



Adarsh Shikshan Sanstha's
KALIKADEVI ARTS, COMMERCE AND SCIENCE COLLEGE
SHIRUR KASAR, Dist. -Beed
Internal Quality Assurance Cell

CRITERION IInd

TEACHING LEARNING & EVALUATION

2.6 Student Performance and Learning Outcome

Programme Outcomes (POs) and Course Outcomes (COs) for all Programmes offered by the institution are stated and displayed on website

Document related to Programme outcomes endorsed by HEI



Adarsh Shikshan Sanstha Beed's
KALIKADEVI ARTS, COMMERCE AND SCIENCE
COLLEGE SHIRUR KASAR,
Tq- SHIRUR (KASAR)-413249, DIST- BEED

**PROGRAMME OUTCOMES (POs), PROGRAMME SPECIFIC OUTCOMES (PSOs),
AND COURSE OUTCOMES (COs)**

Sr. No	Name of the Department
1.	English
2.	Marathi
3.	Hindi
4.	Economics
5.	History
6.	Political Science
7.	Public Administration
8.	Sociology
9.	Geography
10.	Home Science
11.	Commerce
12.	Physics
13.	Mathematics
14.	Chemistry
15.	Zoology
16.	Botany

Principal
Kalikadevi Arts, Comm. & Sci. College,
Shirur (Ka.), Dist: Beed:

ADARSH SHIKSHAN SANSTHA BEED

**KALIKADEVI ARTS, COMMERCE & SCIENCE.
COLLEGE SHIRUR (KASAR) TQ – SHIRUR (KA)
DIST – BEED**

**Programme Outcomes, Programme Specific Outcomes And Course
Outcomes**

Ours College is affiliated to Dr. Babasaheb Ambedkar Marathwada University Aurangabad. We offer undergraduate Programs under the faculties of Arts, Commerce and Science as well as postgraduate programs under the faculties of Arts and Commerce. The outcomes of programs provided to students through our college are as follows:

FACULTY OF ARTS

Arts stream involves the study of subjects like Literature, Languages, Geography, Home Science, Physical Education, Political science, History, Sociology, and Economics etc. Career options and opportunities in Arts stream are endless. With a background in Arts, one can pursue career options such as teaching, nursing, social work, various competitive examinations, law, politics, business, television, radio artist, content writing, acting, designing, singing and many more. Most of the political leaders, business owners as well as the big names of Indian tinsel town have background in arts stream. The reason of its vast scope is that it provides a wide range of subject choice to study. Bachelor of Arts (BA) courses-

DEPARTMENT OF ENGLISH PROGRAMME OUTCOMES

DETAILS:

Academic Year 2021-2022 (CBCGS)

B. A. First Year (Compulsory English)

(Title of the Paper: A Course in Communicative English-I,II)

B. A. F.Y. (Optional English)

1. Forms of Literature-I,II (Paper-I,II)

Academic Year 2022-2023 (Pattern- CBCGS)

B. A. Second Year (Compulsory English)

(Paper of the Title: A Course in Communicative English-III, IV)

B. A. Second Year (Optional English)

1. Literature in English (Paper-V,VI, VII,VIII)

B. A. Third Year (Optional English) (Pattern 2013)

1. Twentieth Century English Literature (Subsidiary)
2. Introduction to Literary Criticism and Terms (Subsidiary)
3. Indian Writing in English (Main)
4. Project Work on History of English Literature (from Renaissance Age to The age of T.S.Eliot) (Main)

M.A English part: Ist Pattern-2015

1. Literature in English (1550-1798)
2. Literature in English (1800-2000)
3. Structure of Modern English
4. Study of an Author- William Shakespeare

M.A English Part- II nd 2015

1. Critical Theory
2. Indian Writing in English
3. English Language Teaching
4. Literature of Oppressed

A particular outline of English Language and Literature taught at BA and MA Course will emphasize that the University has highlighted upon the recent trends in the language development by considering the historical approach. In broad sense, importance is given on Study of Fiction, Study of Drama, Study of Poetry, Study of Prose, Modern English Structure, Literary Criticism, Indian Writing in English and Living English Structure. Hence, our course in English allows the students to become the masters in communication skills in the international language.

- English Literature helps the students to build the skills of creative and intellectual ideas and makes them to enrich their career.
- Learners of our course can easily acquire wide knowledge and allow them to be effective in their interpretations.
- Moreover, it makes to enquire everything with an awareness and curiosity as literature reflects the life.
- Skills of LSRW in English make the students to enrich themselves in all aspects and make them to explore and demonstrate an ability to cope up the life with stylistic clarity
- The main outcome of studying English Literature will widely help to express and improve the ability to read works of literary, rhetorical and cultural criticism

- .It further makes them to develop and acquire great opportunities that is needed in their future career (i.e.) makes oneself to get good job and soon.
- It also allows one to formulate queries for progressive and helps them to identify the better solution for the Problem.
- English Literature helps the reader to be fluent in English and makes them to be bold enough wherever they go as they are good in English.
- It also produces opportunities to maintain traditional aspects and flourishes the learner to be global friendly.
- Learning English Provides great opportunities in teaching in schools Colleges and Universities. It also offers plenty of teaching opportunities in Abroad too.
- Reader of English can also seek their jobs in journalism fields like Publisher, Reader, Editor and Copywriter and so on.
- Learning English can also makes them to work in Advertising and Marketing fields.
- Above all, English Literature students can boost their employment options in various fields and makes them to be the civil service worker like IAS, IAS and several other government employees.



Principal
Kalikadevi Arts, Comm. & Sci. College,
Shirur (Ka.), Dist. Beed.

DEPARTMENT MARATHI PROGRAMME OUTCOMES

**BAFY SL बी. ए., बी. एस्सी प्रथम वर्ष (प्रथम सत्र) भारतीय भाषा : मराठी (भाग-१) अभ्यासपत्रिका-
१ ली संकेतांक AECC-1 Marathi (CBCGS Pattern)**

उद्दिष्टे -

- १) मराठीतील वैविध्यपूर्ण सृजनाविष्काराचा आस्वाद घेण्याची अभिरूची निर्माण करून कलाकृतीतील सौंदर्यस्थळांचा शोध घेण्याची वृत्ती वाढीस लावणे.
- २) विद्यार्थ्यांमध्ये नीतिमूल्यांचे व वैज्ञानिक जाणिवांचे संस्करण करणे.
- ३) राष्ट्रीय एकात्मता व बंधुभाव वाढीस लागण्यास मदत करणे.
- ४) निवडक गद्य व काव्याच्या अनुषंगाने मराठी साहित्यातील विविध प्रवाहांचा परिचय करून देणे.
- ५) उपयोजित मराठीच्या माध्यमातून रोजगाराभिमुख शिक्षण देऊन व्यावसायिक वृत्ती वाढविणे व स्वावलंबी बनवण्यास मदत करणे.
- ६) भाषिक लेखनाचा स्तर उंचावण्यास मदत करणे.
- ७) सर्जनासाठी विद्यार्थ्यांना उद्युक्त करणे.

BAFY (OPT) बी. ए. प्रथम (प्रथम सत्र) अभ्यासपत्रिका १ली ऐच्छिक मराठी निवडक अभंग (अभंग आविष्कार)

- १) संत साहित्याचा आणि त्या प्रवाहाचा परिचय करून देणे.
- २) 'अभंग' प्रकाराचे स्वरूप विशेष (फॉर्म) लक्षात आणून देणे.
- ३) निवडक अभंगातील आशय व अभिव्यक्ती समजून सांगतानाच अभंगातील मूल्यविचार उलगडून दाखवणे.
- ४) संतांच्या अभंग रचनेतील पृथगात्मता व साम्य स्थळांचा उलगडा करणे.
- ५) आजच्या काळात अभंगाची उपयुक्तता सांगतानाच 'अभंगाचे अक्षरत्व व कालातीतता सिद्ध करणे.

❖ **BAFY (OPT) बी. ए. प्रथम (प्रथम सत्र) अभ्यासपत्रिका २ री ऐच्छिक मराठी निवडक कथा (कथार्थ) संकेतांक CC-1A(2)Marathi**

- १) कथा वाङ्मय प्रकाराचे स्वरूप विशेष व प्रेरणा यांची माहिती देणे.
- २) कथा वाङ्मयाची परंपरा, विविध प्रवाह, प्रकारांचा परिचय करून देणे.
- ३) निवडक कथांच्या माध्यमातून विद्यार्थ्यांच्या आकलन व आस्वादात्मक वाढीला चालना देणे.
- ४) निवडक कथांच्या आधारे विद्यार्थ्यांना कलामूल्ये व जीवनमूल्ये यांचा परिचय करून देत मूल्यांचे संस्करण करणे.
- (५) वाङ्मयीन अभिरुची वाढीस लावून विद्यार्थ्यांना कथात्म सृजनाविष्कारास उद्युक्त करणे.
- ६) कथेची वाङ्मयीन मूल्ये व भाषिक रूपे लक्षात आणून देणे.
- ७) कथेच्या अनुषंगाने समकालीन जाणिवा व तत्कालीन सामाजिक स्थिती समजून घेण्यास मदत करणे.

BAFY (OPT) बी. ए. प्रथम (द्वितीय सत्र) अभ्यासपत्रिका ३ री ऐच्छिक मराठी निवडक ललित गद्य (ललित गंध) संकेतांक CC-IB(3) Marathi

उद्दिष्टे-

- १) ललित गद्याचे स्वरूप विशेष व परंपरा यावर प्रकाश टाकणे.
- २) इतर वाङ्मयप्रकारापेक्षा ललित गद्याचे वेगळेपण उलगडून दाखवणे.
- (३) ललित लेखकाच्या तरल, संवेदनशील, विचारशील प्रवृत्तीचा शोध व त्या प्रवृत्तीचा लेखनास झालेला स्पर्श आणि त्यातून निर्माण झालेले सौंदर्य याचा शोध घेणे.
- ४) निवडक लेखकाच्या ललित लेखाची भिन्न प्रकृती व त्यातील साम्यता यांचा उलगडा करणे.
- (५) ललित लेखकाच्या अंगाने जाणाऱ्या विविध लेखांचा परिचय करून देऊन विद्यार्थ्यांना ललित लेखनाच्या सर्जनशीलतेसाठी उद्युक्त करणे.

❖ **BAFY (OPT) अभ्यासपत्रिका ४ थी - ऐच्छिक मराठी निवडक मराठी कविता (आधुनिक)**
संकेतांक - CC-1B(4) Marathi

उद्दिष्टे -

- १) कविता वाङ्मयप्रकाराची माहिती करून देणे.
- २) कवितेच्या माध्यमातून कवितेच्या काळातील स्पंदने व कलावंताची संवेदनशीलता उलगडून दाखवणे.
- ३) कविता या वाक्यप्रकाराच्या आकलन व आस्वादाची क्षमता वाढीला लावणे. तसेच एक रसिक वाचक निर्माण करणे.
- ४) मूल्याधारित कवितेच्या माध्यमातून सामाजिक बांधिलकीची मूल्ये रुजविणे.
- ५) काव्याचे प्रवाह, प्रवृत्ती, अभिव्यक्ती यांचा परिचय करून देणे.
- ६) निवडक कवींच्या कवितेतील आशय व अभिव्यक्ती याचे स्वरूप न्याहाळणे.

❖ **BASY SL बी.ए./बी.एस्सी., द्वितीय वर्ष, सत्र-तिसरे अभ्यासपत्रिका ३ री - भारतीय भाषा :**
मराठी (भाग-३ रा) संकेतांक - AECC-3 Marathi

उद्दिष्टे :

१. विद्यार्थ्यांच्या मनात निवडक वेच्याच्या परिशीलनाने मूल्यात्मक वाढ होईल
२. रसास्वाद क्षमता वाढीस लागेल.
३. विवेकवादाची व वैज्ञानिक दृष्टिकोनाची कास धरण्यास मदत होईल.
४. लेखनातील विविध प्रवृत्ती व प्रकृती समजण्यास मदत होईल.
५. सृजनशील लेखनाकरिता उद्युक्त करण्यास मदत होईल.

❖ **B.COM SL बी.कॉम., बी.एस.डब्ल्यू., बी.एफ.ए., द्वितीय वर्ष, सत्र- तिसर CBCS पद्धतीनुसार जून**
२०२३ पासून लागू संकेतांक - AECC-3 Marathi

१. विद्यार्थ्यांच्या मनात निवडक वेच्याच्या परिशीलनाने मूल्यात्मक वाढ होईल.
२. रसास्वाद क्षमता वाढीस लागेल.
३. विवेकवादाची व वैज्ञानिक दृष्टिकोनाची कास धरण्यास मदत होईल.
४. लेखनातील विविध प्रवृत्ती व प्रकृती समजण्यास मदत होईल.
५. सृजनशील लेखनाकरिता उद्युक्त करण्यास मदत होईल.

❖ **BASY (OPT) मराठी (ऐच्छिक)- अभ्यासपत्रिका ५ वी मध्ययुगीन मराठी वाङ्मयाचा इतिहास**
आरंभ ते १५९९ संकेतांक - CC-2C(5) Marathi

१. मराठी वाङ्मयाचा प्रारंभकाल समजून घेण्यास मदत करणे.
२. मध्ययुगातील प्रारंभीची कविता व गद्य वाङ्मय लक्षात आणून देणे.
३. मध्ययुगातील महत्त्वाचे संप्रदाय व काही प्रवाह त्यांच्या प्रकृतीसह लक्षात घेण्यास मदत करणे.
४. मध्ययुगातील सामाजिक व राजकीय परिस्थिती समजून घेण्यास मदत होईल.
५. मध्ययुगातील विविध प्रकारच्या लेखनापाठीमागील प्रेरणा समजून घेण्यास मदत होईल.

❖ **BASY (OPT) मराठी (ऐच्छिक) - अभ्यासपत्रिका ६ वी साहित्य प्रकार कादंबरी**

संकेतांक - CC-2C(6) Marathi

१. कादंबरीचे स्वरूप व घटक सांगता येतील.
२. कादंबरीचे विविध प्रकार उलगडून दाखविण्यास मदत होईल.
३. कादंबरीचे आशयसूत्र व भाषा यातील विविध घटकांचा उलगडा करता येईल.
४. कादंबरीच्या कथानकाची जडण-घडण घटना प्रसंगाच्या आधारे कशी होते ते सांगता येईल.
५. कादंबरीतील जाणिवा समजून सांगता येतील..

❖ **BASY-(OPT) मराठी (ऐच्छिक) अभ्यासपत्रिका ७ वी मध्ययुगीन मराठी वाङ्मयाचा इतिहास**
१६०० ते १८१८ संकेतांक - CC-2D(7) Marathi

१. मराठी वाङ्मयाचा शिवकाल, पेशवेकाल व त्याकालातील साहित्य समजून घेण्यास मदत करणे.
२. मध्ययुगातील महत्त्वाचे पंत व तंत प्रवाह त्यांच्या प्रकृतीसह लक्षात घेण्यास मदत करणे.
३. शिवकाल व पेशवेकाल सामाजिक व राजकीय परिस्थिती समजून घेण्यास मदत होईल.
४. मध्ययुगातील विविध प्रकारच्या लेखनापाठीमागील प्रेरणा समजून घेण्यास मदत होईल.

❖ **BASY(OPT)मराठी (ऐच्छिक) अभ्यासपत्रिका ८ वी साहित्य प्रकार नाटक संकेतांक - CC-2D(8) Marathi**

१. नाटकाचे स्वरूप व घटक सांगता येतील.
२. नाटकाचे विविध प्रकार उलगडून दाखविण्यास मदत होईल.
३. नाटकातील संदाचे महत्व अधोरेखित करता येईल.
४. नाटकाची संहिता व प्रयोगमूल्ये यातील सूक्ष्मता उलगडून दाखवता येईल.
५. नाटकातील जाणिवा समजून सांगता येतील.

❖ **BATY (OPT)अभ्यासपत्रिका - ११ वी मध्ययुगीन मराठी वाङ्मयाचा इतिहास (प्रारंभ ते १६००)**

उद्दिष्ट्ये :-

- 1) यादवकालीन सामाजिक, सांस्कृतिक, धार्मिक स्थिती-गती लक्षात घेत त्या काळात जी ग्रंथरचना झाली तिच्याबद्दल माहिती करून घेणे, ग्रंथनिर्मितीमागील प्रेरणा व त्यांचा प्रत्यक्ष ग्रंथरचनेवरील परिणाम अभ्यासणे.
- 2) बहामनीकाल ग्रंथनिर्मितीमागील प्रेरणा व त्यांचा प्रत्यक्ष ग्रंथरचनेवरील परिणाम समजून घेणे.
- 3) तत्कालीन महत्त्वाचे ग्रंथ, ग्रंथकार व ग्रंथविशेष यांचे आकलन करून घेणे.

❖ **BATY (OPT) अभ्यासपत्रिका - १२ वी - प्रकल्प कार्य भाग ०१**

उद्दिष्टे :

- १) वाचन लेखन कौशल्याचा विकास
- २) समीक्षणात्मक दृष्टीचा विकास
- ३) संशोधनात्मक दृष्टीचा विकास

❖ **BATY (OPT) अभ्यासपत्रिका- १५ वी मध्ययुगीन मराठी वाङ्मयाचा इतिहास (१६०१ ते १८१८)**

- १) शिवकालीन सामाजिक, सांस्कृतिक, धार्मिक स्थिती-गती लक्षात घेत त्या काळात जी ग्रंथरचना झाली तिच्याबद्दल माहिती करून घेणे, ग्रंथनिर्मितीमागील प्रेरणा व त्यांचा प्रत्यक्ष ग्रंथरचनेवरील परिणाम अभ्यासणे.
- २) पेशवेकालीन ग्रंथनिर्मितीमागील प्रेरणा व त्यांचा प्रत्यक्ष ग्रंथरचनेवरील परिणाम समजून घेणे.
- ३) तत्कालीन महत्त्वाचे ग्रंथ, ग्रंथकार व ग्रंथविशेष यांचे आकलन करून घेणे.

❖ **BATY (OPT) अभ्यासपत्रिका-१६ वी - प्रकल्प कार्य भाग ०२**

- १) वाचन लेखन कौशल्याचा विकास
- २) समीक्षणात्मक दृष्टीचा विकास
- ३) संशोधनात्मक दृष्टीचा विकास
- ४) सिमा भागातील व आपल्या प्रादेशिक विशेषांचा भाषिक अभ्यास व संशोधन करणे.
- ५) भाषा बोलीचे शब्दविशेष नोंदविणे.
- ६) लोकजीवनातील ओवी, लोकगीते, उखाणे, लोककथा इ.संकलन व मूल्यमापन करणे



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DEPARTMENT OF HINDI PROGRAMME OUTCOMES

बी.ए., बी.एस्सी., बी.कॉम., प्रथम वर्ष-

पेपर: द्वितीय भाषा - SL (सामान्य हिंदी) (प्रथम सत्र) प्रश्न पत्र कोड – AECC-1

विषय का उद्देश्य :

1. हिंदी साहित्य संवेदनाओं का विकास कराना।
2. हिंदी कहानी का सामान्य परिचय कराना।
3. कहानी का रसास्वादन एवं सृजन क्षमता का विकास कराना।
4. भाषा कौशल का विकास कराना।
5. छात्रों में व्यक्तिगत, सामाजिक तथा राष्ट्रीय मूल्यों के प्रति जागृति कराना।
6. छात्रों के अंदर एकात्मता तथा सहकार्य की भावना को जागृत कराना।
7. छात्रों को रोजगार संबन्धीत संधियों का परिचय करवाना।

बी.ए., प्रथम वर्ष ऐच्छिक हिंदी

पेपर : आधुनिक कविता – II प्रश्न पत्र कोड – DSC-1 CC – 1B

विषय का उद्देश्य :

1. हिंदी की आधुनिक कविता का रसास्वादन एवं सृजनता का विकास कराना।
2. हिंदी की आधुनिक कविताओं के भाषा कौशल्य का विकास कराना।
3. छात्रों को आधुनिक हिंदी कविता के माध्यम से समाज में होनेवाले बदलाव से रूबरू कराना।
4. छात्रों में देश के प्रति राष्ट्रियता की भावनाओं को प्रेरित कराना।
5. अलग-अलग कवियों की कविताओं में आनेवाले आशय को समझाना।
6. छात्रों में भाषा कौशल्य का विकास कराना।

7. हिंदी की आधुनिक कविताओं का सामान्य परिचय कराना।

बी.ए., द्वितीय वर्ष ऐच्छिक हिंदी

पेपर : कथेत्तर गद्य साहित्य – V प्रश्न पत्र कोड - CC – 1E

विषय का उद्देश्य :

1. साहित्य और युगबोध के संबंधों का अध्ययन कराना।
2. हिंदी की कथेत्तर गद्य संवेदना की परम्परा का परिचय कराना।
3. छात्रों को लेखन एवं पठन कौशल्य वृद्धि का अभ्यास कराना।
4. आधुनिक काल के नव-इलेक्ट्रॉनिक माध्यमों से रूबरू कराना।
5. हिंदी साहित्य लेखन की समृद्ध परंपरा से छात्रों को अवगत कराना।
6. भारतीय साहित्य परंपरा में हिंदी साहित्य के योगदान को सुनिश्चित कराना।
7. छात्रों को हिंदी साहित्य के आधुनिक काल से रूबरू कराना।
8. हिंदी साहित्य इतिहास की परिस्थितियाँ तथा विशेषताएँ को समझाना।
9. हिंदी साहित्य के प्रतिनिधि कवि का परिचय कराना।

बी.कॉम., द्वितीय वर्ष

पेपर : सामान्य हिंदी (द्वितीय भाषा) प्रश्न पत्र कोड – AECC – 3

विषय का उद्देश्य :

1. गद्य साहित्य के पठन एवं पाठन की अभिरूचि को विकसित कराना।
2. छात्रों में व्यक्तिगत, सामाजिक तथा राष्ट्रीय मूल्यों के प्रति जागृति कराना।
3. भाषा के स्वरूप और अवधारणा को समझाना।
4. हिंदी के प्रयोजनपरख आयामों का परिचय कराना।
5. छात्रों में भाषिक कौशल्य विकसित कराना।

बी.ए., तृतीय वर्ष

पेपर : प्रादेशिक साहित्य – IX

विषय का उद्देश्य :

1. छात्रों को प्रादेशिक साहित्य का ज्ञान कराना।
2. लेखन की सृजनशीलता तथा लेखनशैली को विकसित कराना।
3. भारतीय साहित्य परंपरा में हिंदी साहित्य के योगदान को सुनिश्चित कराना।
4. साहित्य और युगबोध के संबंधों का अध्ययन कराना।
5. छात्रों में व्यक्तिगत, सामाजिक तथा राष्ट्रीय मूल्यों के प्रति जागृति कराना।
6. हिंदी प्रादेशिक साहित्य के भाषा कौशल्य का विकास कराना।
7. प्रादेशिक साहित्य का स्वरूप और अवधारणा को समझना।
8. साहित्य आस्वादन अभिरूचि का परिसंस्कार कराना।
9. प्रादेशिक साहित्य के माध्यम से जीवन मूल्यों की प्रति आस्था रखना।
10. हिंदी के आत्मकथाओं के माध्यम से समाज की समस्याओं के प्रति जागृति कराना।

बी.ए., तृतीय वर्ष

पेपर : साहित्य शास्त्र भाग- 1 – पेपर क्रं. – XI

विषय का उद्देश्य :

1. छात्रों को साहित्य चिंतन का अध्ययन कराना।
2. साहित्यशास्त्र के सृजन के संस्कार कराना।
3. साहित्यालोचन क्षमता का परिचय कराना।
4. साहित्य आस्वादन अभिरूचि का परिसंस्कार कराना।

5. छात्रों में व्यक्तिगत, सामाजिक तथा राष्ट्रीय मूल्यों के प्रति जागृति कराना।
6. साहित्य आस्वादन अभिरूचि का परिसंस्कार कराना।
7. साहित्य शास्त्र का स्वरूप और अवधारणा को समझना।
8. भारतीय साहित्य परंपरा में हिंदी साहित्य के योगदान को सुनिश्चित कराना।
9. साहित्य शास्त्र लेखन की समृद्ध परंपरा से छात्रों को अवगत कराना।
10. छात्रों में साहित्य के प्रति भाषिक कौशल्य विकसित कराना।



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DEPARTMENT OF ECONOMICS PROGRAMME OUTCOMES

(As Per CBCGS Pattern)

Paper No. II 102 Indian Economy

CO1: To able to understanding characteristics, features structural changes in Indian Economy.

CO2: To able to understand the size of structure of population and their bad or good impact on our Indian Economy

CO3 Able to understand the increasing problems of unemployment, poverty and their effect on Indian Economy.

CO4: To able to Evaluating the changing agriculture role, Industrial and service sector trade in Forager sector,

COS: To able to understand the rising social inequality problems and regional imbalances in India.

CO6: To able to understand the role of planning commission and National Development Council (NDC) Indian Economy.

CO7: To able to understand the nature, scope and impact of New Economic Reforms in 1991 on the Indian Economy.

Paper No. III 103 Price Theory

CO1 IndentiSging the nature of theory of production

CO2: Comprehending the Isoquant curve.

CO3: To understand cost and Revenue.

CO4: Realizing various production theories.

CO5: Clarifying the meaning of marginal, average total revenue, and marginal average and total cost and its implication.

CO6: Awareness of different markets structure.

CO7: Understanding pricing in different markets.

CO8: Judging the factor pricing.

CO9: To understanding pricing methods

CO10: To knowledge of Bain's model.

Paper No. IV 104 Money, Banking and Finance

CO1: To able to understand the money md banking is essential understand the monetary and barking system in India.

CO2: To able to understand the kinds of paper currently and methods of Note issue.

CO3: To able to understand the meaning, definition, functions and types of money.

CO4: To able to understand the functions and credit creation process of commercial banks and co-operative Banks.

CO5: To able to understand the functions of NABARD, RRB's and foreign Banks.

CO6: To able to understand the new concepts in Banking for e.g. core Banking, ATM, Credit card, Embanking etc.

CO7: To able to understand the meaning, functions, organization and management of RBL

CO8: To able to understand the concept of Money measures, meaning and objectives of Monetary policy and methods of credit control of RBI.

Paper No. V 105 Macro Economics

CO1: After getting knowledge about this subject students will be able to understand meaning, nature and scope of macroeconomics.

CO2: Students will be able to understand various concepts of national income, measurement of national income and what should be include and what should be not include in national income.

CO3: Student will be able to understand how the high growth rate achieve and maintaining has for long in developing country.

CO4: To be understand how to accelerate the growth rate.

CO5: To be understand how the employment generated in the economy with the help of leynesian employment theories.

CO6: Student will be understand the difference phases of trade cycles and the impact of cyclical fluctuation on the \$owth rate of economy.

Paper No. VII 107 Public Finance

CO1: After studies this subject student will be understand what public finance is all about and its importance for economy.

CO2: Student to be understand the classification of taxes between direct tax and indirect tax, also its help students to understand importance of tax in economy.

CO3: To be understand di {lerence between private finance and public finance.

CO4: To be understand the principles and role of public expenditure in developing economy.

COS: To be understand concept and importance of public debt as well as sources of public debt

CO6: To be understand components of union budget and types of budget.

Paper No. VII06 Development Economics

CO1: Basic knowledge of development planning economy and its growth theory.

CO2: Knowledge of development growth theory.

Paper No. VIII 10E Statistical Methods

CO1: On completion of the course student would health to demonstrate the role of and statistical techniques in the field of business/industry, illusory different types of equations solve.

CO2: Collect appropriate data concept mean, median, mode, concept of statistical averages use

And apply central tendency, dispersion, skewness and kurtosis.

CO3: Explain concept of correlation, analyse and interpret covariance and correlation coefficient, illustrate ordinary least squares and use to estimate regression coefficient.

CO4: Describe the components of time series, apply time series analysis in business scenarios, illustrate the different types of Index numbers and calculate Index number.

Knowledge in understanding how the population profile of a country is changing estimate population trend.

Paper No. IX 109 International Economics

CO1: To be able to elaborate the import (aspect of study of International Economics)

CO2: To be able to understand the similarities and differences in Inter-regional and international trade.

CO3: To be able to know the changes in the trade and import-export policies of India.

CO4: To be able to evaluate various aspects of exchange rates in an open economy and its merits or demerits.

CO5: To be able to understand the types and effects of tariffs and Non-tariff barriers (Quotas) in International Trade.

CO6: To be able to judge the function, merits and demerits of IMF, IBRD (World Bank), WTO, SAARC, ADB and other International organizations.

CO7: To be able to understand the difference between Balance of Payment and Balance of Trade and Realizing the volume composition and direction of BOT and BOP.

Paper No. X 110 Agricultural Economics

CO1: After studying this subject student will be able to understand the importance of agriculture sector for any country.

CO2: Student will be able to draw distinctive features of rural and urban economy or agricultural and non-agricultural which can influence the whole economy.

CO3: Student will be able to understand applicability of agricultural economics, which encompasses all aspects of crop production including horticulture, livestock rearing, fisheries etc.

CO4: Student will be able to understand agriculture as a business aims at maximum net return through the management of land, labour, water and capital employing the knowledge of various sciences for production of food, feed, etc.

Paper No. XI History of Economic Thought

CO1: Acquaintance with the economic thought of classical, Nationalist and socialist thinkers.

CO2: Judging the development of economic thought

CO3: Comprehend the development of the theory of Economics in historical perspective.

CO4: Comprehend emerging paradigm and aberration with its reasons.

CO5: Debated similarities and differences among different economy scholars subject.

CO6: History of Economic thought is every more Important now

CO7: Keynes criticized 'classical economics' which was a comprehensive concept for him it included both new classical and classical economics.

Paper No.)XIII 113 Research Methodology

CO1: To able to understand research methodology deals with importance of social research.

CO2: To able to understand meaning, nature, scope and objectives of social research.

CO3: To able to understand the theory, concepts hypothesis stages of scientific Research.

CO4: To able to understand meaning and need of Research design and types of Research design ex. descriptive. Exploratory, diagnostic and experimental etc.

COS: To able to understand the methods of data collection, data presentation and data analysis.

CO6: To able to understand anange the content sequence of report writing.

CO7: To able to understand the importance of hypothesis and concept of hypothesis testing methods.

CO5: Measure mortality rates, population growth reproduction rate of natural increase net

Paper No. 114 Industrial Economic

CO1: Student will be understand need and importance of industries sector in economic development for any country.

CO2: To be understand the linkage between industry and agriculture sector.

CO3: To be understand the organization and varies ownership structure of industry, like public, private & MNCs etc.

CO4: To be understand importance of location for industry with the help of theories of location.

CO5: To be understand composition of industry sector into large scale industry, Agro processing industries etc.

Paper No. XVI15 Indian Economic Thinkers

CO1: Realizing the economic concept and theories of Neo-classical and Indian thinkers.

C02: Evaluating the development of India economic thoughts.

CO3: To gain knowledge on the perspectives of thought Koutilya

CO4: To knowledge of the Economic ideas of Netaji, Rande and Daft.

CO5: To understand the Dr. B.R. Ambedkar Economic ideas.

CO6: To knowledge of Economic thought of Amartya Sen.

C07: Identifuing the Economic welfare and social choice.

Choice Based Credit System (CBCS) Curriculum we. f- June 2022

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

Course outcomes-

Paper name- Micro Economics Paper no. - CC-IA

CO-1 To describe the various ideas on Economics and its related Concept.

CO-2 To evaluate and discuss the law of Demand and Supply.

CO-3 To impart knowledge on Indifference Curve.

CO-4 Identify the various concept Market Equilibrium.

CO-5 To understand Law of Supply and Supply Curve.

CO-6 Identify the various concept of Price Line.

CO-7 To knowledge of the Consumers Behaviour and Demand,

CO-8 To knowledge of revealed Preference theory.

CO-9 Identify and knowledge of kinds of Equilibrium, Static and Dynamic Equilibrium and General Equilibrium.

B.A, F.Y SEMISTER-I

Course outcomes

Paper name - Macro Economics Paper no. - CC-IB

CO-1 after getting knowledge about this subject student will be able to

Understand meaning, nature and scope of Macro Economics.

COE: To able to understand the graphs, charts, line chart diagrams and Tabular presentation.

CO9: To able to understand the importance of student package for social science (SPSS) in Research Methodology.

SEMISTER-2

Course outcomes

Paper name- Micro Economics Paper no. - CC-IC

Upon completion of Micro Economics student should be able to:

CO-1 identifying the Nature theory of production.

CO-2 Comprehending the ISO curve.

CO-3 To understand Cost and Revenue.

CO-4 Realizing various Production theories.

CO-5 Classifying the meaning of Marginal average.

CO-6 Awareness of different Markets Structure.

CO-7 Understanding Pricing in different Markets.

CO-8 Judging the Factor Pricing

CO-9 To understanding Pricing Methods.

SEMISTER-2

Paper name- Macro Economics Paper no. - CC-2C

Course outcomes-

CO-1 Analyse the value of Money and its Measurement.

CO-2 Course specific outcomes of Money Banking Finance one given below.

CO-3 Understand measures to control Inflation and Deflation.

CO-4 To able to understand the kind of Paper currency and methods of Note Issue

CO-5 Analyse trade Cycles and its Effects.

CO-6 To able to understand the meaning Definition, function and types of Money

CO-7 Understand how Monetary and Fiscal policy can be used to achieve policy Goals.

CO-8 To able to understand the functions and credit creation process of Commercial Banks and Cooperative Banks.

CO-9 Identify the social consequences of National and International Economics Activity

CO-10 To able to understand the functions of NABARD, RRBS and Foreign Banks



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DEPARTMENT OF HISTORY PROGRAMME OUTCOMES

Papers Name: - F.Y.1. History of Marathas (AD1630-1707)

- II. History of Ancient India (Beginning to 320 A.D.)
- III. HISTORY OF THE MARATHA'S (A.D. 1707 – A.D. 1818)
- IV. History of Ancient India (A.D.320 TO A.D.1206)
- S.Y.** V. HISTORY OF MEDIEVAL INDIA (A.D.1526-A.D.1707)
- VI. History of Colonial India (AD1757- AD1857)
- VII. History of Modern India (1857-1947)
- VIII. HISTORY OF EUROPE
- T.Y** IX. Historiography
- X. History of Indian Freedom Movement (A.D.1885- A.D.1947)
- XI. History of India (1757-1885)
- XII. Project Work
- XIII. Fields of History
- XIV. Landmark in the History of Modern World
- XV. Glimpses of Marthwada
- XVI- Project Work

B.A. (History)

Program Objectives:

- To acquaint students with the past and present of Maharashtra, India and the World.
- Impart a critical understanding of Indian society, economy, polity, and culture through a Historical perspective
- to prepare students for a range of careers
- to stimulate intellectual curiosity and research attitude in the students'
- to introduce the various Indian and foreign traditions of history writing

Program Outcomes:

F.Y.1. History of Marathas (AD1630-1707)

- Understand the Source of Rise of Maratha Power.
- Know about Shivaji – Mughal political relations.
- Shivaji become Chatrapati and his coronation.
- Introduce administration of Maratha Power.

2. History of Ancient India (Beginning to 320 A.D.)

- Information about archaeological tools.
- Harappan culture as well Information about Vedic culture
- To know about secondary urbanization.
- Learning the history of Mourya And Satavahana dynasty.

3. HISTORY OF THE MARATHA'S (A.D. 1707 – A.D. 1818)

- To understand the transfer of power from Chhatrapati to Peshwa
- To know the history of the accomplished man of the Peshwa family
- To understand the causes and consequences of the Third Panipat War
- Study the Decline of Maratha power.

4. History of Ancient India (A.D.320 TO A.D.1206)

- To study the history of Gupta and Vakataka dynasties.
- To study the history of Wardhan family.

Understanding the Chalukya and Rashtrakuta dynasties.

- To study the history of Chalukyas and Vakatakas.

B.A.S.Y. 1.HISTORY OF MEDIEVAL INDIA (A.D.1526-A.D.1707)

- Medieval culture with a view understands the student.
- Student introduced nature of medieval Indian society economy, state formations and the main religious currents of the time.
- History of Mughal India, History is very important for UPSC exam.
- Students enable to understand the medieval political, Economical, Social and Agriculture History.

2. History of Colonial India (AD1757- AD1857)

- Students got knowledge of concept history of modern India.
 - Modern Indian History is very useful to students for MPSC examination.
 - Modern Indian History is useful to student for NET-SET exam.
 - Student got knowledge of Indian philosophers and their philosophy.

3. History of Modern India (1857-1947)

- 'History of India' is very importance for UPSC exam.
 - When students doing study is 'History of Modern India' that times they know about Freedom Struggle and Freedom Fighters.
 - Increasing student's wideness.
 - Students capable for discuss any Country issue.
 - 'History of Modern India' is very importance for all competitive exams [Set-Net, MPSC]

4. HISTORY OF EUROPE

- Tracking the political situation in Europe.
- To know French Revolution and Industrial Revolution.
- Understanding the unification of Italy and Germany.
- Understanding the World War I and World War II Causes and Solutions.

BATY-IX-Historiography

- Students know source of History.
- Practically student knows to how much write history.
- Increased the knowledge of Research in History.
- Students know external and internal criticism.
- Students know Historian works.
- Students got knowledge of History writing theory.
- History writing trends in the world introduced to students.

X. History of Indian Freedom Movement (A.D.1885- A.D.1947)

- “History of Indian National Movement” topic as a part of History is a very important section as far as the syllabus of any competitive examination is possible, especially civil services exams.
- Students understand of the stages of development in modern India, why certain events happened and analysis of the consequences of such developments that power an impact on our society, Economy and our political system.
- ‘History Indian National Movement’ importance for competitive examination.
- To made them awareness of the multi-dimensionality of History of Indian National Movement’

XI. History of India (1757-1885)

- ‘History of India’ is very importance for UPSC exam.
 - When students doing study is ‘History of India’ that times they know about Freedom Struggle and Freedom Freighters.
 - Increasing student’s wideness.
 - Students capable for discuss freedom issue.
 - ‘History of India’ is very importance for all competitive exams [MPSC]

XII. Project Work

- Student gets information about forts.
 - Students get information about caves.
 - Students understand local history.
 - Students acquire knowledge about historical monuments.
 - Students get information about historical coins.
 - Students get information about museums, saints, social workers, Inscriptions, peasant movement, labor movement, temples, achieves, Hyderabad freedom struggle etc.

XIII. Fields of History

- Students know source of history.
- Practically student known to how much write history.
- Students know historian works.

- Students got information about culture.
- It helps students to understand the Indian Architecture.
- It helps students to understand monumental things by fieldwork.
- Students got great experiences by visiting

XIV. Landmark in the History of Modern World

- Students got knowledge of concept in world history.
 - Students got global event knowledge it is use for increased intellectual level.
 - World trend of thinking, Marxist, communalism Dictatorship, Emperialism, nazizurm, Fascism, Terrorism, Feminism, Globalization etc introduced to students.

XV. Glimpses of Marthwada

- Students got knowledge of concept glimpses of the History of Marathwada.
 - Students got knowledge of Religious movement in Marathwada.
 - Students got knowledge of socio-economical and culture History of under the Nizam state.
 - Students got knowledge of Hyderabad freedom struggle.
 - ‘Glimpses of the History of Marathwada’ is very useful to student for Net,Set, MPSC and all competitive exam.
 - When students doing study it ‘Glimpses of the history of Marathwada’ that times they know about original culture Religion and society.

XVI- Project Work

- Students get information about forts.
- Students get information about caves.
- Students understand local history.
- Students acquire knowledge about Historical monuments.
- Student gets information about historical coins.
- Students get information about museums, saints, social workers, present movement, labor movement, temples, Hyderabad freedom struggle etc.



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DEPARTMENT OF POLITICAL SCIENCE PROGRAMME OUTCOMES

(As per CBCGS Pattern)

Course Outcomes:

Paper No. Pol 101 Basic concepts of political science:

CO1: Students will know about the meaning of state, Government, sovereigns, Citizenship and rights.

CO2: Students will learn theories of origin of state. CO3: Students will understand types of government and organs of government.

CO4: Students should be aware about types of rights and duties of citizen

Paper No. Pol-102 Government and politics of Maharashtra

CO1: Will be able to, learn on completion of course students.

CO2: To know historical and political Background of Maharashtra State.

CO3: To know state reorganization commission.

CO4: To understand and study the movements in Maharashtra.

Paper No. Pol. 103 Basic concepts of political science

CO1: On completion of course students will be able to learn.

CO2: To know meaning definition and types of Liberty, Equality, and justice.

CO3: To know the Rights of Human.

CO4: Students will understand the democracy system.

CO5: To know welfare state.

Paper No. Pol. 104 Government and Politics of Maharashtra

CO1: To know historical background of Panchyati Raj.

CO2: To study composition and functions of Panchyati system.

CO3: To get information about political parties in Maharashtra.

Paper No. Pol. 105 Indian Government and politics

CO1: To introduce Indian constitution.

CO2: To know fundamental rights.

CO3: To study Indian government.

CO4: To understand budgetary process:

Paper No. Pol. 106 International Relations

CO1: Information about international relation.

CO2: To study approaches of international relations.

CO3: To know foreign policy.

CO4: To understand the concepts of National interest and national power.

CO5: To introduce the international relations.

Paper No. Pol. 107 Indian Government and politics

CO1: To know about Supreme Court.

CO2: To introduce center state Relations.

CO3: To study ideology and program of political parties in Commission. 23 India to know importance of Election

Paper No. Pol. 108 International Relations

CO1: To know about collective security to study deterrence

CO2: Introduce major issues in internationalism:

CO3: To know International and Regional organizations:

Paper No. Pol. 109 Indian Political Thinkers

CO1: To study thoughts of Raja Ram Mohan Roy

CO2: To know the thoughts of Dayanand Sarasvati.

CO3: To know the thoughts of Gopal Krishna Gokhale

CO4: To understand the views of Lokmanya Tilak COS: To study views of Mahatma Gandhi

Paper No. Pol. 110: Western Political Thinkers

CO1: On the completion of course students will able to

CO2: To study views of Plato

CO3: To know thoughts of Aristotle

CO4: To understand thoughts of Machiavelli

CO5: To study views of Thomas Hobbes.

CO6: To know thoughts of John Locke

Paper No. Pol. III Political Ideologies On the completion of course students will able to.

CO1 : Introduce to Nationalism

CO2: To understand Liberalism

CO3: To know democracy.

CO4: To study imperialism

CO5: To study feminism

Paper No. Pol. 112 Indian Political Thinkers

CO1: To study views of Maulana Azad.

CO2: To know thoughts of Jawaharlal Nehru.

CO3: To criticize views of M.N. Roy.

CO4: To understand the importance of Dr. Babasaheb Ambedkar's thoughts .

COS: To study thoughts of Jai Prakash Narayan.

Paper No. Pol. 113 Western Political Thinkers

CO1: To study views of Jean Jacques Rousseau

CO2: To analyze views of John Stuart Mill

CO3: To understand thoughts of Jeremy Bentham

CO4: To know importance of Karl Marx's thoughts.

CO5: To study views of Harold Laski.

Paper No. Pol. 114 Political Ideologies

CO1: To introduce socialism.

CO2: To study communism.

CO3: To understand Fascism. 2

CO4: To know anarchism

CO5: To study environmentalism.

Paper No. Pol. 115 Project

CO1: On the completion of Course students will be able etc.

CO2: To learn about research.

CO3: To improve scientific approach in the students.

CO4: Students will get basic knowledge about research.

PROGRAMME OBJECTIVES •

Objectives

1. Educate students about normative political values, concepts and debates centered on these along with political processes, theories, governments in India and other countries and about international relations between those countries.

2. Prepare students for a variety of careers or graduate and professional degree programs in fields such as law, bureaucracy, education, politics, policy, civil society and business.

3. Offer students the analytical and research skills needed to understand, explain, describe & evaluate society, politics, governments, organized associational life and international relations.

4. B.A. Political Science or Bachelor of Arts in Political Science is an undergraduate Political Science course. Political Science is the study of theory and practice and description and analysis of power relations, political systems and political behaviour. The B.A. (Political Science) degree course involves study of both national and international political systems. It covers a very broad field which incorporates the study of normative concepts, historical and modern political systems, public administration, governmental policies and procedures, international relations and public affairs. The stipulated duration of the course is three years.

5. Political science, the systematic and rigorous study of politics and government, is becoming increasingly crucial in a complex and controversial world. Current cynicism about politics and public leadership belies a need for responsive, representative, effective, and capable public authority. Citizens still expect government to tackle such intimidating social problems, such as

healthcare, community security, economic, and social justice and the balancing of conflicting rights and freedoms. Political science analyzes the ways societies use public authority to address collective problems. The Bachelor of Arts in Political Science program is designed to equip students with specialized research and analytical skills as well as familiarity with more generalized problem-solving skills sufficient to allow them to make valuable contributions to any vocation or enterprise they pursue and to ensure that they will be prepared to solve public problems.

6. The Bachelor of Arts degree in Political Science will engage students in the study of social, economic, and political life, nationally and globally. A bachelor's degree in political science can lead to exciting careers in federal state and local governments; law, business, and international organizations; non-profit associations and organizations; campaign management, electoral politics, and polling; journalism; and last but certainly not the least research and teaching. 27. BA (Honors) Political Science offers a strong platform to venture into div.


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DEPARTMENT OF PUBLIC-ADMINISTRATION PROGRAMME

OUTCOMES

B.A. (Public-Administration)

(As per CBCGS Pattern)

Program Objectives & Program Outcomes

Semi I F.Y.

Paper- I. Introduction to Public –Administration I

II. Indian Administration I

Semi-II

Paper- III. Introduction to Public –Administration II

IV. Indian Administration II

Semi III S.Y.

Paper- V. Public personnel Administration

VI. Management of NGOs

Semi IV

Paper- VII. Public Financial Administration

VIII. Secretarial practice

Semi-V-T.Y.

Paper- IX. Human Resource Development.

X.Educational Administration in India.

XI. Administrative Thinkers

XII.Project Work

Semi-VI

Paper- XIII. - Public Policy and Development

XIV. - Health Administration in Indian

XV. - Recent Trends in Public-Administration & Important Laws

XVI – Project Work

B.A. (Public-Administration)

Program Objectives:

- * To acquaint students with the past and present of Administration, India and the World.
- * Impart a critical understanding of Indian society, economy, polity, and culture through a Administrative perspective
- * to prepare students for a range of careers

- * to stimulate intellectual curiosity and research attitude in the students'
- * to introduce the various Indian and foreign traditions of Public-Administration writing

Program Outcomes:

The following are the learning outcomes that we would like to see each Public-Administration student graduate with.

- * Demonstrate broad understanding of Public-Administration including principles of Management and origination.
- * Explain the development of Indian Administration from ancient to contemporary times.
- * Acquire an understanding of the features and principles of Organization.
- * Acquire an broad understanding of constitutional Values, Rights and Duties
- * The paper attempts to make the students understand the system of Indian Administration and Governance. Students will be able to understand the basic Structure, Function and Behavior of Indian Administration.
- * Acquire knowledge of legislature, Executive and judiciary's working.
- * Conceptual clarity of personal Administration its issue, carrier system and other teams covering various aspects of personnel Administration
- * Comprehending the theoretical conceptualization of NGOs and the public sector
- * Understanding capacity building, ethical and accountability concerns.
- * Knowledge of various aspects of public financial Administration in general and in the Indian context in particular.
- *Deep Understanding of the role of comptroller and Auditor General in a public financial administration.
- * Developing an understanding of the basic concepts of office management.
- * Students will be able to lead and manage in public governance.
- * Students will participate in and contribute to the policy process.
- * Students will be able to analyze, synthesize, think critically, solve problems, and make decisions.
- *To acquaint the students with the administrative thinkers life and their works specially contributions and thought to Public Administration.
- *This course attempts to develop an understanding about the functioning of health administration along with various health mission and issues and


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DEPARTMENT OF SOCIOLOGY PROGRAMME OUTCOMES

F.Y.B.A.

Sem I.I. Introduction to Sociology (CC-1A)

Course Objectives:

1. To understand the social context of emergence of Sociology.
2. To Familiarize students with new avenues in Sociology.
3. To Introduction basic concept in sociology.

Course outcomes:

1. The students learn to apply the sociology perspectives in understanding how society shapes our individual lives.
2. It also provides a foundation for the other more detailed and specialized course in Sociology.
3. The students learn how to read and interpret complex ideas and text and to present them in a cogent manner.

II. Indian Social Institutions (CC-1B)

Course Objectives:

1. To be able to identify the functions of a given social institutions.
2. To identify intuitional structures within societies.
3. Get to know the rules governing these institutions.

Course Outcomes:

1. This paper is expected to instill knowledge about the fundamental institution.
2. Their governing principles and the continuity and change features of these institution.
3. The students learn how to read and interpret co plex ideas and texts and to present them in a cogent manner.

Sem II III Basic Concept in Sociology (CC-1C)

Objectives of course:

1. To introductions the basic concept in Sociology.
2. To Familiarize students with the theoretical aspect of different concepts.
3. To give an outline of Sociological Background.

Course Outcomes:

1. The course is intended to introduce the students to a sociological way of thinking.
2. It also provides a foundation for the other detailed and specialized course in sociology.
3. The course provides competitive atmosphere for the students.

IV Transformation in Social Institution (CC-2C)

Course Objectives:

1. To acquaint students with basic institutions of society its newer dimensions.
2. To develop critical understanding of the functioning of social institutions.
3. To acquaint students with the concept and current versions of social change.

Course Outcomes:

1. Students have understood the transformation in social institutions.
2. An acquaintance with change in institutions.
3. Institutions change guide them in their future planning.

S. Y. B. A. Sem. III**V Indian Society (CC-1E)****Course Objectives:**

1. To draw attention to the variety of ideas and debates about Indian.
2. To introduced mobilization and change in Indian society.
3. To provide comprehensive understanding of Indian society.

Course outcomes:

1. They are made familiar with the Indian society.
2. Its linkages and continuity with past and present.
3. This paper provides comprehensive understating of Indian society.

VI Cinematic Sociology (SEC-1A)**Course objectives:**

1. To introduce the students to certain major themes of outlining the interconnections between cinema and society.
2. To familiarize students with important theories in cinematic sociology.

Course outcomes:

1. Students are introduced the key ideas within a theory. They understand the importance of cinemas impact on society.
2. Students will investigate questions through a filmic analysis of sociological issues will consider both narrative and documentary films and use them to engage in a sociological exploration of identity, interaction, inequality and institutions.
3. Students explore the familiar path of cinema to connect to large theoretical grounds.

Sem. IV -VII Indian society: Issues and Concerns (CC-1F)**Objectives of course:**

1. Identify and analyze some emerging social issues and problems.
2. To acquire sociological understanding focusing on their structural linkages and interrelationship.

Course outcomes:

The course content will empower the students to deal with the current challenges and to

serve as change agents in government and nongovernmental organizations.

VIII

Sociology of Mass Media (SEC-1B)

Course objectives:

1. To introduce the students to certain major themes of outlining the interconnections between media and society.
2. To understand influence of media on socio-cultural change and development in present society.
3. To familiarize students with important theories in the sociology of media.

Course outcomes:

1. An appreciation of mediatized character of social existence and its history.
2. An acquaintance with concepts and various theoretical stands in sociology of media.
3. An understanding of social, political and cultural processes that underpin the operations of our mediatized ecosystem and their effects.

Sem. I I. Introduction to Sociology (Old)

OUTCOMES:

Sociology is one of the modern social sciences, which has a significant role in society. This core course is designed to know about the origin and development of sociology as a discipline in general and development in India in particular. Every science or branch has its own subject matter so as sociology, which corresponds to society as its subject. This course is designed to study approach, principles, concepts, methods, and history of sociology.

II. Individual and society

Outcomes:

Sociology has been instrumental in changing our attitude towards society. In a specialized society we are all limited as to the amount of the whole organization and culture that we can experience directly. We can hardly know the people of other areas intimately. This course is designed to study different sections of society and the institutions and other structural elements.

Sem. II III. Introduction to Subfields of Sociology

Outcomes:

Sociology as a subject has its own discourse however it undertakes many issues concerning the other social sciences. Gradually several branches of sociology emerged with distinct subject matters. Students of sociology must have the knowledge of those branches to understand the scope of sociology & its wideness. With this objective this course is designed. This will also help to carry interest in the sociology

As general and its subfields in particular.

IV. Indian Social Composition

Outcomes:

Indian Sociology has been focused on the wide description of Indian social Composition. As student of sociology, one has known the basic segments of Indian social structure and its various dimensions. This course mainly covers the broad segments of Indian society which are India's geographical ethnic and religious distinctiveness. This course also provides Information regarding democratic beauty of India.

S.Y.B.A.

Sem. III V. Problems of Rural India

Outcomes:

It is very important to focus on studies about rural development in Country like India. Where a large section of Population still living in rural Ares. Rural life is affected by the change taking place at world around. A student of sociology must be aware about the changing scenario of Rural India and the contemporary Problems of rural development.

VI. Contemporary Urban Issues

Outcomes:

Urbanization is irreversible process in all over world so as in India. The number of cities and the demographic population is increasing day by day. As the result of it several issues of Planning and distribution of means are raised. So, this course is design to create understanding any analytical capacity among students about urbanization. Urban communities, urban planning and urban problem.

Sem. IV VII. Population in India

Outcomes:

This course designed to understand causes and consequences of Population change. Population is decisive factor which reflects in overall society. Change in fertility. Mortality. Migration. Technology affected he society. India which is second large population in the world has its own features and characteristics. This course is designed to understand the dynamics of Population.

VIII. Sociology of Development

Outcomes:

Development is broad and critical process which makes impact on society. The development of human society has come across many stages. The outreach of any development has created many issues too. Sociology has taken Development as a diverse discourse to study. This course provides a broad introduction to many development issues.

T.Y.B.A.

Sem. V IX. Sociological Traditions

Outcomes:

To provide information in the student with the understand of historical Scio-economic and intellectual forces of the rise of sociological theories. also provide the student with the basic understand of emergence of sociological thought and to know about pioneer sociologists started theories with their contribution to sociology.

X. Introduction to Research Methodology

Outcomes:

This course is designed to introduce Research Methodology to undergraduate students for better understand of application of social science in general and sociology in particular. Also provide and equip the students with the procedures, tools and techniques of social research

XI. Social Problems in India

Outcomes:

As a nation of diversity and plural society India witnessed many issues in past and present this course is designed to identify and analyse some emerging social problem from sociological perspectives. To sensitize the student about social problems of contemporary India and to discuss the measures on it.

OR Urban Sociology

Outcomes:

The urban Sociology is the important branch of Sociology which indulge in urban features study and urban theories this course is designed to provided information to student about urban sociology and to furnish the basic elements of the subject and to draw attention of the students towards increasing urbanization.

XII. Practical

Sem. VI XIII. Sociological Theories

Outcomes:

This course is designed to understand basic theoretical approach and develop their sociology thinking while knowing theoretical contribution of prominent sociologists of their time

XIV. Social Research Methods

Outcomes:

This course can serve as a helping hand to students to understand primary technique and the use of social research. The course is designed in view of increasing use of computer and statistical tools in social research.

XV. Social Disorganization in Contemporary India

Outcomes:

With rapid industrialization and modernization Indian society is witnessing drastic change. With this transformation Indian society also witnessing few negative changes in social Institution. The course is designed to elaborate on such change and to know causes and impact of social disorganization.

OR Urban Society in India

Outcomes:

This course is designed to analyze critically social problems of urban India and to discuss regarding impact of modernization and industrialization on Indian urban sphere.

XVI. Practical

Outcomes:

Society has its own problems in every field. It is through the study of **sociology** that the scientific study of society has been possible. The **practical** aspect of **sociology** is too of great **importance** in the study of social problems and in social work and social adjustment.



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DEPARTMENT OF GEOGRAPHY PROGRAMME OUTCOMES

PROGRAMME DETAILS

Sr. No.	Class	Semester	Name of Paper
1	F.Y.	I	Physical Geography
2	F.Y.	I	Human Geography
3	F.Y.	II	Geography of Landform
4	F.Y.	II	Geography of Maharashtra
5	F.Y.	I&II	Practical
6	S.Y.	III	Climatology
7	S.Y.	III	Introduction To GIS
8	S.Y.	IV	Oceanography
9	S.Y.	IV	Geography of Population
10	S.Y.	III&IV	Practical
11	T.Y.	V	Physical Geography Of India
12	T.Y.	V	Geography Of Environment
13	T.Y.	V	Industrial Geography Of Maharashtra (M)
14	T.Y.	VI	Agricultural Geography Of India
15	T.Y.	VI	Geography of Natural Calamity
16	T.Y.	V & VI	Practical
17	T.Y.	VI	Bio Geography (M)
18	T.Y.	VI	Practical (M)
19	T.Y.	VI	Project Work (M)

The current syllabus of B. A. given by the **Dr. Babasaheb Ambedkar Marathwada University**, Aurangabad the courses offered by our college emphasis the practical utility of the course design. Many of our students have become successful Teachers, got the jobs in competitive examination MPSC, SSC, Police Constables.

Geography subject is the professional subject. Those disciplines focused upon the recent trends in the Environment as well as job oriented. Thus, our course in Geography enables the students to become masters in Socio-Geographical terms.

➤ PROGRAMME SPECIFIC OUT COME:

Geography opens many new doors in terms of career opportunities. Geography is one field which enhances your knowledge about different countries, helps you chart out

maps, location of forests, rivers etc. You also get to learn about the people that inhabit the region, its climatic conditions along with the influence of lifestyle and economy on that region etc.

Geography graduates tend to be fairly open-minded and interested in the world around them. While the perception is that one goes straight from a geography degree to teaching in a school or college, however, those who specialize in geography now have new fields to conquer. Some of the popular ones include research in climate studies, medical epidemiology etc. Geography is becoming a more promising career option than it was before.

➤ **COURSE OUT COME:**

After the completion of course, the students will have ability to:

1. Understand the elements of weather and climate and its impacts at different scales
2. Comprehend the climatic aspect and its bearing on the earth
3. Learning the interactions between the atmosphere and earth surface
4. Analyze the dynamics of the earth's atmosphere and global climate assessing the role of main in global climate change
5. Understands various components and principals of GIS
6. Construct the thematic maps using different layers
7. Apply GIS in various geographical studies

B.A. S.Y. (Semester – IIIrd)
Course Code – CCGEOG-3E
Title of Course- Climatology

❖ Learning Outcomes:

After the completion of course, the students will have ability to:

1. Understand the elements of weather and climate and its impacts at different scales.
2. Comprehend the climatic aspects and its bearing on planet earth.
3. Learn the interaction between the atmosphere and the earth's surface. Understand the importance of the atmospheric pressure and winds.
4. Analyze the dynamics of the Earth's atmosphere and global climate. Assessing the role of man in global climate change.

Total Marks: 30

Unit No.	Topic	Period	Marks
I	Introduction of Climatology- Definition, – Nature and scope of Climatology, Significance of Climatology, weather and Climate, Composition and Structures of the Atmosphere.	10	6
II	Insolation and Temperature – Definition of Insolation and Temperature, Heat Budget of the Earth, Factors affecting the distribution of Solar energy, Distribution of Temperature – Vertical and Horizontal, Range of Temperature.	15	8
III	Atmospheric Pressure and Types of Winds- Evaporation and Condensation, Hydrological cycle, Types of Precipitation, World pattern of rainfall- Regional and Seasonal distribution. Air Masses and Fronts: Concept, Classification and properties. Atmospheric disturbance: Tropical and Temperate cyclones: thunderstorms and tornadoes.	25	10
IV	Role of Climate in Human life: - Atmospheric pollution and global warming, general causes, consequences and measures of control.	10	6

Recommended Books:

- 1] Barry R.G. and Chorley R.J. : Atmosphere, Weather and Climate, Routledge. 1998.
- 2] Critch Field H. : General Climatology, Prentice, Hall, New York, 1975.
- 3] Lydolph, Paul, E. : The Climate of the Earth, Rowman and Allanheld, Totowa N.J. 1958.
- 4] Triwartha G.T. : An Introduction to Climate, International Student's edition, McGraw-Hill, New York, 1975
- 5] D.S. Lal : Climatology , Sharda Pustak Bhawan, Prayaraj,
- 6] डॉ. गजहंस डी. एस व डॉ. पाथरे यु. बी. : हवामानशास्त्र व सागर विज्ञान , विद्या प्रकाशन,

**DEPARTMENT OF HOME SCIENCE PROGRAMME
OUTCOMES**

- **PROGRAMME DETAILS**
- **B.A. First Year, First Semester:**

Theory:

Paper Ist :- Family Resource Management

Paper IInd Basic Nutrition

Practical:- Basic Nutrition

(Introduction to laboratory, Planning and Preparation of recipes from food groups, Planning & Preparation of Nutrient rich recipes for different income groups)

First Year, Second Semester

Paper IIIrd:- Extension Education

Paper IVth:- Food and Nutrition

B.A. Second Year, Third Semester

Paper Vth:- Extension Education

(Extension Education, Extension Models and Methods, Community Organization & Social Problems)

Paper VIth:- Textile & Clothing (Garment Designing and Printing)

(Introduction to Dyeing, Printing, Introduction to Clothing and Management, Care of Household Clothing)

Practical: Knitting, Printing Elements of Sleeves Construction of Garment)

B.A. Second Year, Fourth Semester:

Paper VIIth:-Child Development (Late Childhood and Adolescence)

(Late Childhood, Parent and Child Relationship, Adolescence & Behavioral Problems During Adolescence)

Paper VIIIth:- Food and Nutrition:

(Digestive System, Energy, Meal Planning & Food Preservations)

Practical: Planning And Preparation Of Diet Plan For Different Age And

Socioeconomic Groups In Relation To Specific Nutritional Needs, Salad Decoration, Food Preservation & Food Adulteration

B.A. Third Year, Fifth Semester:

Paper IXth :- (subsidiary) Marriage and Family Dynamics

(Marriage, Family, Adjustments, Parenthood and Family Crisis, Laws Related to Woman, Marriage and Family & Counseling)

Paper Xth:- (subsidiary) Housing and Interior Decoration

(Housing, Lighting and Ventilation, Furniture Arrangement, Home Furnishing; Curtains)

Practical : Housing and Interior Decoration

Draw house plan for different economic groups, Preparation of any decorative article, making curtains of different patterns

Paper XIth:- (Main) Nutritional Management in Health and Disease

(Health and Nutrition, Food Habits, Diet Therapy, Dietary Management and Nutritional Requirements in common elements)

Practical : Nutritional Management in Health and Disease

Planning and preparations of therapeutic and modified diet, Planning and preparation of diet in common elements, Regional Cookery

Paper XIIth:- Project Work Paper XIIIth:- (subsidiary) Human Development (Adulthood and Old Age)

(Early Adulthood, Middle age, Old Age, Adjustments to Different areas)

Paper XIVth:- (subsidiary) Fundamentals of Art and Design

(Introduction to foundation of art, The Color, Color Scheme, Computer Aided Color Scheme, Flower Arrangement, Floor Decoration)

Practical : Fundamentals of Art and Design

Color Schemes, Flower Arrangement, Floor Decoration, Preparation of Accessories for Interior Decoration

Paper XVth:- Communication Process in Home Science

(Concept of Development and Communication, Communication Process, Communication Method, Leadership)

Practical: Communication Process in Home Science

Preparation and write up of Audio Visual Aids, Preparation of teaching Aids, Preparation of PowerPoint Presentation on any topic related to subject

Paper XVIth:- Project Work

The current syllabus of Programme of B. A. Home Science provided by Dr. BAMU Aurangabad offered by our college to students emphasizes the practical utility of the course design. Many of our students are successfully working as Nurse, Teachers, Lawyers, Aganwadi Sevikas, Entrepreneurs and even Social Workers.

➤ PROGRAMME SPECIFIC OUTCOME:

Home science has its own unique features which distinguishes itself from other subjects. It helps in improving the domestic skills like housekeeping, food preservation, stitching, interior decoration, cookery, home decoration, child rearing etc. which is of wide application now a days. Five disciplines of Home Science are focused upon the recent trends in the entrepreneur as well as job oriented. Along with it the knowledge of Home Science improves the quality of life: the study of home science provides the homemaker with the knowledge and skills required to manage a home effectively. Helps in the best utilization of resources to get maximum satisfaction and returns: Family resource management provides knowledge necessary to make intelligent decisions regarding the Purchases budgeting and other managerial activities. Helps to improve family relationships. Develops in the students the necessary skills and techniques required for better homemaking and family living. The importance of Home science has further increased to meet the demands of the modern society. The knowledge of Home science is derived from physical, social, and biological sciences and many arts, which is applied towards achieving better, healthier and happier homes.



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FACULTY OF COMMERCE

Commerce is a fundamental academic UG programme, besides Science, Arts, Engineering and Medicine. After completing Class 12, one can pursue Bachelor of Commerce (BCom) or Bachelor of Commerce (Hons), both three-year full-time programmes. Commerce comprises a wide range of interdisciplinary branches such as accountancy, finance, statistics, and ecommerce among other

PROGRAM OUTCOMES: DEPARTMENT OF COMMERCE

The framework also provides a set of broad learning outcomes that summaries the knowledge, understanding, skills, values and attitudes essential for all students to succeed in and beyond their schooling. These broad learning outcomes indicate that students will:

Programme Outcomes

- Enables learners to get theoretical and practical exposure in the commerce sector which includes Accounts, Commerce, Marketing, Management, Economics, and Environment etc.
- Develops communication skills and build confidence to face the challenges of the corporate world.
- Enhances the capability of decision making at personal and professional levels.
- Makes students industry ready and develop various managerial and accounting skills for better professional opportunities.
- Develops entrepreneurial skills amongst learners.
- Strengthens their capacities in varied areas of commerce and industry aiming towards holistic development of learners.
- Thus, after completing their graduation learners develop a thorough understanding of the fundamentals in Commerce and Finance.

COURSE OUTCOMES (Program Specific Outcomes)

- Commerce education is business education. Commerce education is that area of education which develops the required knowledge, skills and attitudes for the handling of Trade, Commerce and Industry. The recent commerce graduate can enhance their education and has emerged in the form of Chartered Accountant, and Business administrator. Commerce education is a totally different from other disciplines. Hence, it must charter new routes to service the aspirations of the nation.
- 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. Through teaching, research, and service, the College of Commerce is dedicated to developing tomorrow's leaders, managers, and professionals.
- Commerce provides the knowledge, skills, understanding and values that form the foundation on which young people make sound decisions on consumer, financial, business, legal and

employment issues. It develops in students an understanding of commercial and legal processes and competencies for personal financial management. Through the study of Commerce students develop financial literacy which enables them to participate in the financial system in an informed way

- Central to the course is the development of an understanding of the relationships between consumers, businesses and governments in the overall economy. Through their investigation of these relationships, students develop the capacity to apply problemsolving strategies which incorporate the skills of analysis and evaluation. Students engage in the learning process which promotes critical thinking, reflective learning and the opportunity to participate in the community.
- Commerce provides for a range of learning styles and experiences that suit the interests and needs of all students. It emphasizes the potential and use of information and communication technologies. Students gain greater competence in problem-solving and decision-making by evaluating the range of consumer, financial, business, legal and employment strategies. In examining these they also develop attitudes and values that promote ethical behavior and social responsibility and a commitment to contribute to a more just and equitable society



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DEPARTMENT OF PHYSICS PROGRAMME OUTCOMES

B.Sc. First Year Physics syllabus

Choice based credit system syllabus

Title of the course B.Sc. (Physics)

Preamble:

The curriculum for the B.Sc. (Physics) program is designed to cater to the requirement of choice based credit system following the University grand commission (UGC) guidelines. In the proposed structure, due consideration is given to core and elective courses (Discipline Specific-Physics), along with ability enhancement (Compulsory and skill biased) courses. Furthermore contentious assessment is an integral part of the CBCS, which will facilitate system and through learning towards better understanding of the subject. The systematic and planned curricula from first year to the third year (comprised of six semesters) shall motivate the students for pursuing higher studies in Physics and inculcate enough skill for becoming an entrepreneur.

Objectives:

- To foster scientific attitude, provide in-depth knowledge of scientific and technological concepts of Physics
- To enrich knowledge through problem solving, minor / major projects, seminars tutorials, review of research articles / papers, participation in scientific events, study visits, etc.
- To familiarize with recent scientific and technological developments.
- To create foundation for research and development in physics.
- To help students to learn various experimental and computational tools thereby developing analytical abilities to address real world problems.
- To train students in skill related to research, education Industry and Market.
- To help students to build-up progressive and successful career in Physics.

Learning outcomes:

On successful compilation of this course students will be able to:

1. Understand Newton's laws and apply them in calculations of the motion of the simple system.
2. Use the free body diagrams to analyze the forces on the objects.
3. Understand the concept of the friction and the concept of the elasticity, fluid mechanics and be able to perform calculations using them.
4. Apply the laws of thermodynamics to formulate the relations necessary to analyze thermodynamic process.
5. Demonstrate quantitative problems solving skills in all the topics covered.

B.Sc. Second Year Physics syllabus
Choice based credit system syllabus

Title of the course B.Sc. (Physics)

Preamble:

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- To train students in skill related to research, education Industry and Market.
- To help students to build-up progressive and successful career in Physics.

Learning outcomes

B.Sc. Second Year Physics (Semester III)

(Statistical Physics and Relativity)

Course code: Phy: 311

Periods 45

Credit 02

Marks 50 (CA = 10, ESE = 40)

Course outcome:

On successful completion of this course students will be able to

- Show an analytic ability to solve problems relevant to statistical mechanics.
- Can explain the procedures for deriving the relations between thermodynamic parameters such as pressure, temperature, entropy and heat capacity from the distribution functions.
- Can apply the methods of statistical physics in other fields of physics and related fields.

- Demonstrate knowledge and broad understanding of special relativity.

B.Sc. Second Year Physics (Semester III)

(Modern and Nuclear Physics)

Course code: Phy: 312

Periods 45

Credit 02

Marks 50 (CA = 10, ESE = 40)

Course outcome:

On successful compilation of this course students will be able to

- Able to explain the factors influencing photoelectric effect, explain the experimental set up and apply it for applications.
- Understand the fundamentals of LASERS, laser systems, their characteristics and diversified applications including Industry, Medicine and defense.
- Use this knowledge for applications of LASERS in specific fields of their interest.
- Demonstrate the ability to critically evaluate the results in nuclear and particle physics.
- Identify the strength and limitations of various nuclear models.

B.Sc. Second Year Physics (Semester IV)

(Semiconductor and digital electronics)

Course code: Phy: 411

Periods 45

Credit 02

Marks 50 (CA = 10, ESE = 40)

Course outcome:

On successful completion of this course students will be able to

- Basic semiconductor devices.
- Various transistor basing device techniques and detailed study of single stage amplifier.
- How amplifier can be converted in to oscillator.
- Importance of Op-amp and its various circuits.
- Number systems, logic gates and Boolean algebra.

B.Sc. Second Year Physics (Semester IV)

(Condensed Matter Physics)

Course code: Phy: 412

Periods 45

Credit 02

Marks 50 (CA = 10, ESE = 40)

Course outcome:

On successful completion of this course students will be able to

- Expose students to the basic concept in condensed matter physics.

- Recognize common crystal structure.
- Explain the Physics of different types of bonds and bonding in solids.
- Describe electrical conduction in crystal.
- Thermal properties of solids.
- The details study of Hall Effect.

B.Sc. Second Year Physics (Semester III)

Title of the course: SEC- 1 (A) Medical Physics

Course code: Phy: 313

Periods 45

Credit 02

Marks 50 (CA = 10, ESE = 40)

Course outcome:

On successful completion of this course students will be able to

- To learn the construction of X-ray generator.
- Explain different types of radiation, their sources / properties.
- The basic principles and working of CT, MRI and ultra sound imaging.
- Able to provide adequate knowledge about the medical testing equipment's.
- Able to transfer knowledge and skills to students as well as younger professionals.

B.Sc. Second Year Physics (Semester III)

Title of the course: SEC- 1 (B) Sensor and Physics

Course code: Phy: 313

Periods 45

Credit 02

Marks 50 (CA = 10, ESE = 40)

Course outcome:

On successful compilation of this course students will be able to

- Describe primary blocks of an instrumentation system and qualities of measurement.
- Classify physical measurements backgrounds.
- Select transducer as per application demand.
- Identity terminals of industry grade transducers.
- Describe operations of basic transducers.

B.Sc. Second Year Physics (Semester IV)

Title of the course: SEC- (C) Renewable Energy

Course code: SEC: 413

Periods 45

Credit 02

Marks 50 (CA = 10, ESE = 40)

Course outcome:

On successful compilation of this course students will be able to

- Know the need of renewable energy resources, historical and latest developments.
- Discuss wind energy conversion system and explain sources of geothermal energy.
- Describe different biogas plants and working of different gasifiers.
- Explain the working principal of different fuel cells and ocean thermal energy conversion systems.
- Compare Solar, wind and bio energy systems, their prospects, advantages and limitations.

B.Sc. Second Year Physics (Semester IV)

Title of the course: SEC- (C) Physics workshop Skill

Course code: SEC: 413

Periods 45

Credit 02

Marks 50 (CA = 10, ESE = 40)

Course outcome:

On successful compilation of this course students will be able to

- The student to familiar and experience with various mechanical and tools through hands-on mode.



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DEPARTMENT OF MATHEMATICS PROGRAMME OUTCOMES

OUTCMES OF SYLLABUS

B.SC. First Year syllabus (NEW)

[Choice Based Credit & Grading System]-[REF.NO.SU/2022/6852-62 Date:10./08/2022]

Course Outcomes (COs)

B.SC. (Mathematics) First Year B.SC.

Semester –I

MAT-101: Geometry

Paper -I

Course Objectives: -General objectives are to study three-dimensional geometry, plane, Right line, sphere, cone and cylinder along with their properties & Interceptions.

Course Outcomes:-After successful completion of this course the student will able to identify and study equation of plane. Basic idea of lines, sphere, cones and cylinders.

Semester –I

MAT-102: Differential Calculus

Paper –II

Course Objectives: - The objective of the course is to learn real sequences, functions and higher Derivatives, vector differentiation and applications.

Course Outcomes: - After completion of the course students will be able to:

- Classify the sequences.
- Check the limit and continuity of functions.
- Evaluate the derivative of functions.
- Find the curl divergence and gradient of functions.

Semester –II

MAT-201: Number Theory

Paper –III

Course Objective: - A primary objective of the course is to learn elementary knowledge of Number theory.

Course Outcomes: - At the end of course, students will be able to:

- Evaluate the greatest common divisor and solve Diophantine equations.
- Understanding of divisibility concepts, prime numbers and usefulness of congruencies.
- Use the results to solve problems.

Semester –II

MAT-202: Integral Calculus

Paper –IV

Course Objectives: -The main objective of the course is to study methods of finding integration
And apply it to evaluate line integral volume integral and surface integral.

Course Outcomes: - After successful completion of the course student will be able to:

- Apply method of integration to find the integral of function.
- Find the area, surface and volume of given shape.

Course Outcomes (COs)

B.SC. (Mathematics) Second Year B.SC.

Semester –III

MAT-301: Number Theory

Paper –V

Course Objectives: - After studying this course, you should be able to:

1. Find quotients and remainders from integer division.
2. Apply Euclid's algorithm and backwards substitution.
3. Understand the definitions of congruence's, residue classes and least residues.

Course Outcomes: - Upon completing the course, students will be able to:

1. Solve problems in elementary number theory.
2. Apply elementary number theory to cryptography.
3. Develop a deeper conceptual understanding of the theoretical basis of number theory and
Identify how number theory is related to and used in cryptography.

Semester –III

MAT-302: Integral Transforms

Paper -VI

Course Objectives:-

1. The Course will enable students in handling linear systems using matrices.
2. Understand different solution techniques and use tools like Fourier transforms
Fourier series, Z – transforms,
3. Beta and Gamma functions in problem solving.

Course Outcomes:-

1. Solve finite difference equations using Z-transforms.
2. Solve improper integrals using beta, gamma functions.
3. Apply method of least squares to find the curve of best fit for the given data.
4. Solve partial differential equations of first order

MAT-303: MECHANICS

Paper –VII

Semester –IV

Course Objectives:-

1. Students will be able to understand basic concepts of stress, strain and their relations based on linear elasticity.
2. Material behaviours due to different types of loading will be discussed.
3. Students will be able to understand and know how to calculate stresses and deformation of A bar due to an axial loading under uniform and non-uniform conditions.
4. Students will understand how to develop shear-moment diagrams of a beam and find the Maximum moment/shear and their locations
5. Students will understand how to calculate normal and shear stress

Course Outcomes:-

1. Analyse the behaviour of the solid bodies subjected to various types of loading.
2. Apply knowledge of materials and structural elements to the analysis of simple structures.
3. Undertake problem identification, formulation and solution using a range of analytical Methods.
4. Analyse and interpret laboratory data relating to behaviour of structures and the materials They are made of, and undertake associated laboratory work individually and in teams.
5. Expectation and capacity to undertake lifelong learning.

Semester –IV

MAT-401:-Numerical Methods

Paper –VIII

Course Objectives:-

1. Find the solution of the first order and second order equation with constant coefficient
2. Find the summation of series finite difference techniques
3. Find the solution of ordinary differential equation of first order by Euler, Taylor and Runge- Kutta methods
4. Derive Least – Squares curve fitting procedures, fitting a straight line, nonlinear curve fitting, Curve fitting by a sum of exponentials.

Course Outcomes:-

1. Apply appropriate numerical methods to solve the problem with most accuracy.
2. Be able to find the solution of linear systems by using direct methods, Matrix inversion Method, Gaussian elimination methods, Gauss-Jordan Method, Method of factorization, Solution of Tridiagonal Systems.
3. Be able to find the find the solution of ordinary differential equation of first order by Euler Taylor and Runge-Kutta methods

MAT-402:-Partial Differential Equations

Paper -IX

Course Objectives:-

1. Introduce students to partial differential equations.
2. Introduce students to how to solve linear Partial Differential with different methods.
3. Find the solutions of PDEs are determined by conditions at the boundary of the spatial domain and initial conditions at time zero.
4. Technique of separation of variables to solve PDEs and analyse the behaviour of solutions in terms of Eigen function expansions.

Course Outcomes:-

1. Solve linear partial differential equations of both first and second order
2. Extract information from partial derivative models in order to interpret reality.
3. Identify real phenomena as models of partial derivative equations.

MAT-403: MECHANICS

Paper X

Course Objectives:-

To appreciate the theory of relativity for particles having relativistic speed.

To realize the reduction of a two-body problem to a one-body problem in a central force system.

Course Outcomes:-

1. Identify the motion of a mechanical system using Lagrange-Hamilton formalism
2. Apply theory of relativity to determine time dilation, length contraction and simultaneity
3. Determine the various four vectors: position, velocity, acceleration, momentum, Force

Course Outcomes (COs)

B.SC. (Mathematics) Third Year B.SC.

Semester –V

MAT-501: Real Analysis

Paper –XI

Course Objectives:-

1. Have the knowledge of basic properties of the field of real numbers.
2. Studying the basic topological properties of the real numbers
3. Studying the notion of continuous functions and their properties.

Course Outcomes:-

1. Abstraction ability and are able to recognize analogies and basic patterns
2. A classify, recognize, formulate and solve mathematics-related problems
3. The is electronic media competently

MAT-502: Abstract Algebra

Paper –XIII

Course Objectives:-

1. In particular to study in details the Sylow theorems and polynomials rings.
2. This course helps to gain skill in problem solving and critical thinking.

Course Outcomes:-

1. The student will be able to define and work with the concepts of homomorphism and Isomorphism.
2. The student will be able to apply the basic concepts of field theory, including field extensions And finite fields.
3. The student will be able to define the concepts of coset and normal subgroup and to prove Elementary propositions involving these concepts.

MAT-504: Ordinary Differential Equations**Paper –XIII****Course Objectives:-**

1. To model mechanical systems using differential equations.
2. To analyse and solve ordinary differential equations.
3. To understand numerical methods for solving ordinary differential equations.

Course Outcomes:-

1. Understand the basic concepts of differential equations
2. Solve the ordinary differential equations using variation of parameters, undetermined Coefficients and by numerical technique.

Semester –VI**MAT-601: Real Analysis****Paper –XIV****Course Objectives:-**

1. Have the knowledge of real functions-limits of functions and their properties.
2. Studying the differentiability of real functions and related theorems.
3. General and Transferable Skills: Develop the ability to reflect on problems that are quite Significant in the field of real analysis

Course Outcomes:-

1. Knowledge of the implementation of theories in problem solving.
2. Ability to identify, formulate, and solve problems.
3. Knowledge of basic theorems and concepts in the different areas of mathematics.

MAT-602: Abstract Algebra**Paper –XV****Course Objectives:-**

1. Develop the ability to form and evaluate conjectures.

2. Present concepts and properties of various algebraic structures.
3. Discuss the importance of algebraic properties relative to working within various number Systems.

Course Outcomes:-

1. Generate groups given specific conditions.
2. Investigate symmetry using group theory.
3. Identify plane periodic patterns (lattices).

MAT-604: Ordinary Differential Equations

Paper –XVI

Course Objectives:-

1. To analyse and solve ordinary differential equations.
2. Will be able to explain the concept of differential equation
3. Explains the meaning of solution of a differential equation
4. Will be able to solve first-order ordinary differential equations.

Course Outcomes:-

1. Solve problems involving exponential growth and decay.
2. Understand the basic concepts of d differentials equations
3. Undetermined coefficients and by numerical tequnique.



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DEPARTMENT OF CHEMISTRY PROGRAMME OUTCOMES

(As per CBCGS Pattern)

The Outcomes of UG Course, B. Sc. in Chemistry

At the completion of B. Sc. in Chemistry the students are able to: After completion of degree, students gained the theoretical as well as practical knowledge of handling chemicals. Also they expand the knowledge available opportunities related to chemistry in the government services through public service commission particularly in the field of food safety, health inspector, pharmacist etc. Afford a broad foundation in chemistry that stresses scientific reasoning and analytical problem solving with a molecular perspective. Achieve the skills required to succeed in graduate school, professional school and the chemical industry like cement industries, agro product, Paint industries, Rubber industries, Petrochemical industries, Food processing industries, Fertilizer industries etc. Got exposures of a breadth of experimental techniques using modern instrumentation. Understand the importance of the elements in the periodic table including their physical and chemical nature and role in the daily life. Understand the concept of chemistry to inter relate and interact to the other subject like mathematics, physics, biological science etc. Learn the laboratory skills and safely to transfer and interpret knowledge entirely in the working environment.

Programme outcome (POs):

1. Comprehensive understanding of the principles of Chemistry .
2. Gain the skills to design and carry out scientific experiments and interpret the data.
3. Understand the interdisciplinary nature of Chemistry and to make aware of the emerging areas in Chemistry .
4. Build a scientific temper and to learn the necessary skills to succeed in research or industrial field. .
5. Be able to define and resolve new problems in Chemistry and participate in the future development of Chemistry.
6. Get a deep insight into the various spectroscopic methods used for the characterization of organic compounds. .
7. Enable the students to elucidate the structure of compounds by analyzing the spectral data.

Programme Specific Outcomes (PSOs):

1. Gains complete knowledge about all fundamental aspects of all the elements of chemistry.
2. Understands the background of organic reaction mechanisms, complex chemical structures, and instrumental method of chemical analysis, molecular rearrangements and separation techniques.

3. Appreciates the importance of various elements present in the periodic table, coordination chemistry and structure of molecules, properties of compounds, structural determination of complexes using theories and instruments.

4. Gathers attention about the physical aspects of atomic structure, dual behavior, reaction pathways with respect to time, various energy transformations, molecular assembly in nano level, significance of electrochemistry, molecular segregation using their symmetry.

5. Learns about the potential uses of analytical industrial chemistry, medicinal chemistry and green chemistry.

6. Carry out experiments in the area of organic analysis, Synthesis estimation, separation, derivative process, inorganic semi micro analysis, preparation, conduct metric and potentiometric analyze.


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DEPARTMENT OF ZOOLOGY PROGRAMME OUTCOMES

Program Specific Outcomes (PSOs) and Course Outcomes (COs) of B.Sc. (Zoology)

Program Specific Outcomes (PSOs) B.Sc. (Zoology)

On successful completion of the Program, the students will be able to:

- PSO1:** Learn about animal interactions with the environment and identify the major groups of organisms with an emphasis on animals and classify them within a phylogenetic framework.
- PSO2:** Apply knowledge to solve the issues related to animal sciences
- PSO3:** Learn with skills related to laboratory as well as field based studies and inculcate interest and foundation for further studies in Zoology.
- PSO4:** Illustrate zoological science for its application in branches like medical entomology, apiculture, aquaculture and agriculture etc.
- PSO5:** Becoming an entrepreneur and also enable students to get employed in the Biological research Institutes, Industries, Educational Institutes and in the various concerning departments of State and Central Government based on subject Zoology.
- PSO6:** Ability to connect and apply biological knowledge to other disciplines and to Integrate knowledge into their personal and professional lives.
- PSO7:** Foster curiosity in the students for Zoology by inculcating good laboratory practices in students and to train them about proper handling of lab instruments.

Course Outcomes (COs)

B. Sc. (Zoology) First Year B.Sc.

Semester-I

Course ZOL- 101 Animal Diversity- I (Protozoa to Echinodermata)

After successfully completing this course, students will be able to:

- CO1:** To understand the general organization, diversity and adaptation of Non Chordates and Protochordata
- CO2:** The Student will learn the importance of biodiversity conservation.

Course: ZOL-102-Cell Biology

After successfully completing this course, students will be able to:

- CO1:** The students will the Structure and function of animal cell
- CO2:** The students will understand compares between the prokaryotic and eukaryotic system and extrapolates the life to the aspect of development.

Course: ZOL-103 Practical Based on ZOL-101 and ZOL-102:

After successfully completing this course, students will be able to:

CO1: The students will recognize the live forms of invertebrates.

CO2: The students will Study of the cells in respect to internal structure.

Semester-II

ZOL-105 -Animal Diversity- II (Protochordata to Mammals)

After successfully completing this course, students will be able to:

CO1: The students will understand the general organization of Chordata

CO2: The students will understand the taxonomy and characteristic feature of Chordate phyla.

Course: ZOL-106-Genetics

After successfully completing this course, students will be able to:

CO1: The students will understand the basic terms in genetics and heredity

CO2: The students will understand the classical and modern concept of gene, muton, recon and mendal law of inheritance.

Course: ZOL- 107 Practical based on ZOL-105and ZOL-106:

After successfully completing this course, students will be able to:

CO1: Identify and study various animals based on morphological features from the Phylum Protochordata to Mammal

CO2: Detect human blood group.

CO3: Gain the knowledge about normal human karotype

CO4: The student will learn about down syndrome, Turner syndrome and Klinefelters Syndrome

CO5: Study the gene frequency and mutants of man

Course Outcomes (COs)

B. Sc. (Zoology) Second Year B.Sc.

Semester-III

Course ZOL- 311: Developmental Biology

After successfully completing this course, students will be able to:

CO1: The students will understand the basic concept in development biology.

CO2: Explain model organism for developmental studies.

CO3: Explain the concept of gametogenesis, fertilization and cleavage

CO4: Understand the concept of chick and mammal embryology.

Course ZOL-312: Ecology

After successfully completing this course, students will be able to:

CO1: Demonstrate knowledge of biotic and abiotic interaction

CO2: Express understanding of environmental issues, and inter-relation between different components of an ecosystem

CO3: Ability to elaborate about distribution and abundance of organism.

CO4: Apply different experimental techniques to study any ecosystem or its components.

CO5: Describe the relation between structures and function species environment.

Course ZOL- 321: Practical paper based on ZOL-311 on Development Biology:

After successfully completing this course, students will be able to:

CO1: Understand the whole mount of different types of sperm..

CO2: Understand the egg and cleavage pattern

CO3: Understand the different stages of frog development

CO4: Understand the the type of placenta.

CO5: Understand the whole mount of Chick embryo

CO6: Slide preparation of Chick embryo

Course ZOL- 322- Practical paper based on ZOL-312 on Ecology

After successfully completing this course, students will be able to:

CO1: Understand the dissolved oxygen, alkalinity, salinity and chlorinity of water sample

CO2: Learn the population density by quadrat method.

CO3: Study of microscope fauna of freshwater ecosystem (from Ponds)

CO4: Preparation of permanent slide of, Spirogyra, Verticella, Oedogonium, Daphnia, Cyclop and Mysis

Skill Enhancement Course

ZOL-313 SEC-1 (A): Haematology

After successfully completing this course, students will be able to:

CO1: Ability to Explain Composition and Function of blood.

CO2: Knowledge about compound used in processing and storage of blood.

ZOL-313 SEC-1 (B): Urinology

After successfully completing this course, students will be able to:

CO1: Ability to describe function of human urinary system.

CO2: Skill to collect, preserves, process and store urine sample.

Semester-IV

Course ZOL- 411: Biochemistry and Endocrinology

After successfully completing this course, students will be able to:

CO1: The student will understand the fundamental process of biochemical process and their application.

CO2: The students will understands the Structure and function of endocrine system.

Course ZOL- 412: Evolution

After successfully completing this course, students will be able to:

CO1: Understand the theory and concept of evolution.

CO2: Learn the process of evolution.

CO3: Understand the patterns of evolutionary changes in animals.

CO4: Understand the organization and function of genetic material in the living world.

CO5: Understand to the recombinant technology.

Course ZOL- 421: Practical paper based on ZOL-411 on Biochemistry and endocrinology:

After successfully completing this course, students will be able to:

CO1: Prepare the solution of given percentage, normality and morality.

CO2: Learn the analytical instrument principle and application.

CO3: Study the qualitative test for organic compound,

CO4: Gain the knowledge about histological slides and endocrine gland

Course ZOL- 422: Practical paper based on ZOL-412 on Evolution

After successfully completing this course, students will be able to:

CO1: Study the evidences by using photograph/ charts and models.

CO2: Understand the Adaptation (Museum Specimen)

CO3: Understand the Patterns of speciation with the help of charts/ models /pictures.

CO4: Understand the successive stages of evolution of horse and man with help of charts/ models.

Skill Enhancement Course

ZOL-413 SEC-2 (C): Micro technique

After successfully completing this course, students will be able to:

CO1: To identify different types of tissue and distinguish between different components of cells. Handle and catalogue slides of different tissue

CO2: To acquire the skill related to different process in micro technique

ZOL-413 SEC-2 (D): Apiculture

After successfully completing this course, students will be able to:

CO1: Ability to correctly explain and perform bee rearing, framing and harvesting practices.

CO2: Appreciate the economic importance of derivative benefits.

Course Outcomes (COs)

B. Sc. (Zoology) Third Year B.Sc.

Semester-V

Course ZOL- 501: Ecology

After successfully completing this course, students will be able to:

CO1: The Student will develop an appreciation of the modern scope of scientific inquiry in the field of Ecology.

CO2: Become familiar with the variety of ways that organisms interact with both the

physical and the biological environment.

CO3: The Student will develop an understanding of the differences in the structure and function of different types of ecosystems.

Course ZOL- 502: Fishery Sciences-I

After successfully completing this course, students will be able to:

CO1: The Student will obtain knowledge of fishery science, with a particular emphasis on the biology, assessment, and management of fish and invertebrate fisheries.

CO2: Gain the knowledge about remote sensing technique in pelagic fisheries

Course ZOL- 503: Practical paper based on ZOL-501 on Ecology

After successfully completing this course, students will be able to:

CO1: Understand the productivity of pond ecosystem using white and dark bottle methods.

CO2: Determine the soil parameters.

CO3: Understand the dissolved oxygen, carbon dioxide, salinity and chlorinity of water sample

CO4: Understand the animal association ship with example

CO5: Estimate the population density.

CO6: Preparation of permanent slide of, Spirogyra, Verticella, Oedogonium, Daphnia, Cyclop, Mysis, Cypris and keretella.

Course ZOL- 504: Practical paper based on ZOL-502 on Fishery Sciences-I

After successfully completing this course, students will be able to:

CO1: Understand the freshwater fishes

CO2: Gain the knowledge about brackish water fishes.

CO3: Gain the knowledge about marine water fishes.

Semester-VI

Course ZOL- 601: Evolution

After successfully completing this course, students will be able to:

CO1: The Student will gain the knowledge about evolution

CO2: Understand the theory evolution.

CO3: Learn the process of evolution.

CO4: Understand the patterns of evolutionary changes in animals.

CO5: Learn about Fossils

Course ZOL- 602: Fishery Sciences-II

After successfully completing this course, students will be able to:

CO1: The Student will gain the knowledge about fish culture

CO2: learn about fish diseases.

CO3: Students will be made fully skilled with respect to aquaculture, fisheries management, formulating policies and making crucial developments in fisheries sector/
fishing community

Course ZOL- 603: Practical paper based on ZOL-601 on Evolution

After successfully completing this course, students will be able to:

CO1: Learn the embryological evidences of evolution

CO2: Understand the adaptive modification in feet of bird and mouth part of insects.

CO3: Understand the successive stages of evolution of horse and man with help of charts/ models.

CO4: Gain the Knowledge about homologous and analogous organs

CO5: Understand the natural selection using E.Coli bacteria against antibiotics.

Course ZOL- 604: Practical paper based on ZOL-602 on Fishery Sciences- II

After successfully completing this course, students will be able to:

CO1: Learn the Primary productivity of ponds

CO2: Identification, classification and culturalable significance of catla, rohu, mrigal, catfishes and exotic canoj

CO3: Learn the collection and identification of fish parasite and worms.

CO4: Understand the identification of craft and gears. .



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DEPARTMENT OF BOTANY PROGRAMME OUTCOMES

(AS per CBCGS Pattern)

PO1 Demonstrate and apply the fundamental knowledge of the basic principles of major fields of biology

PO2 Apply knowledge for conservation of endemic and endangered plant species

Programme specific outcomes

PO3 Apply knowledge to solve the issues related to plant sciences with the help of computer technology

Programme specific outcomes:

PSO1 collaborate effectively on team-oriented projects in the field of life sciences.

PSO2 apply Biotechnology, Ecology, Genetics and Plant breeding techniques in plant sciences

PSO3 explain Biodiversity, climate change and plant pathology.

PSO4 apply knowledge of Medicinal and Economic botany in day to day life.

PSO5 apply the knowledge to develop the sustainable and eco-friendly technology in Industrial Botany.

PSO6 communicate scientific information in a clear and concise manner both orally and in writing.



HEAD, Dept. of Botany

Semester	Course Title	Sr. No.	Course Outcomes(COs)
SEMESTER – I	Diversity of Cryptogms-I	CO1	Understand the nature and role of Microorganisms like Bacteria & Viruses their uses directly and indirectly
		CO2	Explain Structure, Organization, Physiology, Reproduction & Economic importance of aquatic, autotrophic forms – Algae
		CO3	Explain about non chlorophyllous, heterotrophic forms – Fungi.
		CO4	Devise short write ups about microbial diversity using additional OE resources available in the internet using modern ICT tools.
		CO5	Discuss Microorganisms, their control and their right use.
	Morphology of Angiosperms	CO1	Explain various external features of the plant including the root system, stems, leaves, flowers, fruits and seeds and its modifications.
		CO2	Understand the importance of plant morphology in allied branches of botany
		CO3	Understand the morphological differences in dicot and monocot and their classification.
		CO4	Discuss flower of an angiosperm consistsof four types of floral parts namely calyx, corolla, androecium and gynoecium and its modifications.
	Practical based onPaper - I & I	CO1	Handle carefully microorganisms, Algae& Fungi in the practical lab.
		CO2	Observation of specimens & slides
		CO3	Explain about preparation of bio fertilizers

SEMESTER – II	Diversity of Cryptogams - II	CO1	Explain about Bryophytes in which the plant body contains Thalloid or leafy structures
		CO2	Describe the highest group of vascular cryptogams & 1st land Plants (Pteridophytes)
	Histology, Anatomy and Embryology	CO1	Explain the size and shape of the cells, the texture of the tissue, and the form of the organs.
		CO2	Describe various tissue systems in plants like epidermal, mechanical and vascular
		CO3	Students study the role of anatomy in other allied branches of botan
		CO4	Discuss on Plant cell structure.
		CO5	Understand the reproduction of plants, Haploid male and female gametes, fertilization of Zygote and embryo formation, embryo development and endosperm.
	Practical based on Paper – IV & V	CO1	Recognize Bryophytes –slides, sections and mounts.
		CO2	Identify Pteridophytes –slides, sections and mounts.
		CO3	Observe various Embryology slides.
SEMESTER – III	Taxonomy of Angiosperms	CO1	Outline the concepts of Taxonomy with Identification, Nomenclature and various classification of plants using additional OE resources available in the internet using modern ICT tools.
		CO2	Students learn Plant collection, preservation techniques and can identify plant in field
		CO3	Study on Herbarium and Botanical Gardens
	Plant Ecology	CO1	Explain various Ecosystems & relationships between Organisms and environment.

		CO2	Elaborate plant population and community Ecology
		CO3	Describe the Various Eco systems and Plant distribution.
		CO4	Identify Phyto geographical Regions of India, Plant Biodiversity and its importance using additional OE resources available in the internet using modern ICT tools.
		CO5	Discuss Phytogeography, the major plant communities of the world and different Vegetational belts of the earth with characteristic climatic Conditions of the area.
	Practical based on Paper - VII	CO1	Understand the Bentham and Hooker's and other System of Classification.
		CO2	Describe technical description of various plants
	Practical based on Paper - VIII	CO1	Understand the Ecosystem: Types, structure and functions of ecosystem (pond ecosystem). Determine minimal quadrat size and understand herbaceous vegetation in the college campus by species area curvemethod
		CO2	Identify the hotspots, phyto geographical regions and distribution of endemic plants in the map of India.
		CO3	Understand Plant succession-Hydrosere and Xerosere
		CO4	Discuss productivity of ecosystem-Primary, Secondary and Net productivity
SEMESTER – IV	Gymnosperms and Utilization of plants	CO1	Discuss the naked seed producing plants (naked seeded Plants of flowering plants) Gymnosperms
		CO2	Outline about a group of higher cryptograms and gymnosperms using additional OE resources

			available in the internet using modern ICT tools.
Plant Physiology	CO1	Understand Plant physiology, a sub discipline of Botany concerned with functional aspects of plants	
	CO2	Demonstrate processes imbibition, Osmosis, Diffusion and Plasmolysis.	
	CO3	Remember all internal metabolic activities of plants.	
	CO4	Understand Photosynthesis & Respiration process.	
	CO5	Describe Plant growth regulators and their types.	
	CO6	Explain the growth and development of plants using additional OE resources available in the internet using modern ICT tools.	
Practical based on Paper - XI	CO1	Understand Gymnosperms –slides, sections, and mounts.	
	CO2	Observe and identify internal structures of plants.	
Practical based on Paper - XII	CO1	Discuss the effect of kind of light intensity, bicarbonate concentration in photosynthesis on oxygen evolution (Hydrilla funnel).	
	CO2	Determine osmotic potential of vacuolar sap by plasmolytic method using leaves of Rhoeo / Tradescantia.	
	CO3	Separate of chloroplast pigments using paper chromatography	
	CO4	Rate of photosynthesis under varying CO ₂ concentration.	
	CO5	Understand the transport phenomenon of water and Transpiration	

SEMESTER – V	Cell Biology and Molecular Biology	CO1	Realize the cell as a structural and functional unit of life, basic components of a cell & explain basic principles.	
		CO2	Discuss the structure of plant cell and Plasma membrane and cell cycle in plants	
		CO3	Explain the scope and importance of molecular biology	
		CO4	Describe the structure of DNA, Packing of DNA and types of DNA, RNA.	
		CO5	Explain the DNA replication process, enzymes involved in that process.	
		CO6	Understand the basic components of cell, key role of cell division during cell cycle	
	Diversity of Angiosperms - I	CO1	Create awareness about the plants & their Biodiversity.	
		CO2	Explain about the rare, endangered, endemic species and their biodiversity.	
		CO3	Discuss about the family's with local examples.	
	Practical based on Paper - XV	CO1	Understand the plant cell structure through microphotographs.	
		CO2	Understand the structure of cell organelles through photomicrographs.	
	Practical based on Paper – XVI(A)	CO1	Understand plant diversity (flowering plants) and Maceration, wood (Tracheary elements, fibres).	
		CO2	Explain exotic species- Identification and morphological characteristics.	
		CO3	Knowledgeable through visits to the local ecosystem for Herbarium collection.	
	SEMESTER – VI	Genetics and Biotechnology	CO1	Explain about inheritance and behaviour of chromosomes using additional OE resources available in the internet using modern ICT tools.

		CO2	Describe Plant Breeding and produce new crop varieties superior to existing types in all.
Diversity of Angiosperms - II		CO1	Discus about the family's with local examples.
		CO2	Realize ecological importance of plants and describe the role of plants in relation to Human Welfare.
Practical based on Paper - XIX		CO1	Describe the various stages of mitosis using cytological preparation of
		CO2	Onion root tips. Understand DNA packing by micrographs
		CO3	Solving numerical problems using Mendel's Laws of inheritance
		CO4	Explain Hybridization techniques – emasculation, bagging (for demonstration only).
Practical based on Paper – XX(A)		CO1	Explain exotic species- Identification and morphological characteristics.
		CO2	Realize ecological importance of plants and describe the role of plants in relation to Human Welfare.
		CO3	Knowledgeable through visits to the local ecosystem for Herbarium collection.


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