution of botany in increase and improve our supply of medicines, food, Fibers and other plant products.

4: Understand health and environmental protection and to solve the pollution problems.

5: Understand knowledge of botany is an essential pre-requisite for the pursuit of many applied Sciences like Agriculture, Horticulture, Sericulture, Forestry, Pharmacology and Medicine.

6: Understand to care Nature.

7: Understand experiments in botany.

8: Fundamentals, principles& practical skills and recent development in subject area.

9: Inspire and boost interest of student towards the botany as a main subject & understand global Issue.

10: Create foundation for advance studies, research & development in botany.

Name of Faculty - Science and Technology

UG Programme – B.Sc. Wine, Brewing & Alcohol Technology

PROGRAMME SPECIFIC OUTCOME [C.O]:-

1: Understand the importance of wine, their types and its quality.

2: Achieve knowledge of wine making.

3: Understand contribution of wine in increase and improve our Health, Quality and production Methods

4: Understand marketing strategies of growers and wine makers.

5: Understand knowledge of wine tech. is an essential pre-requisite for the pursuit of many applie Sciences like Alcohol tech., brewery, biochemistry, botany and Microbiology.

6: Understand current scenario in wine and wine making.

7: Understand experiments in wine technology.

8: Fundamentals, principles& practical skills and recent development in subject area.

9: Inspire and boost interest of student towards the wine technology as a main stream & Understand global market

10: Create foundation for advance studies, research & development in wine & vine.