1.3.2 Syllabus of Courses including experiential learning through Project work/Field Work/Internship during the year 2021-2022

[Courses Offered by Institute]

Sr. No.	Name of Department	Program name	Program code	Name of the Course that include experiential learning through project work/field work/internship	Course code	Year of offering
1.	English	B.A English	BA-01	SYBA A Certificate Course in Skill Development	SEC-2A	2020-2021
2.	English	B.A English	BA-01	TYBA. Functional English	36852	2021-2022
3.	Marathi	B.A Marathi	BA-02	TYBA मध्ययुगीन मराठी वाङ्मयाचा स्थूल इतिहास प्रारंभ ते इ.स. १६००	[DSE 1 D (3+1)]	2021-2022
4.	Marathi	B.A Marathi	BA-02	TYBA मध्ययुगीन मराठी वाङ्मयाचा स्थूल इतिहास इ.स. १६०० ते इ.स. १८१७	[DSE1C(3+1)]	2021-2022
5.	Marathi	B.A Marathi	BA-02	TYBA वर्णनात्मक भाषाविज्ञान भाग १	[DSE2C (3)+1]	2021-2022
6.	Marathi	B.A Marathi	BA-02	TYBA वर्णनात्मक भाषाविज्ञान भाग २	[DSE 2 D (3) +1]	2021-2022
7.	Hindi	B.A Hindi	BA-03	TYBA हिंदी साहित्य का इतिहास (आदिकाल भक्तिकाल रीतिकाल का सामान्य परिचय)	Discipline Specific Elective DSE 1 C (S3)	2021-2022
8.	Hindi	B.A Hindi	BA-03	TYBA हिंदी साहित्य का इतिहास (आधुनिक काल सामान्य परिचय)	Discipline Specific Elective DSE 1 D (S3)	2021-2022

9.	Hindi	B.A Hindi	BA-03	TYBA (भाषाविज्ञान सामान्य परिचय)	Discipline Specific Elective DSE 2C (S4)	2021-2022
10.	Hindi	B.A Hindi	BA-03	TYBA हिंदी भाषा और उसका विकास	Discipline Specific Elective DSE 2 D (S4)	2021-2022
11.	History	B.A History	BA -04	TYBA Applied History	Discipline Specific Elective Courses (DSE-3C)	2021-2022
12.	Geography	B.A Geography	BA -05	SYBA IV DSE 2 B Practical Geography – II (Cartographic Techniques, Surveying and Excursion / Village / Project Report)	Gg: 201(B) DSE 2 B	2020-2021
13.	Geography	B.A Geography	BA -05	TYBA Practical Geography – II (Techniques of Spatial Analysis, Surveying and Excursion / Village / Project Report	Gg: 301(B) VI DSE 2D	2021-2022
14.	Geography	M.A/M.Sc. Geography	M.A/M.Sc. - 04	Practical in Physical and Human Geography	GGUP115	2019-2020
15.	Geography	M.A/M.Sc. Geography	M.A/M.Sc. - 04	Practical of Statistical Techniques for Geography	GGUP -134	2019-2020
16.	Geography	M.A/M.Sc. Geography	M.A/M.Sc. - 04	Practical in Economic Geography	GGUP247	2020-2021
17.	Geography	M.A/M.Sc. Geography	M.A/M.Sc. - 04	Dissertation / Research Project	GGUP258	2020-2021
18.	Economics	B.A Economics	BA-06	TYBA Business Management-II (Project Report)	SEC 3A	2021-2022
19.	Commerce	B. Com	B. Com-01	TYBA Banking & Finance Spl. –II and III	366(B)	2021-2022
20.	Commerce	M.Com Banking and Finance	M.Com-01	Project Work	416	2021-2022
21.	BBA CA	BBA CA	BBA CA 01	SYBBA CA Project	CA 405	2020-21
22.	BBA CA	BBA CA	BBA CA 01	TYBBA CA Software Project	CA – 505	2021-2022
23.	BBA CA	BBA CA	BBA CA 01	TYBBA CA Software Project	CA - 605	2021-2022
24.	Physics	BSc Physics	BSc - 01	Project-I	PHY-359	2021-2022

25.	Physics	BSc Physics	BSc - 01	Project-II	PHY-369	2021-2022
26.	Physics	MSc Physics	MSc -01	Project	PHCP-245	2022
27.	Chemistry	B.Sc Chemistry	BSc-02	S Y B Sc Practical Chemistry-III	CH- 303	2020-2021
28.	Chemistry	MSc Organic Chemistry	MSc - 02	Practical-III	CBOP-5, CHO-453	2021-2022
29.	Botany	BSc Botany	BSc - 03	Practical	BO 357, BO 358	2021-2022
30.	Botany	MSc Botany	MSc -04	Practical Paper	BODP 114,BOUP 115,BODP 124	2020-2021
31.	Botany	MSc	MSc – Bot - 02	Practical Paper	BODP 234 BOUP244 BOUP 245	2021-2022
32.	Zoology	BSc Zoology	BSc -04	Project	ZO-3611	2021-22
33.	Computer Science	BSc Computer Science	BSc -06	Project	CS3611	2021-22
34.	Computer Science	MSc. Computer Science	MSc -06	Project	CSDT124A	2020-2021
35.	Computer Science	MSc. Computer Science	MSc -06	Project	CSUIT241	2021-22
36.	B Voc	B.Voc. RETM	BVOC -02	FYBVOC RE Practical –IV (On Job Training)	REP 2-5	2018-2019
37.	B Voc	B.Voc. RETM	BVOC -02	SYBVOC RE Practical – VI (On Job Training)	REP-3-5	2021-2022
38.	B Voc	B.Voc. RETM	BVOC -02	SYBVOC RE Practical – VIII (On Job Training)	REP-4-5	2021-2022
39.	B Voc	B.Voc. RETM	BVOC -02	TYBVOC RE Practical- X (On Job Training)	REP-5-5	2021-2022
40.	B Voc	B.Voc. RETM	BVOC -02	TYBVOC RE Practical – XII (On Job Training)	REP-6-5	2021-2022

Faculty of Arts

Course No.: 1
Department: English
Implemented from: 2020-21
Detailed Syllabus:
Title: "A Certificate Course in Skill Development"

[Credits-2]

Skill Enhancement Course-(SEC-2A) (S.Y.B.A)

(w.e.f-2020- 2021)

"A Certificate Course in Skill Development"

[Two Credit Course (2x15=30 Hours)]

Objectives:

1. Enhancing the skill of using English for everyday communication
2. To acquaint the students with the verbal and nonverbal communication
3. To create opportunities to access exposure of speaking in various contexts
4. To acquaint and familiarize the students with soft skills
5. To develop interest among the students to interact in English

SEMESTER-III

Course contentA) Introducing Yourself and Others

B) Joining and Leaving Conversation

C) Accepting/Declining Invitations

D) Asking/Giving/Refusing Permission

E) Digital Literacy

F) Project Management

SEMESTER-IV Course content:

A) Asking/Giving/Refusing Information

B) Agreeing/Partial Agreeing/Disagreeing

C) Complaining

D) Apologizing

E) Vocabulary Building

F) Delivering a Speec

Course No.:2
Department: English
Implemented from: 2020-21
Detailed Syllabus:
Title: Functional English (Course Code – 36852)
[Credits-3+1=4]

Syllabus of Course

"Functional English"

Semester VI 3+1 = One credit is for **Interview of an Entrepreneur, Field (SME/Start-up/Service Industry) Visit and Report,** or **any other Subject-centric activities** to be undertaken by the students in consultation with the teacher concerned. The teachers concerned have to evaluate and maintain the record of these activities.

OBJECTIVES:

1. Encouraging students to motivate about the possibility of self-employment through entrepreneurship
2. Providing them with basic sources of information regarding Small and Medium Enterprises (SMEs)
3. Introducing students to the idea and aspects of Start-ups and government schemes to promote Start-ups
4. Introducing Students to the opportunities in Service Industry Sector
5. Promoting the idea of self-employment through field work, study reports and interviews

5.Leading students to overall development of personality through key competency modules

6. Initiating students into research through project report
7. Creating a possibility of focused writing in the field of their interest

Expected Outcomes:

1. Students will able to identify the traits of an entrepreneur
2. They should become aware about the scope, challenges and opportunities in entrepreneurship
3. They will be aware about the basics required for setting up a start-up/ small or medium enterprise
4. They will be able to explore the opportunities in Service Industry Sector
5. They will be proficient in oral and written modes of expression

1.

Semester VI
Course Content

48 (38+ 10 for Project Report Guidance)

A

I. Voice Culture, Voice Modulation: breath- control, sharpness, and volume of voice, pitch variation, pronunciation and intonation The above will be tested in the external practical exam for 5 marks from the overall performance. 4

II. Preparing News Bulletin for Radio/TV containing international, national, regional, local and sports news, weather news, all types of news This bulletin will be prepared by students themselves and will not be downloaded Students will work on it for the term and keep it ready before final practical exam for reading. A copy of the same will be submitted to the dept beforehand. (The students may be encouraged transcribe their script phonemically) 10

III. Speech of about 5to 7 minutes on a given topic. Students will be encouraged to hear

public speeches and write analysis of the same in their journal from the point of view of language, organization of thought, expressions of ideas and emotions, information, use of illustrations, quotations, body language, effectiveness etc. They may be given a list of topics for practice as well as to write the outline plan of the speech they will make. 10

IV. Talking in a group- a 'free-talk' activity to test spontaneity, naturalness, vocabulary, initiation, cooperation, consistency in expressing opinion etc 12

B

Project Report or exercises in creative performance in any one area of language use studied in FE Syllabi 10

Suggestions for Teaching

1) Extensive use of newspapers, radio and TV in the classroom is necessary

2) Teacher,with the help of the Head and Coordinator will plan the field and other activities beforehand and will prepareacademic calendar

3) Students will be encouraged to spend more time with the department for fruitful activity

4) Guest lectures may be arranged from time to time

5) There will be insistence on students attending public speeches/ internet may be used for the same in absence of public functions

6) For project students must be able to use all the 4 language skills

7) As an option to project they may be encouraged to do exercise in any one area of language use studied in SY/TYFE syllabi; for example a student interested in newspaper may write articles, features, news of different types, letters to editors to show his/her proficiency in using language comfortably in that particular area.

He may be encouraged to write several different headlines for the same news to show his creativity or a student interested in trying his/her language skills in the field of advertising may write copy of ads of different types (eg. Domestic, cosmetics, health drinks, social cause) for different media. The respective dept/college may give a certificate for such a student showing proficiency of language skills required for a particular vocation

Evaluation Pattern 30:70

Internal Evaluation: TV/Radio News reading/Preparing: 20 Marks

Assignment/ Participation in visits/activities Activity Report/ Industry Visit Report : 10 Marks (A teacher may select any one of the above for assessment)

Pattern for Semester Examination: (Practical) 70 marks

A:

Q1 Reading news for TV/Radio – the students will present the News bulletin they have prepared as term work 10

Q2 Speech on the given topic for approximately 7 minutes 10

B:

Viva on Project Report 50

Course No.: 3
Department: Marathi
Implemented from: 2021-2022
Detailed Syllabus:
Title: मध्ययुगीन मराठी वाङ्मयाचा स्थूल इतिहास प्रारंभ ते इ.स. १६०० (Course Code – DSE 1 C (3+1))
[Credits-3]

Syllabus of Course

"मध्ययुगीन मराठी वाङ्मयाचा स्थूल इतिहास प्रारंभ ते इ.स. १६००"

अभ्यासक्रमाची उद्दिष्टे :

१ इतिहास संकल्पना, स्वरूप, प्रेरणा प्रवृत्ती समजून घेणे.

२ मध्ययुगीन कालखंडाची सामाजिक, सांस्कृतिक पार्श्वभूमी समजूनघेणे.

३. मराठी भाषा, साहित्याची कालखंडानुरूप इतिहास समजून घेणे.

घटक १

वाङ्मयेतिहास संकल्पना आणि मराठी भाषा, वाङ्मयाचा उगम **श्रेयांक १** **तासिका १५**

१. वाङ्मयेतिहास: संकल्पना आणि स्वरूप

२. मराठी वाङ्मयेतिहासाचे कालखंड : स्वरूप चर्चा

मराठी भाषा व वाङ्मयाचा उगम (कोरीव लेख आणि ग्रंथ या साधनांच्या आधारे)

यादव काळ आणि बहामनी काळातील वाङ्मयनिर्मिती

१ या कालखंडांची सामाजिक आणि सांस्कृतिक पार्श्वभूमी

२ महानुभाव वाङ्मय प्रेरणा, प्रवृत्ती व स्वरूप

घटक २ **श्रेयांक १** **तासिका १५**

३ महानुभाव वाङ्मय

गद्य ग्रंथ लीळाचरित्र, स्मृतिस्थळ, दृष्टांतपाठ.

पद्य ग्रंथ महदंबेचे धवळे, साती ग्रंथ.

१. वारकरी वाक्य प्रेरणा, प्रवृत्ती व स्वरूप

(संत ज्ञानेश्वर, संत नामदेव, संतमेळा, संत एकनाथ, शेख महंमद)

घटक ३ **श्रेयांक १** **तासिका १५**

१. मुकुंदराज, नृसिंहसरस्वती, दासोपंत, फादर स्टीफन्स, ब्रह्मगुणदास : वाङ्मयनिर्मितीचे स्वरूप

संशोधनपर प्रकल्प / क्षेत्र कार्य (घटक १, २ आणि ३)

Course No.: 4
Department: Marathi
Implemented from: 2021-2022
Detailed Syllabus:

Title: मध्ययुगीन मराठी वाङ्मयाचा स्थूल इतिहास इ.स. १६०० ते इ.स. १८१७ (Course Code – DSEID (3+1))

[Credits-3]

Syllabus of Course

"मध्ययुगीन मराठी वाङ्मयाचा स्थूल इतिहास इ.स. १६०० ते इ.स. १८१७"

घटक १ **श्रेयांक १** **तासिका १५**

शिवकाल आणि पेशवेकाळातील वाङ्मयनिर्मिती

१. या कालखंडांची सामाजिक आणि सांस्कृतिक पार्श्वभूमी

२. संत तुकाराम वाङ्मयनिर्मितीचे स्वरूप

३. संत रामदास वाक्यनिर्मितीचे स्वरूप

घटक २ **श्रेयांक १** **तासिका १५**

पंडित आणि शाहिरांची निर्मिती

१. पंडिती वाङ्मय स्वरूप, प्रेरणा प्रवृत्ती आणि वैशिष्ट्ये मुक्तेश्वर, वामनपंडित, रघुनाथपंडित, मोरोपंत

२. शाहिरी वाङ्मय : स्वरूप, प्रेरणा, प्रवृत्ती आणि वैशिष्ट्ये अनंत फंदी, परशराम, राम जोशी, प्रभाकर, होनाजी बाळा

घटक ३ **श्रेयांक १** **तासिका १५**

बखर आणि गद्य वाङ्मयनिर्मिती

१. बखर वाङ्मय : स्वरूप, प्रेरणा, प्रवृत्ती आणि वैशिष्ट्ये सभासदाची बखर, शिवछत्रपतींचे सप्तप्रकरणात्मक चरित्र, शिवदिग्विजय, पानिपतची बखर, भाऊसाहेबांची बखर

२. आज्ञापत्र

३. संशोधनपर प्रकल्प / क्षेत्र कार्य (घटक १, २ आणि ३)

संदर्भ ग्रंथ :

१. महाराष्ट्र सारस्वत, वि. ल. भावे

२. मराठी भाषेचा व वाक्याचा इतिहास, बा. अ. भिडे ३. मराठी वाक्याचा इतिहास, खंड पहिला, ल. रा. पांगारकर

४. प्राचीन मराठी वाक्याचा इतिहास, भाग १, पूर्वार्ध आणि उत्तरार्ध अ. ना. देशपांडे

५. महाराष्ट्रीयांचे काव्यपरीक्षण, श्री. व्यं. केतकर

६. मराठी वाक्याभिरुचीचे विहंगमावलोकन, जोग रा. श्री.

७.पाच भक्तीसंप्रदाय, र. रा. गोसावी

८. महाराष्ट्रातील पाच संप्रदाय, पं. रा. मोकाशी

९. नाथ संप्रदाय उदय व विकास, प्र. न. जोशी

१०. मराठी साहित्याचे आदिबंध, उषा मा, देशमुख

Course No.:5

Department: Marathi

Implemented from: 2021-2022

Detailed Syllabus:

Title: वर्णनात्मक भाषाविज्ञान भाग १ (Course Code – DSE 2 C (3) +1)

[Credits-3]

Syllabus of Course

"वर्णनात्मक भाषाविज्ञान भाग १"

अभ्यासक्रमाची उद्दिष्टे :

१. भाषा स्वरूप, वैशिष्ट्ये व कार्ये समजावून घेणे.

२ भाषा अभ्यासाची आवश्यकता स्पष्ट करणे.

३ भाषा अभ्यासाच्या शाखा आणि विविध पद्धतींचा थोडक्यात परिचय करून घेणे.

४ वागिन्द्रियाची रचना, कार्य आणि स्वननिर्मितीची प्रक्रिया समजावून घेणे.

५ स्वनविज्ञान, स्वनिमविचार आणि मराठीची स्वनिमव्यवस्था समजावून घेणे.

घटक १ **श्रेयांक १** **तासिका १५**

भाषा : स्वरूप व संकल्पना

१ भाषा: स्वरूप, वैशिष्ट्ये व कार्ये

२ संदेशन मानव व मानवेतर संदेशन

३ भाषाभ्यासाच्या शाखा (ध्वनिविचार व्याकरणविचार अर्थविचार शब्दसंग्रह स्थूल परिचय)

४ भाषेच्या अभ्यासाचे महत्त्व व भाषाभ्यासाच्या पद्धती (ऐतिहासिक, वर्णनात्मक, सामाजिक तुलनात्मक स्थल परिचय)

स्वनविचार

१ स्वनविज्ञान स्वरूप व संकल्पना (उच्चारणकेंद्री संचारणकेंद्री – श्रवणकेंद्री)

२ वागिन्द्रीय : रचना व कार्य स्वनांची निर्मितिप्रक्रिया

३ स्वनांचे वर्गीकरण व वर्गीकरणाची तत्त्वे(उच्चारण स्थान, उच्चारण अवयव, प्रयत्न)

स्वनिमविचार

१ स्वन स्वनिम स्वनांतर (परस्पर संबंध व प्रकार)

२ स्वनिमनिश्चितीची तत्त्वे

३. विनियोग संकल्पना (व्यवच्छेदक विनियोग- पूरक विनियोग मुक्त परिवर्तन)

मराठीची स्वनिमव्यवस्था (स्वरस्वनिम अर्धस्वरस्वनिम व्यंजन स्वनिम - - खंडित व खंडाधिष्ठीत स्वनिम बलाघात, सुरावली नासिक्यरंजन - सीमासंधी)

४. संशोधनपर प्रकल्प / क्षेत्रकार्य (घटक १, २ आणि ३)

Course No.: 6
Department: Marathi
Implemented from: 2021-2022
Detailed Syllabus:
Title: वर्णनात्मक भाषाविज्ञान भाग २ (Course Code – DSE 2 D (3) +1)

[Credits-3]

Syllabus of Course
"वर्णनात्मक भाषाविज्ञान भाग २"

अभ्यासक्रमाची उद्दिष्टे :

१. रूपविन्यास आणि मराठीची रूपव्यवस्था समजावून घेणे.

२. वाक्यविन्यास आणि वाक्यव्यवस्थेचा मराठी भाषेच्यासंदर्भात परिचय करून देणे

३. अर्थविन्यास या संकल्पनेचा भाषावैज्ञानिक अंगाने परिचय करून देणे

घटक १ **श्रेयांक १** **तासिका १५**

रुपिमविचार

१ रूपविन्यास (संकल्पना)

२ रूपिका- रुपिम रुपिकांतर स्वरूप व प्रकार

३ रूपिम निश्चितीची तत्त्वे

४ विनियोग संकल्पना

५ प्रकृती आणि प्रत्यय यांचे वर्गीकरण

घटक २ **श्रेयांक १** **तासिका १५**

वाक्यविचार

1 वाक्यरचना संकल्पना परिचय)

२ घटक आणि रचना परस्पर संबंध

३ वाक्याचे घटक (उद्देश्य विधेय)

4 प्रथमोस्थित संघटक संकल्पना व वाक्यविश्लेषण (शब्द – शब्दबंध- उपवाक्य – वाक्य)

५ वाक्यांचे प्रकार

घटक ३ **श्रेयांक १** **तासिका १५**

अर्थविचार

१ अर्थ: स्वरूप व संकल्पना

२ अर्थविन्यास (संकल्पना परिचय)

३ अर्थाचे वर्गीकरण (प्रकार: सांकल्पनिक अर्थ - साहचर्यपर अर्थ- शैलीगत
अर्थ- भावपर अर्थ- परावर्तीत अर्थ - विषय अर्थ)

४ अर्थविन्यासाची व्यापकता (समानार्थी शब्द, अनेकार्थी शब्द अर्थसमावेश अर्थविरोध)

संशोधनपर प्रकल्प / क्षेत्रकार्य (घटक १, २ आणि ३)

संदर्भ ग्रंथ :

१. वैखरी, अशोक केळकर
२. भाषाविज्ञान : वर्णनात्मक आणि ऐतिहासिक, मिलिंद मालशे, लोकवाड.मय प्रकाशन, मुंबई.
३. मराठीचा भाषिक अभ्यास, मु. श्री. कानडे
४. वर्णनात्मक भाषाविज्ञान : स्वरूप आणि पद्धती, संपा. कल्याण काळे, डॉ. सोमण
५. आधुनिक भाषाविज्ञान, संपा. कल्याण काळे
६. अभिनव भाषाविज्ञान, डॉ. गं.ना. जोगळेकर
७. वर्णनात्मक भाषाविज्ञान, डॉ. लीला गोविलकर
८. भाषाशास्त्रविचार, डॉ. र. बा. मंचरकर ध्वनिविचार, ना. गो. कालेलकर, डॉ. प्रभाकर जोशी
९. सुलभ भाषाविज्ञान, दत्तात्रय पुंडे
१० .भाषाविज्ञान परिचय, स.गं. मालशे
११. सुबोध भाषाविज्ञान, प्र. न. जोशी
१२. आधुनिक भाषाविज्ञान : सिद्धांत, उपयोजन, मिलिंद मालशे
१३. आधुनिक भाषाविज्ञान, डॉ. मिलिंद सं. मालशे
१४. भाषाशास्त्र प्रदीप, संपा. स. गं. मालशे, द. दि. पुंडे, अंजली सोमण
१५. भाषा आणि भाषाविज्ञान, रमेश धोंगडे

Course No.: 7
Department: Hindi
Implemented from: 2021-2022
Detailed Syllabus:
Title: हिंदी साहित्य का इतिहास (आदिकाल भक्तिकाल रीतिकाल का सामान्य परिचय) (Course Code – DSE 1 C (S3))

[Credits-4]

Syllabus of Course

"हिंदी साहित्य का इतिहास (आदिकाल भक्तिकाल रीतिकाल का सामान्य परिचय)"

उद्देश्य

1.हिंदी साहित्येतिहास लेखन का परिचय देना

2. हिंदी साहित्येतिहास के कालविभाजन तथा नामकरण का परिचय देना ।

3. आदिकालीन भक्तिकालीन , रीतिकालीन प्रमुख साहित्यिक प्रवृत्तियों रचनाकारों और रचनाओं से परिचित कराना ।

इकाई	पाठ्यविषय -	तासिकाएँ
I	हिंदी साहित्य का कालविभाजन और नामकरण आदिकाल की पृष्ठभूमि , रासो साहित्य पृथ्वीराज रासो और कवि चंदबरदायी का परिचय सिद्ध और नाथ साहित्य गोरखनाथ का साहित्यिक परिचय । अमीर खुसरो की हिंदी कविता आदिकालीन साहित्य की विशेषताएँ ।	15
II	भक्तिकाल के उदय के सामाजिक , सांस्कृतिक कारण । भक्ति आंदोलन का महत्व पृष्ठभूमि निर्गुण काव्य संत काव्य की विशेषताएँ संत कबीर का सामान्य परिचय सूफी काव्य की विशेषताएँ ।कवि जायसी का सामान्य परिचय । सगुण काव्य राम काव्य की विशेषताएँ कवि तुलसीदास का सामान्य परिचय | कृष्ण काव्य की विशेषताएँ, कवि सूरदास का सामान्य परिचय |	15
III	रीतिकाल की सामाजिक , राजनीतिक , सांस्कृतिक पृष्ठभूमि रीतिकाल की प्रमुख प्रवृत्तियों का (रीतिबद्ध , रीतिसिद्ध , रीतिमुक्त) सामान्य परिचय । रीतिबद्ध कवि केशवदास का सामान्य परिचय । रीतिसिद्ध कवि बिहारी का सामान्य परिचय । रीतिमुक्त कवि घनानंद का सामान्य परिचय	15
Research Project	One Credit for Research Project , field work etc.	

पूर्णांक 100

आंतरिक मूल्यांकन 30 अंक (लघुत्तरी परीक्षा- 20 अंक , शोध परियोजना / समूह परियोजना / मौखिक प्रस्तुति / क्षेत्रीय अध्ययन 10 अंक)

सत्रांत परीक्षा 70 अंक

Course No.: 8
Department: Hindi
Implemented from: 2021-2022
Detailed Syllabus:
Title: हिंदी साहित्य का इतिहास (आधुनिक काल सामान्य परिचय) (Course Code – DSE 1 D (S3))

[Credits-4]

Syllabus of Course

"हिंदी साहित्य का इतिहास (आधुनिक काल सामान्य परिचय)"

उद्देश्य

1. आधुनिक काल की पृष्ठभूमि से छात्रों अवगत कराना ।

2. भारतेंदु युगीन , द्विवेदी युग के काव्य की विशेषताओं से छात्रों को अवगत कराना ।
3 . आधुनिक काल के रचनाकारों और रचनाओं से परिचित कराना ।
4 . हिंदी गदय के उद्भव और विकास से छात्रों को अवगत कराना ।

इकाई	पाठ्यविषय -	तासिकाएँ
I	आधुनिक काल की पृष्ठभूमि भारतेंदुयुगीन काव्य की सामान्य विशेषताएँ । प्रमुख कवि भारतेंदु हरिश्चंद्र बद्रिनारायण चौधरी प्रेमघन द्विवेदी युगीन काव्य की सामान्य विशेषताएँ । प्रमुख कवि मैथिलीशरण गुप्त , अयोध्यासिंह उपाध्याय ' हरिऔध '	15
II	छायावादी काव्य की सामान्य विशेषताएँ । छायावाद के प्रमुख कवि –जयशंकर प्रसाद,सुमित्रानंदन पंत, सूर्यकांत त्रिपाठी निराला, महादेवी वर्मा का सामान्य परिचय | प्रगतिवादी काव्य और प्रमुख कवि रामधारी सिंह दिनकर नागार्जुन सामान्य परिचय । प्रयोगवादी काव्य और प्रमुख कवि सच्चिदानंद हीरानंद वात्स्यायन अज्ञेय का सामान्य परिचय	15
III	हिंदी गद्य का उद्भव और विकास फोर्ट विलियम कॉलेज का योगदान हिंदी उपन्यास साहित्य का विकासक्रम कहानी हिंदी (परिचय सामान्य) (परिचय सामान्य) विकासक्रम का साहित्य हिंदी नाटक साहित्य का विकासक्रम (परिचय सामान्य)	15
	One Credit for Research Project , field work etc.	

पूर्णांक 100

आंतरिक मूल्यांकन 30 अंक -परीक्षा लघुत्तरी)20 अंक शोध परियोजना मौखिक / परियोजना समूह / अध्ययन त्रीयक्षे / प्रस्तुति10 अंक (सत्रांत परीक्षा 70 अंक

Course No.: 9
Department: Hindi
Implemented from: 2021-2022
Detailed Syllabus:
Title: भाषाविज्ञान सामान्य परिचय (Course Code – DSE 2 C (S4))

[Credits-4]

Syllabus of Course

"भाषाविज्ञान सामान्य परिचय "

उद्देश्य

1.छात्रों को भाषाविज्ञान की व्याप्ति समझाना।
2.भाषाविज्ञान के अध्ययन की दिशाओं का परिचय देना।
3.भाषाविज्ञान के अनुप्रयोगात्मक पक्ष को समझाना।
4.साहित्य अध्ययन में भाषाविज्ञान की उपयोगिता समझाना।

इकाई	पाठ्यविषय -	तासिकाएँ
I	भाषा विज्ञान का नामकरण और परिभाषा ।भाषाविज्ञान की शाखाएँ। भाषा विज्ञान का अन्य शाखाओं से संबंध। भाषा विज्ञान और व्याकरण भाषा विज्ञान और साहित्य , भाषा विज्ञान और मनोविज्ञान भाषा विज्ञान और भूगोल।	15
II	ध्वनि विज्ञान ध्वनि का अर्थ और परिभाषा | ध्वनि यंत्र ध्वनि गुण मात्रा , स्वराघात , बलाघात। ध्वनि परिवर्तन के कारण। रूप विज्ञान अर्थ और परिभाषा रूप और रूपिम में अंतर रुपिम के भेद -मुक्त रूपिम बद्ध रूपिम मुक्तबद्ध रूपिम रूप परिवर्तन के कारण।	15
III	अर्थ विज्ञान परिभाषा | अर्थ परिवर्तन की दिशाएँ। अर्थ परिवर्तन के कारण।	15
Research Project	One Credit for Research Project , field work etc.	

पूर्णांक 100

आंतरिक मूल्यांकन 30 अंक
(लघुत्तरी परीक्षा- 20 अंक , शोध परियोजना / समूह परियोजना / मौखिक प्रस्तुति / क्षेत्रीय अध्ययन 10 अंक)
सत्रांत परीक्षा 70 अंक

Course No.: 10
Department: Hindi
Implemented from: 2021-2022
Detailed Syllabus:
Title: हिंदी भाषा और उसका विकास (Course Code – DSE 2 D (S4))

[Credits-4]

Syllabus of Course

"हिंदी भाषा और उसका विकास"

उद्देश्य

1.भाषाविज्ञान के स्वरूप का परिचय देना।
2.छात्रों को भाषाविज्ञान की व्याप्ति समझाना।
3.भाषाविज्ञान के अध्ययन की दिशाओं का परिचय देना।
4.भाषाविज्ञान के अनुप्रयोगात्मक पक्ष को समझाना।
5.साहित्य अध्ययन में भाषाविज्ञान की उपयोगिता समझाना।

इकाई	पाठ्यविषय -	तासिकाएँ
I	भाषा की परिभाषा और भाषा की विशेषताएँ। भाषा के विविध रूप बोली भाषा परिनिष्ठित भाषा , साहित्यिक भाषा , राजभाषा राष्ट्रभाषा , संपर्क भाषा अंतर्राष्ट्रीय भाषा	15
II	हिंदी की बोलियाँ पश्चिमी हिंदी , पूर्वी हिंदी बिहारी हिंदी , पहाडी हिंदी . राजस्थानी हिंदी हिंदी का शब्द भंडार तत्सम शब्द तद्भव शब्द देशज शब्द आगत या विदेशी शब्दों का परिचय |	15
III	नगरीलिपि का उद्भव और विकास। नागरी लिपि की विशेषताएँ। नागरी लिपि में सुधार की सभावनाएँ।	15
Research Project	One Credit for Research Project , field work etc.	

पूर्णांक 100

आंतरिक मूल्यांकन 30 अंक
(लघुत्तरी परीक्षा- 20 अंक , शोध परियोजना / समूह परियोजना / मौखिक प्रस्तुति / क्षेत्रीय अध्ययन 10 अंक)
सत्रांत परीक्षा 70 अंक

Course No.: 11

Department: History

Implemented from: 2021-2022

Detailed Syllabus:

Title: Applied History (Course Code – DSE-3C)

[Credits-4]

Syllabus of Course

"Applied History"

Course objectives:

1) To Introduce students to information and importance of Applied History.

2) To help students understand the usefulness of history in the 21st century, its changing perspectives, the new ideas that have been invented, and the importance of History in a Competitive World.

3) To inform the students about the historical significance of Archaeology and Archives and the opportunities in the field of Archaeology and Archives through this course.

4) To inform the students about the opportunities in the field of Media, Museums through this Course.

Course Outcomes:

1. Students will be introduced to the information and importance of applied history.

2. Student will learn about the Historical significance of Archaeology and Archives and opportunities in the field of Archaeology and Archives.

3. Through this course, students will be informed about the opportunities in the field of Media, Museums.

4. Students will learn about the usefulness of history in the 21st Century, its changing Perspectives, the new ideas that have been invented, and the importance of History in a Competitive World.

Pedagogy: Lectures / Visual Presentation / Critical Analysis / Assignments / Test/ e-learning Course Content

Unit-I. Applied History

a. Applied History: Concept and Application

b. Application of History in Various Subjects

c. Co-relationship between Past and Present d.

Contemporary History: Meaning and Nature

Unit-II. Archaeology and Archives

a) Archaeology and Archives: Definition and Development in India

b) Archival Sources: Ancient, Medieval and Modern- A brief survey

c) Heritage Sites: Types, Preservation and Conservation

d) Historical Importance of Heritage Sites and Museums

Unit-III. :-Mass Media and Applied History

a) Mass Media: Meaning and Types

b) Print media:

i). Establishment and growth of printing press in India

ii). Newspaper: Definition, Rise, Newspaper in India - A brief survey

c) Electronic media: Radio, Television, E-media.

Unit-IV: Project Work /Study Tour Report/Historical Places Visit Report Project work and Evaluation scheme

1. Candidate shall submit Project report of minimum 2000 words i.e.10 to12 pages (Should be DTP) to the department by end of the Semester.

2. A viva-voce should be conducted before theory examination and the results should be sent to the University as immediately

3. The Distribution of Marks – For Report Writing 20 Marks and for Vice-Voce 10Marks

Reference Books

English

1) Bajaj Satish K, Research Methodology in History, Amol Pub Pvt.Ltd, NewDelhi.
2) Bobade Bhajang R., Manuscriptology from Indian Sources, Pacific Publication, Delhi.
3) Carr E.H., What is History, Penguin Books, Harmondsworth, 1971.
4) Chitnis K.N., Research Methodology in History, Navi Path, Pune1979.
5) Collingwood R.G., The Idea of History, Oxford university,1961.
6) Datta.K.B., Mass Media in India, Akansha Publishing House, New Delhi,2005.
7) Director General, Archaeological Remains, Monuments and Museums Part1&2, Archaeological Survey of India, New Delhi, 1964.
8) Gaur.M. M., Electronic Media, Omega Publication, Delhi, 2006.
9) Ghose,Sallen, Archive in India, Calcuttd,1963.
10) Mehara Chandar, History of Newspapers in India, Notion Press, Chenniai,2019.
11) Mujumdar R.K., Shrivastava A.N., Historiography, subject Book, Delhi,06 ,1975.
12) Shobita Punija, Museum of India, The Guidebook, Hon Kong, 1990.

Course No.: 12

Department: Geography

Implemented from: 2020-2021

Detailed Syllabus:

Title: Cartographic Techniques, Surveying and Excursion / Village / Project Report (Course Code (Gg: 201(B) DSE 2 B))

[Credits-4]

Syllabus of Course

"Cartographic Techniques, Surveying and Excursion / Village / Project Report"

Workload: Six Periods per week per batch consisting of 12 Students; however the last batch needs to have more than six students.

(Examination for the course will be conducted at the end of the semester)

Objectives of Course:

1. To introduce the students to the basic and contemporary concepts in Cartography.
2. To acquaint the students with the utility and applications of various Cartographic Techniques.
3. To introduce the latest concepts regarding the modern cartography in the field of Geography.
4. To explain the elementary and essential principles of practical work in Geography.

Course Outcome:

After the successful completion of the course, the students will be able to:

1. Develop practical knowledge and application of cartographical techniques.
2. To make students aware of the new techniques, accuracy and skills of Map Making.

Note :

1. Use of Map stencils, Log tables, Calculators, Statistical Tables is allowed at the time of Examination.
2. Journal completion by the students and the certified by practical in-charge and Head of the Department is compulsory.
3. Students without a certified journal should not be allowed for the practical examination.
4. Each of the practical batches needs a separate question paper.

Sr. No.	Topic	Sub Topic & Learning Point	Hours	Credits
1.	Introduction to Cartography	1. Definition of Cartography 2. Development of cartography a. Traditional b. Modern 3. Use of Cartography	02	04
2.	Cartographic techniques	1. Techniques of representation of data (Use and limitations) a. Simple line graph b. Simple bar Graph c. Pie diagram d. Choropleth Map e. Isopleth Method (Isoheight or Isothermal) f. Flow diagram (At least 01 example of each manually and using computer)	06	
3	Surveying	1. Definition of Surveying 2. Types of North Direction (True, Magnetic and Grid North)	08	

		3. Types of Survey (Any three) a. Plane Table Survey : (Radiation Method and Intersection Method) b. GPS Survey and plotting c. Dumpy level / Auto level survey i) Rise and Fall Method ii) Collimation Method d. Demonstration of Total Station 4. Measurement of land: i) Measurement of survey field ii) Example on measurement of area (Circle, Square, Rectangle, Triangle, Uneven shape) iii) Conversion of area (hector into Acer, Square km into square meter, Square meter to Square feet)		
4	Excursion / village/city survey and report writing	Study tour to places of geographical interest anywhere in the country Or Socio- economic survey of village/city	04	

Course No.: 13

Department: Geography

Implemented from: 2021-2022

Detailed Syllabus:

Title: Practical Geography- II (Techniques of Spatial Analysis, Surveying and Excursion /Village/ Project Report) (Course Code (Gg: 301(B) VI DSE 2D))

[Credits-4]

Syllabus of Course

"Practical Geography- II (Techniques of Spatial Analysis, Surveying and Excursion /Village/ Project Report)"

Objectives:

1.To introduce the basic concepts and techniques of Geographical Analysis.

2.To introduce the students with SOI Toposheets and acquire the Knowledge of Toposheet interpretation.

3.To introduce the students with Weather Maps and acquire the Knowledge of its interpretation.

4.To introduce the students with Aerial Photographs and Satellite Images and acquire knowledge to interpret it .

5.To acquaint students with the spatial and structural characteristics of Practical Geography.

6.To explain the elementary and essential principles on field of practical work.

Sr. No.	Topic	Sub Topic & learning Points	No. of Lectures
1.	Geographical Data & its Basic Analysis	a. Introduction and Types of Geographical Data: i) Spatial and Temporal data ii)Discrete and Continuous series iii) Grouped and Ungrouped data b. Basic Analysis : i) Tally marks and frequency table ii)Frequency distribution (histogram & polygon) iii) Cumulative Frequency & Ogive curve	15
2.	Calculation of Central Tendency, & Dispersion	a. Meaning and description of central tendencies- Mean, Mode, Median b. Calculation of Mean, Mode, Median for ungrouped and grouped data (two examples each) c. Measures of Dispersion: Mean Deviation & Standard Deviation (two examples each)	15
3.	Testing and Application of Hypothesis	a) Meaning, Definition of Hypothesis & Types of Hypothesis i) Null & Alternative hypothesis ii) Level of significance, iii) Degree of freedom b) Concept of Correlation and regression I. Concept of bivariate correlation & Regression II. Meaning of coefficient of correlation III. Parametric & Non parametric tests: i) Chi-square test (two examples each) IV. Calculation of Spearman Rank order (Min. two	15

		examples for each test)	
4.	Field Excursion / Village Survey / Project Report	a.One Short tour of two days duration and preparation of tour report **OR** b. One long Tour of more than Five days duration anywhere in the country and preparation of tour report **OR** c. Village / City / Area Survey and preparation of report	15

Course No.: 14
Department: Geography
Implemented from: 2019-2020
Detailed Syllabus:
Title: Practical in Physical and Human (Course Code: GGUP115)

[Credits-4]

Syllabus of Course

"Practical in Physical and Human"

GeographyNo. of Credits: 04 No. of Periods: 60

Topic No.	Topic	Sub topics	Periods (3 hours)
		A Geomorphology	
1	Drainage Network	Stream ordering and Bifurcation ratio i. Strahler'smethod ii. Horton's method	02
2	Drainage BasinRelief Analysis	Relief analysis (for a 3 to 5 order drainage basin;based on grid method) i. Absolute relief map ii. Relative relief map iii. Hypsometric analysis iv. Basin cross profiles v. Block diagram (multiple section)	03
		B Climatology	
3	Climatic ElementDiagrams	i. Climatograph ii. Climograph iii. Simple wind rose iv. Hythergraph v. Water Budget	03
4	Climatic Classification	i.Koppen's classification	02
		C Economic Geography	
5	Crop Combinationand Crop Diversification	i. Weaver's method ii. JasbirSingh	02
6	Measures of Network Structure	i. Ratio measure ii. Alpha, beta, gamma, etc. iii. Associated number, cyclomatric number	01
D Population and Settlement Geography			
7	Population Indicesand Projection	i. Age-sex pyramid ii. Infant mortality rate iii. Population growth rate iv. Population projection	02

8	Measures of Nucleation andDispersion	i. Rank size rule ii. Nearest neighbor analysis iii. Calculation of centrality	03
9	Field Visit and Report Writing	i. One day study tour or long tour of geographical interest places anywhere in the country and excursion report	02

Course No.: 15

Department: Geography

Implemented from: 2019-2020

Detailed Syllabus:

Title: Practical of Statistical Techniques for Geography (Course Code: GGUP-134)

[Credits-4]

Syllabus of Course

"Practical of Statistical Techniques for Geography"

Topic No.	Topic	Sub topics	Periods (3 hours)
1	Introduction to Statistical Techniques in Geography	i. Introduction and applications of statistical techniques in Geography ii. Types of statistics: descriptive and inferential statistics iii. Geographical data a) Primary and secondary data b) Spatial and temporal data c) Discrete and continuous data d) Grouped and ungrouped data iv. Scales of measurement: nominal, ordinal, interval and ratio	01
2	Descriptive Statistics	i. Introduction to descriptive statistics ii. Central tendency: mean, mode, median iii. Dispersion: variance and standard deviation iv. Skewness and kurtosis(Calculations of above parameters forungrouped and grouped data)	03
3	Probability and Probability Distributions	i. Introduction to probability ii. The Normal Probability Distribution iii. The Binomial Probability Distribution iv. The Poisson Probability Distribution	03
4	Inferential Statistics	i. Introduction to inferential statistics ii. Population and sample iii. Hypothesis testing: Null and alternate hypothesis iv. The Chi-square test (Two sample case) v. Student's 't' test (Two sample tests) vi. ANOVA (Analysis of variance)/ F ratio test	05
5	Correlation and Regression Analysis	i. Introduction to bi-variate correlation and regression ii. The product-moment correlation coefficient iii. Significance testing in correlation analysis iv. Linear regression equation v. Exponential regression equation vi. Power-law regression equation vii. Concept of residuals and explained variance	05

6	Time Series Analysis	i. Introduction and definition of time series ii. Applications of time series analysis iii. Components of time series iv. Calculation and plotting of moving averages (3 and 5) v. Curve fitting by method of least squares	02
7	Fieldwork and Data Collection	i. Collection of primary and/or secondary data by fieldwork or field visit ii. Analysis of data by using appropriate statistical technique(s) iii. Report writing	01

Course No.: 16
Department: Geography
Implemented from: 2020-2021
Detailed Syllabus:
Title: Practical in Economic Geography (Course Code: GGUP-247)

[Credits-4]

Syllabus of Course

"Practical in Economic Geography"

Topic No.	Topic	Subtopics	Practical (3 Hours)
1	Techniques in Agricultural Geography	i. Crop Combination: Thomas Method ii. Crop Diversification: Bhatia method iii. Crop Concentration : Jasbir Singh method iv. Measurement of Agriculture Efficiency : Kendallmethod v. Productivity Index: Enyedi Method vi. Cropping Intensity and Irrigation Intensity	05
2	Techniques in Industrial Geography	i. Lorenz Curve: Calculation and Plotting ii. Location Quotient: Calculation and Plotting iii. Gini's Co-efficient	04
3	Techniques in Trade and Transportation Geography	i. Measures in Network Structure: Ratio Measure, Alpha, Beta, Gamma, Associate Number and Cyclomatric numbers ii. Gravity Potential Population Surface iii. Breaking Point Theory iv. Law of Retail Trade Gravitation	05
4	Cartographic Techniques in Economic Geography	i. Use of Thematic Maps in Economic Geography ii. Use of Choropleth Maps in Economic Geography iii. Use of GIS in Economic Geography	03
5	Industrial Visit	i. Visit to one Agro-based Unit (Industry) and report writing	03

Course No.: 17
Department: Geography
Implemented from: 2020-2021
Detailed Syllabus:
Title: Dissertations / Research project (Course Code: GGUP-258)

[Credits-4]

Syllabus of Course

"Dissertations / Research project"

Course: GGUP - 258 Dissertations No. of Credits: 04 Total Periods: 60

1 The students shall declare the option of dissertation at the beginning of the 3rd semester.
2 A Post Graduate recognized teacher in a department is eligible to guide the students.
3 General Guide Lines :- i. Introduction to the problem
ii. Aims and objectives of the study
iii. Data and Methodology
iv. Analysis, description and interpretation
v. Results and Conclusions
vi. References/Bibliography
4 Every table, figure, photograph should have a caption and with references.
5 The list of references should be given at the end and all the references should be complete in all respects (author(s)) name, year, title of the article or book, name of the journal, name of the publisher of the book and place of publication, volume of journal and page numbers)
6 The total number of pages should be minimum 50, including text, figures, tables, photographs, references and appendices.
7 At the time of viva-voce presentation may be given with the help of equipments which are available in the respective department

Course No.: 18

Department: Economics

Implemented from: 2021-2022

Detailed Syllabus:

Title: Business Management-II (Project Report) (Course Code: SEC-3A)

[Credits-2]

Syllabus of Course

"Business Management-II (Project Report) "

Course Learning Outcomes:

At the end of the Course, the Learner will have the following skills:

- Analytical Skills – Ability to analyze data collected and interpret in the most logical manner
- Project Report Writing Skills- Ability to comprehend and illustrate/demonstrate findings
- Presentation Skills – PPT/Poster- Ability to illustrate findings in the most appealing manner
- Leadership Skills: Ability to show leadership skills with business ideas or work on business ventures as a practical example

Unit No.	Name and Sub Titles of the Topic	No. of Lectures	Skill Enhancement Exercises
1	**Case Study** Guest Lecture – Local Entrepreneur – Success Stories / Struggles/ Historical Reviews/ Start- ups, etc	2	Preview to Students for Project Report
2	**Project Interim Presentation** Detailed Study of ANY Business Enterprise under the Guidance of Subject Teacher ORPresentation of a Business Idea	14	Initial Mid Semester Presentation (15 marks)
3	**Project Final Presentation** Presentation with PPT or Poster or Exhibition of Business Ideas/ Reports	14	Final Presentation Viva (35 Marks) Int. Examiner - 10 Ext. Examiner - 10 Report- 15

Recommended Books

1. Stephen R. Covey, The 7 Habits of Highly effective People (1989), Guerilla Marketing.
2. Harvard Business Review, Management Tips, hbr.org/books.
3. Pandey, I.M. Financial Management, Persons 12th Edn.
4. Saksena, S.C., Principles of Business Management (2019), Sahitya Bhawan Publi.Agra.
5. Kalkar Parag and Ajinath Doke, Vyavsay Vyavsthapan, Nirali Prakashan, Pune.

Faculty of Commerce

Course No.: 19
Department: Commerce
Implemented from: 2021-2022
Detailed Syllabus:
Title: Banking & Finance Spl. –II and III (Course Code: 366(A and B))

[Credits-2]

Syllabus of Course
"Banking & Finance-Special Paper II and III"

Objectives :

1 .To familiarize students about various basic concepts of stock market.
2 .To analyse the types and process of stock trading.
3.To enable the students to understand the functions and working of Non -Banking Financial Institutions in India .
4 .To enable the students to acquire sound knowledge of Regulatory Bodies in India.

Unit No.	Topic	Number of Lectures	Teaching Method	Proposed skills to be developed
01	**Basic Concepts of Stock Market:** 1 Primary & Secondary Market . Merchant Banking, IPO,FPO 2 .Selective Stock Exchanges .Concept of Stock market 2.1 BSE - Bombay Stock Exchange 2.2 NSE- National Stock Exchange 2.3 Broker &Sub.broker, Demat Account, broker account, IPO Price band, Stock Listing, IPO Stock allotment 2.5 Small Cap, Mid Cap & Large Cap Companies 6 .Selective Market Index. Sensex, Niffty, Bank Niffty, Niffty future & Option 2.7 Bear & Bull Market	10	Lecture, PPT, Group and Panel Discussion, Library Work, Assignments	Understanding the basic concept of stock market.

02	**Stock Trading:** 2.1. Cash Market, Future &Option Market 2.2 Types of Stock Trading A. Day Trading)Intra.day Trading (B. Delivery Trading C. Future & Option Trading 2.3 Types of Orders A. Buy B. Sell C. Stop loss . 2.4 Premium amount, Lot size 2.5. Lower & Upper Circuit. 2.6 Trade Settlement, Stock Oxen 2.7 Carrier opportunities in Stock Market	14	Lecture, PPT, Group and Panel Discussion, Library Work, Assignments	Understanding the basic concept and types of stock trading.
03	**Non-Banking Financial Institutions (NBFIs):** 3.1 Meaning and definitions Of NBFIs 3.2 Distinction between Bank and NBFIs 3.3 Functions and workings of. i) Lease Financing ii) Mutual Fund iii) Housing Finance Companies iv) Life Insurance Company)LIC (v) General Insurance Company) GIC(3.4 carrier opportunities in Insurance Sector	12	Lecture, PPT, Group Discussion, Library Work Book Assignment , Use of internet	Understanding the functions and working of Non -Banking Financial Institutions in India .
04	**Regulatory Bodies** 4.1 SEBI -Security Exchange Board of India 4.2 IRDA -Insurance Regulatory & Development Authority.	12	Lecture, PPT, Group and Panel Discussion, Library Work, Assignments	Understanding the role of SEBI in financial Market and Understanding the role of IRDA in Insurance Sector
	Total	**48**		

Revised syllabi (2019 Pattern) for T.Y.B. Com Degree course (CBCS)Semester – VI
SPECIAL ELECTIVE COURSE (Special Course – III)
Banking & Finance-Special Paper III) Sem.VI
Banking Law and Practices in India – II Course code :366-B
(Total Credits :04)Theory 03 +Practical 01=04

Objectives:

1. To familiarize students about concept and types cybercrimes in banking.
2. To understand the aspects of paying and collecting banker.
3. To analyse the banker and customers relationship.
4. To enable the students to apply the legal and practical aspects of bank advances.

Unit No.	Topic and Contents	No. of Lectures	Teaching Method	Skills to be developed
1.	**Cyber Crimes in Banking:** 1.1 Meaning and Definition of Cyber Crimes 1.2 Types of Cyber Crimes 1.3 Types of Cyber Crimes in Banking- a) Virus attack b) Hacking c) Phishing d) Vising e) Spamming f) ATM skimming g) E-mail spoofing 1.4 Reasons of Cyber Crimes in Banking 1.5 Impact of Cyber Crimes on Banking 1.6 Measures to control Cyber Crimes in Banking: A) Legal Measures: i) IPC-420 ii) IT Act(2000) SEC 66C,66D B) Non-legal Measures	14	Lectures, PPT, Group and Panel Discussion, Library Work, Assignments Guest Lectures	Understanding the conceptand types of cyber-crimes in banking

2.	**Paying and Collecting Banker:** 2.1 Meaning and Definition of Paying Banker 2.2 Precautions to be taken while doing payment ofcheques 2.3 Duties and Rights of Paying Banks 2.4 Meaning and Definition of Collecting Bank 2.5 Precautions to be taken while collectingpayment of cheques 2.6 Duties and Rights of collecting Banker	12	Lectures, PPT, Group and Panel Discussion, Library Work, Assignments,	Understanding the concept of paying and aspects of paying and collecting banker.
3.	**Banker and Customer Relationship:** 3.1 Definition of Banker and Customer - Relationship as Debtor and Creditor 3.2 Banker as Trustee Banker as Agent 3.3 Banker's Obligation of Secrecy of Accounts 3.4 Banker's Lien Right of Set Off 3.5 Garnishee Order 3.6 Termination of Relationship	**12**	Lectures, PPT, Group and Panel Discussion, Library Work, Assignments	Understanding the relationship between banker and customers
4	**Bank Advances:** 4.1 Secured and Unsecured loans 4.2 Types of loan schemes in Banks 4.3 Securities for Loans 4.4 Mode of creating Charges: Lien, Pledge, Hypothecation and Mortgage 4.5 Causes of loan recovery problems 4.6 Recovery Measures: a) Legal measures b) Non-legal measures	**10**	Lectures, PPT, Group and Panel Discussion, Library Work, Assignments	Understanding the legal aspects of bank advances
	Total	**48**		

Course No.: 20

Department: Commerce

Implemented from: 2021-2022

Detailed Syllabus:

Title: Project Work / Case Studies **(Course Code: 416)**

[Credits-4]

Syllabus of Course

"**Project Work / Case Studies"**

The following are the topics suggested for Project Work:

1. A study of trends in mutual funds
2. Financial Inclusion & unskilled worker.
3. Rural Development & role of NABARD
4. A study of Bank portfolio
5. Banking Development Problems & Perspectives
6. Role of IT in Banking industry: constraints & challenges
7. A study of New Banking products
8. A study of Marketing of Banking products
9. A study of Companies (Amendment) Act 2013 with reference to Banking
10. Capital Adequacy Norms: constraints & challenges
11. Project Evaluation Tools & Techniques
12. Assessment of Financial Health through Ratio Analysis
13. Study of Bank Balance Sheet.
14. Study of Urban Co-Operative Bank.
15. Study of Non-Performing Assets.
16. Study of Capital adequacy of Public sector, Private sector and Co-Operative Banks.
17. Study of Foreign bank branch working in India.
18. Study of forex operation of Indian banks located in your city.
19. Study of National securities depositary and Demat Account.
20. Study of Social banking (Prime Minister Rozgar Yojana, Suwarna Jayanti Sahara Rozgar Yojana,NAREGA, The Urban Self employmentprograme.)
21. Study of Self help group in Maharashtra.
22. Study of Recent Mergers and acquisition in banks.
23. Study of recent mergers of banks and its implication on bank employee.
24. Study of Foreign institutional investments.
25. Study of Recent reforms in capital market.
26. Study of R.B.I. recent monetarypolicy.
27. Study of Stock Exchange
28. Study of Non-Banking Finance Companies.
29. Study of Role of N.G.O's.
30. Study of International Financial Institutions.
31. Study of International Investors.
32. Skill Development for unemployment Youth.
33. Study of Self Help Groups.
34. Study of investor's portfolio.
35. Study of investor's awareness and education by SEBI.
36. Study of role of SEBI.
37. Study of different schemes of mutual funds.
38. Study of companies deposits.
39. Study of GDR and ADR
40. Study of FDI.

Course No.: 21
Department: BBA (CA)
Implemented from: 2020-21
Detailed Syllabus:
Title: Project (Course Code – CA405)
[Credits-4]

Syllabus of Course

"Project"

Programme Objectives:

1. To produce skill oriented human resource.
2. To import practical skills among students.
3. To make industry ready resource.
4. To bring the spirit of entrepreneurship.

Programme Structure:

1. The Programme is of a Three Year (Six semesters) Full Time Degree Programme.
2. The programme shall be based on credit system comprising 132 credits.

Titles of Papers and Scheme of Study for B.B.A. (C.A.):
CC-Core Course, EC-Elective Course, PR-Practical, PJ-Project,
AECC- Ability Enhancement Compulsory Courses
SEC- Skill Enhancement Courses.

SEMESTER- IV

Subject Code	**Subject Name**	**Course**	**Credits**	
			Th	**Pr**
CA-401	Networking	CC	3	
CA-402	Object Oriented Concepts Through CPP	CC	3	
CA-403	Operating System	CC	3	
CA-404	**NODE JS**	**EC**	**3**	
OR				
CA-404	**Advance PHP**	**EC**	**3**	
CA-405	Project	EC		4
CA-406	Computer Laboratory Based on 402,404 (2 credits each)	PR		4
4	ADD-On (30 Hours)	SEC	2	

Course No.: 22
Department: BBA (CA)
Implemented from: 2015-16
Detailed Syllabus:
Title: Project (Course Code – CA505)
[Credits-4]

Syllabus of Course

"Project"

Programme Objectives:

5. To produce skill oriented human resource.
6. To import practical skills among students.
7. To make industry ready resource.
8. To bring the spirit of entrepreneurship.

Programme Structure:

3. The Programme is of a Three Year (Six semesters) Full Time Degree Programme.

4. The programme shall be based on credit system comprising 132 credits.

Titles of Papers and Scheme of Study for B.B.A. (C.A.):
CC-Core Course, EC-Elective Course, PR-Practical, PJ-Project,
AECC- Ability Enhancement Compulsory Courses
SEC-Skill Enhancement Courses.

SEMESTER-V

Subject Code	Subject Name	Course	Credits	
			Th	Pr
CA-501	Cyber Security	CC	3	
CA-502	OOSE	CC	3	
CA-503	Core Java	CC	3	
CA-504	Mongo DB	EC	3	
OR				
CA-504	Python	EC	3	
CA-505	Project	PJ		4
CA-506	Computer Laboratory Based on 503 and 504(2 credits each)	PR		4
5	Add on Course-IOT(30 Hours)		2	

Course No.: 23
Department: BBA (CA)
Implemented from: 2015-16
Detailed Syllabus:
Title: Project (Course Code – CA605)
[Credits-4]

Syllabus of Course

"Project"

Programme Objectives:

9. To produce skill oriented human resource.
10. To import practical skills among students.
11. To make industry ready resource.
12. To bring the spirit of entrepreneurship.

Programme Structure:

5. The Programme is of a Three Year (Six semesters) Full Time Degree Programme.
6. The programme shall be based on credit system comprising 132 credits.

Titles of Papers and Scheme of Study for B.B.A. (C.A.):
CC-Core Course, EC-Elective Course, PR-Practical, PJ-Project,
AECC- Ability Enhancement Compulsory Courses
SEC-Skill Enhancement Courses.

SEMESTER-VI

Subject Code	Subject Name	Course	Credits	
			Th	Pr
CA-601	Recent Trends in Information Technology(Tutorial/Assignment)	CCT	3+1	
CA-602	Software Testing	CC	3	
CA-603	Advanced Java	CC	3	
CA-604	Android Programming	EC	3	
OR				
CA-604	Dot Net framework	EC	3	
CA-605	Project	PJ		4
CA-606	Computer Laboratory Based on 603 and 604(2 credits each)	PR		4
6	Add on Course-Soft Skills Training		2	

Faculty of Science

Course No.: 24
Department: Physics
Implemented from: 2021-2022
Detailed Syllabus:
Title: Project (Course Code – PHY:359)
[Credits-2]

Syllabus of Course

"Physics Project-I"

Lectures: 36 **(Credits-02)**

Guidelines:

It is expected that,

1. The student does work equivalent to about ten (10) laboratory experiments throughout the semester in the third year.
2. One bears in mind that the project work is a practical course and it is intended to develop a set of skills pertaining to the laboratory work apart from the cognition of students. Therefore, the guides should not permit projects that involve no contribution on part of student.
3. The project must have a clear and strong link with the principles of basic physics and/or their applications.
4. The theme chosen should be such that it promotes better understanding of physics concepts and brings out the creativity in the students.
5. The evaluation of the project work must give due credit to the amount of the project work actually done by a student, skills shown by the student, understanding of the physics concepts involved and the final presentation at the time of viva voce.
6. It is also recommended that a teacher will look after Four (4) projects at one time.
7. Practical examination will be conducted semester wise.
8. The student can perform an Experimental/Theoretical/Computational Project in Physics or interdisciplinary areas under the supervision of one or more guides.
9. The student can learn the basics of the topic chosen for project, to learn how to do literature survey and set up the basic experimental/theoretical and computational techniques needed for the project.
10. The department encourage to students for projects both in experimental and theoretical areas of Physics in collaboration with other institutes and industry.

The Project work shall consist of the following Criterions.

1. Project work is mandatory for all the T. Y .B. Sc. students.
2. All the T. Y. B. Sc. students will be have to complete the Project work prescribed by the Board of Studies in Physics of Savitribai Phule Pune University during the Vth Semester.
3. The Project work shall consist of the following Criterions.

- It is expected that students must finalize the Title of Project, Aim and objective,

Significance, Literature survey, Materials required, Method and Application etc.

- Introduction to foundations of Project Work.
- Introduction of Project Research Methodology.
- Study of Data Collection Methods.
- Project Problem Writing and Presentation Skills.

Evaluation weightage:

- Project-I: Semester End University Examination : 35 Marks
- Internal Examination: 15 Marks

Course No.: 25
Department: Physics
Implemented from: 2021-2022
Detailed Syllabus:
Title: Project (Course Code – PHY:369)
[Credits-2]

Syllabus of Course

"Physics Project-II"

Lectures: 36 **(Credits-02)**

Guidelines:

It is expected that,

1. The student does work equivalent to about 10 laboratory experiments throughout the semesters in the third year.
2. One bears in mind that the project work is a practical course and it is intended to develop a set of skills pertaining to the laboratory work apart from the cognition of students. Therefore, the guides should not permit projects that involve no contribution on part of student.
3. The project must have a clear and strong link with the principles of basic physics and/or their applications.
4. The theme chosen should be such that it promotes better understanding of physics concepts and brings out the creativity in the students.
5. The evaluation of the project work must give due credit to the amount of the project work actually done by a student, skills shown by the student, understanding of the physics concepts involved and the presentation of the final report at the time of viva voce.
6. The viva voce should be conducted at the time of evaluation of project work at least for twenty minutes per student. Extra care must be taken in the evaluation of projects done in a pair or group. Delegation of the work done by individuals must be sought from the students in such cases.
7. Any ready-made material used in the report (such as downloaded pages from the web) must be clearly referred to and acknowledged.
8. It is also recommended that a teacher will look after 4 projects at one time.
9. Any non-adherence to this norm should attract a penalty by way of deduction in the marks awarded to a student. It is recommended that the College will provide consumables/contingencies for every project, to the tune of Rs. 750 /- each. (*If the students paid extra fee other than laboratory fee then college will provide financial assistance for the Project work.)

The Project work shall consist of the following Criterions.

1) Working model (Experimental or Concept based simulation/Demonstration Related to Physics).
2) Understanding of the project.
3) Experimental Details.
4) Data collection and Data Analysis.
5) Innovation.
6) Outcomes/Result.

7) Conclusion.

Note: At the time of project practical examination, the candidate must submit the certified project report by the project in-charge and HOD. A candidate will be allowed to appear for the Project practical examination only if the candidate submits a project completion report duly certified by the project in-charge and Head of the department.

The Project work shall include:

Models based / Demonstrated Applications / Review articles / Simulation on PC on any concept in Physics / Comparative & differentiative study / Improvement in the existing experiment (Design and fabrication concept) / Extension of any regular experiments / Attempt to make experiment open-ended / Thorough survey of existing active components / devices, ICs, methods, means, technologies, generations, applications etc. / any innovative projects using the concept of Physics / Interdisciplinary areas.

Evaluation weightage:

- Semester End University Examination : 35 Marks

Internal Examination: 15 Marks

Course No.: 26
Department: Physics
Implemented from: 2020-2021
Detailed Syllabus:
Title: Project (Course Code – PHCP-245)
[Credits-4]

Syllabus of Course

"Project"

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 skills related to research, education, industry and market.
- To help students to build-up a progressive and successful career in Physics.

	Year	Semester	Course Type	Course Code	Course Name		Credit
		III	CCTP	PHCT-231	Statistical Mechanics		**4**
				PHCT-232	Solid State Physics		**4**
				PHCT-233	Experimental Techniques in Physics - I		**4**
			CBOP-III	PHOT-234	Special–I from **Group II**	Theory	**4**
				PHOP-234		Practical	**0**
			OR				
			CBOP-III	PHOT-234	Special–I from **Group II**	Theory	**2**
				PHOP-234		Practical	**2**

			CCPP	PHCP-235	Physics Laboratory - III		**4**
		I V	**CCTP**	PHCT-241	Nuclear Physics		**4**
				PHCT-242	Experimental Techniques in Physics-II		**4**
			CBOP-IV	PHOT-243	Choose any one from **Group I**	Theory	**4**
				PHOP-243		Practical	**0**
			O R				
			CBOP-IV	PHOT-243	Choose any one from **Group I**	Theory	**2**
				PHOP-243		Practical	**2**
			CBOP-V	PHOT-244	Special–II from **Group II**	Theory	**4**
				PHOP-244		Practical	**0**
			O R				
			CBOP-V	PHOT-244	Special–II from **Group II**	Theory	**2**
				PHOP-244		Practical	**2**
			CCPC	PHCP-245	Project		**4**

Course No.: 27
Department: Chmestry
Implemented from: 2020-2021
Detailed Syllabus:
Title: Practical Chemistry-III (Course Code – CH: 303)
[Credits-2]

Syllabus of Course

"CH-303: Practical Chemistry-III"

* 72 L distributed as 58 L for performing practicals and 14 L for internal evaluation.
For practicals, see the manual prepared by BOS of Chemistry. The examination will be held according to this manual.

Instructions

1. Use molar concentrations for volumetric /estimations/synthesis experiments.
2. Use optimum concentrations and volumes
3. Two burette method should be used for volumetric analysis (Homogeneous mixtures)
4. Use of Microscale technique is recommended wherever possible

Examination Pattern: At the time of examination student will have to perform one experiment. In case of organic qualitative analysis, after separation of binary mixture any one component has to be analysed according to OQA scheme. Distribution of 35 marks: 30 marks for experimental performance and 5 mark for oral.

To cope up with NACC criterion and to motivate and inculcate research culture among the students, interested students can be assigned mini-scale project. Project should be based either on applications of chemistry in day to day life or application or novel / applied synthesis / demonstrating principles of chemistry. The project work is equivalent to three experiments. ***Student performing project can be exempted from 3 experiments from two semester. (*from three different sections of two semester) and project will be evaluated by external examiner. Project being choice based activity; student will not get any exemption in external examination***. Systematic project report (Name page, certificate, introduction/theory, importance of project, learning outcome, requirements, safety precautions, procedure, observations, calculations, results and conclusions) be submitted separately in binding form duly certified by mentor teacher and HOD.

Illustrative list of some projects is given below for your perusal.

1. Synthesis of soap from different types of oils with respect to i) percent yield ii cost of obtaining 50 g soap (students will learn saponification or alkaline hydrolysis of oils – a chemical reaction for the synthesis of day to day life product, which oil is better for soap making).
2. Synthesis of biodegradable plastic (Principles demonstrated: Chemical reactions for mores safe products and to mitigate environmental pollution).
3. Synthesis of azo dyes and effect substituents of benzene ring on colour of azo dye (Principle demonstrated -Inductive effect a visible demonstration, strategy to charge the colour of dye, chemical reactions for industries).
4. Quality of Consumer products: identification reactions and Purity of NaHCO3 (eating soda) of different brands by thermal decomposition. (Application of analytical chemistry and simple decomposition reaction for the determination of purity of consumer product)
5. Determination pH, surface tension, CMC and washing action of detergent of different brands for comparing their quality. (Application of chemistry principles in determination of quality of consumer product)

6. Removal of dyes / nitrophenols / by Fenton's process or by adsorption on activated charcoal. (Applications of principles of chemistry in mitigation of environmental pollution, an industrial application of chemistry).
7. Study of deionization water using cation and anion exchange resins / zeolites. Amount of zeolites / resin required for the softening of water. (Day to day life application of chemistry, student can apply their knowledge and can construct their own deionizer).
8. Preparation shampoo. Ingredients required, their proportion, mixing and testing.
9. Eudiometer: Determination of oxidation state, equivalent wt. and determine stoichiometry of the reaction between i) iron metal and HCl. Fe can have oxidation state +2 or +3. ii) Zn and HCl iii) Al and HCl. What happens with HNO3? Why similar method cannot used to investigate reaction between HNO3 and these metals?
10. Study stoichiometry of simple chemical reactions thereby determination of equivalent wt. of one of the reactant: i) FeSO47H2O and KMnO4 (determine equivalent wt. of KMnO4) ii) Mn(II) and KMnO4 (determine equivalent wt. of KMnO4).Explain the concept of variable oxidation state and variable equivalent wt. for same substance i.e. mol. wt. is constant. (Known Fe2+ oxidizes to Fe3+ only).
11. Synthesis /isolation of essences, purity by TLC/ B.P. (at least two).
12. Synthesis and estimation of purity of aspirin (medicinal compound) by green chemistry route.
13. Compare the paracetamol content in tablet of different brands (at least three different brands).
14. Compare the vitamin-c content in tablet of different brands. (at least three different brands).
15. Determination of Avagdro Number (N) by various technics such as Brownian Moment, Electrodeposition, number of molecules in monolayer etc.
16. Hess Law verification
17 Determination of Farday constant and Avagadro number
18 To determine thermodynamic values of various compounds
19 To determine density of various substances
20 Preparation of Nylon and study its properties
21 Microscale techniques in Chemistry

References:

1. A laboratory manual for general, organic and biological chemistry, 3rd Ed. Pearson.
2. Safety-Scale Laboratory Experiments for Chemistry for Today: General, Organic and Biochemistry Seventh Edition, Spencer L. Seager, Michael R. Slabaugh, Cengage Learning, 2010
3. Laboratory Manual for Principles of General Chemistry, Bearen, 8th Ed. Wiley.
4. Green Chemistry Laboratory Manual for General Chemistry, Sally A. Henrie, CRC Press Taylor & Francis Group, and Informa Business. 2015
5. Experiments in General Chemistry, G. S. Weiss T. G. Greco L. H. Rickard, Ninth Edition, Pearson Education Limited, 2014.
6. Mini-scale and micro-scale organic chemistry laboratory experiments 7th Ed. Schoffstall, Gaddis, Mc-Graw-Hill Higher Education, 2004.
7. Journal of Chemical Education, ACS, (search relevant topics).

Course No.: 28
Department: Chmestry
Implemented from: 2021-2022
Detailed Syllabus:
Title: Practical-III (Course Code – CBOP-5, CHO-453)
[Credits-2]

Syllabus of Course

"Practical-III"

Project/ Industrial Training/Summer Training/ Internships

1. Students should carry out a small research project.
2. This should make them familiar with
i. Literature survey, research methodologies
ii. Data Analysis
iii. Column and TLC chromatographic techniques
iv. Characterization of the products by analytical and spectral methods.
3. Project report must be written and submitted in a proper format as follows;
i) Certificate (Signed by Project guide and Head of the Department)
ii) Certificates for Poster/Paper presented in conferences (if any)
iii) Self declaration certificate for plagiarism
iv) Introduction (not more than 6 pages)
v) Results and Discussions
vi) Experimental Section
vii) Conclusion
viii) References (Use ACS format)
ix) Spectroscopic or other relevant supporting data
x) Acknowledgement
4. Interdisciplinary projects shall be encouraged; however there **must be some organic chemistry component**.
5. Students should spend enough time for the project works (**at least** 4 hours per week for **15 weeks**)
6. At least 30% students should undertake projects/summer training/Internships etc.
7. If student is performing project in another institute, for such a student, internal mentor must be allotted and he will be responsible for internal assessment of a student. In this case student has to obtain certificate from both external and internal mentor. ***Systematic record of attendance of project students must be maintained by a mentor.*** Project will be evaluated jointly by three examiners and there will not be any practical performance during the examination. Typically, student has to present his practical work, discuss results and conclusions in details (20-30 min.) which will be followed by question-answer session (10 min). It is open type of examination.

Course No.: 29
Department: Botany
Implemented from: 2021-2022
Detailed Syllabus:
Title: Practical (Course Code – BO 357, 358)
[Credits-2]

Syllabus of Course

"Practical"

BO 357: Practical based on BO351 and BO352 (2 Credits)

Sr. No.	Title	No. of Practical
1.	Study of Algae with respect to systematic position, thallus structure and reproduction of *Nostoc, Oedogonium, Chara, Sargassum, Palmaria/Chondrus.*	**04**
2	Study of Fungi respect to systematic position, thallus structure and reproduction of *Mucor*, *Saccharomyces*, *Penicillium*, *Puccinia* and *Cercospora***.**	**04**
3.	Study of *Marchantia* with respect to systematic position,morphology of thallus –rhizoids and scales,Gemma Cup, structure of sporophyte, reproduction.	**01**
4.	Study of *Anthoceros* with respect to systematic position, structure of gametophyte, anatomy of thallus, structure of Sporophytes, reproduction.	**01**
5	Study of *Funaria* with respect to systematic position, morphology ofthallus-leaf, rhizoids, operculum, Anatomy of axis, leaf, reproduction	**01**
6	Study of Sporophyte evolution in Bryophytes with the help of permanentslides.	**01**
7	Study of *Psilotum* with respect to Taxonomic position, Morphology of sporophyte, anatomy and reproductive structure	**01**
8	Study of *Selaginella* with respect to Taxonomic position, Morphology of sporophyte, Anatomy and reproductive structures.	**01**
9	Study of *Equisetum*with respect to taxonomic position, Morphology of Sporophyte, anatomy and reproductive structure	**01**
10	Study of Stelar evolution in Pteridophytes with the help of permanent slides	**01**

Note:
Botanical Excursion and submission of Tour Report with Photographs is compulsory.

T.Y.B.Sc. Botany CBCS Pattern Practical (Semester V Paper VIII) 2020-2021

BO 358: Practical based on BO353 and BO354 (2 Credits)

Sr. No.	Title	No. of Practical
1.	Study of following families with reference to systematic position (following Bentham & Hooker), Diagnostic characters, floral formula, floral diagram of Nymphaeaceae, Oleaceae, Amaranthaceae, Cannaceae	**04**
2	Preparation of Botanical keys: Indented and bracketed keys by using vegetative and reproductive characters	**01**
3	Study of internal and external morphology of Gnetum	**01**
4.	Study of internal and external morphology of Pinus	**01**
5.	Study of the following with the help of slides and/ or specimens. i) Impression ii) Compression iii) Petrifaction	**01**
6	Study of polluted water body with ref. to BOD (D zero day and D fifth day).	**02**
7	Study of physicochemical properties of water body by using Sacchi disc, pH meter and electric conductivity meter	**02**
8	Acquisition of ecological data of particular locality by using GPS/ altimeter/geographicloa maps etc	**02**
9	Study of suitable ecosystem by line/belt transect method/ nested quadrate method	**02**

Note: Excursion tours of long and short duration are compulsory

Course No.: 30
Department: Botany
Implemented from: 2021-2022
Detailed Syllabus:
Title: Practical (Course Code – BODP 114, BOUP 115,BODP 124)
[Credits-2]

Syllabus of Course

"Practical"

BODP 114: Botany practical 4 based on BODT 114 Pomoculture and Fruit Processing Technology

1. Study of Growth and Fruiting habit in any one locally cultivated fruit crop . 1P
2. Study of methods of Pruning and Training of fruit plants. 1P
3. Study of effect of Growth regulators in fruit ripening in Banana/Grapes/Mango. 1P
4. Study of methods of Propagation of fruit trees. 1P
5. Study Maturity indices and estimation of Maturity in locally grown Fruit plant. 1P
6. Study of Methods of Harvesting. 1P
7. Preparation of Jam, Jelly & Marmalade from Locally available fruits. 1P
8. Preparation of Squash, Candy. 1P
9. Demonstration of any one by-product of wastes of fruits. 1P
10. Visit to Fruit Processing Industry and preparation of Case study report on any one. 1P
11. Visit to fruit market and prepare report. 1P
12. Visit to Vineyard preparation of case study report on Vine Industry. 1P

BOUP 115: Botany practical paper based on BOUT 111, BOUT 112, andBOUT 113

Practical based on BOUT 111-Plant Systematics IPractical on Algae:

1. Morphological observations, documentation (description and illustrations) and classification according to Fritsch (1935) with reasons of taxa belonging to:
   a. Any one member from Charophyta, Euglenophyta, Bascilariophyta and Chrysophyta, Cyanophyta. 1 P
   b. Any three members from Phaeophyta, Chlorophyta and Rhodophyta. 2 P

Practical on Fungi:

2. Study of the representative genera belonging to following sub-divisions of fungi with respect to vegetative, reproductive structures and classification with reasons according to Ainsworth *et al* (1973).
   a. Any one member from each Sub-divisions: Myxomycotina, Mastigomycotina and Zygomycotina
   b. Any three members of each Sub-divisions: Ascomycotina and Basidiomycotina and Deuteromycotina. 2P

Practical on Bryophytes:

3. Morphological, anatomical and reproductive studies of the following members:
   a. Any three members from Hepaticopsida and one member from Anthocerotopsida 1 P
   b. Any four members from Bryopsida (Musci). 1 P

Practical based on BOUT 112: Cell Biology and Evolution

4. Study of mitosis and meiosis 2P
5. Study of polytene chromosome from Chironomous larvae 1P
6. Differential centrifugation for isolation of cell fractions- Nuclear fraction 1P
7. Isolation of Chloroplasts to study 1P
   a. Hill reaction to measure intactness,

b. Chlorophyll estimation

8. Isolation of mitochondria for: 1P
   a. Estimation of succinic dehydrogenase activity
   b. Microscopic observations using MitoTracker Green FM/ MitoTracker Red 580/Janus green B
9. Isolation of Lysosomal fraction and estimation of acid phosphatase activity 1P
10. Study of induced cell senescence in leaf discs &Study of programmed cell death in plants 1P
11. Study of different plant fossils & Geological Time Scale. 1P

Practical based on BOUT 113: Cytogenetics and Plant Breeding

12. Karyotype analysis, preparation of C- metaphase chromosomes of appropriate material (*Allium / Aloe*). 1P
13. Study of Meiotic configuration in *Rhoeo* buds 1P
14. Study of polygenic inheritance in any suitable material (Wheat/Maize etc.) 1P
15. Problems of population genetics: Estimation of gene and genotypic frequencies, PTCtesting ability in humans 1P
16. Gene mapping, *Neurospora* tetrad analysis 1P
17. Problems on Mendelian Inheritance and analysis of F2 data by Chi-quare Test. 1P
18. Study of Polytene / Salivary gland Chromosomes from *Drosophilla / Chironomous* larva, with Balbiani rings, puff balls, bands & inter bands. 1P
19. Floral Biology, Study of Pollen Viability (any two major crops). Use of Colchicine for induction of polyploidy in appropriate plant material. 1P

Note: Visit to different plant diversity regions and visit to any plant breeding centre. Submission of report is Compulsory

Semester II

BODP 124: Practical based on BODT 124 Floriculture and NurseryManagement

Practical (2 Credits):

1. Study of methods of post-harvest technology for flowers (cut flowers) 1P
2. Study of different protective structures with respect to design, components,orientation and construction for cut flower production 1P
3. Study of special cultural practices for flower crops under protected structure 1P
4. Gerbera–identification and description of species/varieties – propagation and planting –pruning management 1P
5. Study of response of micronutrients and macronutrients on growth of cut flowers. 1P
6. Preparation of project on Cut flower production including diseases and Pestsmanagement. 1P
7. Preparation of Bed for nursery 1P
8. Study of different method of seed germination 2P
9. Preparation of growing media 1P
10. Study of Grafting and budding method 1P
11. Study of Air Layering and cutting method 1P

Note: Visit to any Local Nursery and Preparation of report is compulsory

Course No.: 31
Department: Botany
Implemented from: 2021-2022
Detailed Syllabus:
Title: Practical (Course Code – BODP 234 ,BOUP 244,BOUP 245)
[Credits-2]

Syllabus of Course

"Practical"

BODP 234 Practical Paper based on BODT 234

BODP 234 based on BODT 234 d) Plant Biotechnology

Sr. No	Title of practical	No.
1	Isolation of Plant genomic DNA using suitable method	2
2	Separation of restriction fragments using Agarose gel Electrophoresis	2
3	Enzymatic isolation of protoplast using suitable plant material	2
4	Evaluation and viability counting of the protoplsts	2
5	Physicochemical Properties of waste water	1
6	Biological assessment of waste water	1
7	Demonstration of Transgenic Plants	1
8	Visit to a Research institute and write a report on Biosafety	1
9	Visit To Commercial Tissue culture Laboratory and write a report	1
10	Visit to Waste water treatment Plant and write a report	1
11	Prepare a case study report on Patenting of any one Biotechnology Product/invention	1

M. Sc II Botany Semester IV

BOUP 244 Botany Practical paper / PG Dissertation based on BOUP 244 BOUP 244 based on BODT 244 a) Plant Tissue Technology (2Cr)

Sr. No	Title of practical (Any 12 Practical)	No.
1	Study of different Laboratory instruments used in Plant Tissue culture Laboratory	1
2	Study of different sterilization techniques used in Plant tissue culture	1
3	Preparation and sterilization of MS- medium	1
4	Study of different growth regulators and their role in PTC	1
5	Study of dedifferentiation of a suitable plant tissue to induce callus	2
6	Study of *invitro* production of haploid using suitable plant material	2
7	Study of the method of isolation of protoplast from suitable plant material for somatic hybridization	1
8	Study of production of secondary metabolites from suitable plant material using callus culture and qualitative estimation of the secondary metabolites	2

9	Studies on use of any one Biotic/Abiotic elicitor for enhancement of secondary metabolite production through Callus culture	1
10	Visit to any Commercial tissue culture laboratory and write a case study report.	1
11	Visit to *Ex situ Germplasm Bank* and write a visit report.	1
12	Studies on methods of DNA transfer in plant cell (Demonstration)	1

M. Sc II Botany Semester IV
BOUP 244 Botany Practical paper / PG Dissertation based on BOUP 244
BOUP 244 based on BODT 244 b) Herbal Technology (2Cr)

Sr. No	**Title of practical**	**No.**
1	To perform preliminary phytochemical screening of crude drugs.	2
2	Determination of Ash value and moisture content of crude drugs	1
3	Determination of the alcohol content of Asava and Arista.	2
4	Preparation of any one herbal cosmetics.	2
5	Preparation and standardization of any oneherbal formulation.	2
6	Monograph analysis of herbal drugs from recent Pharmacopoeias	1
7	Analysis of fixed oils.	1
8	Study of different processes of packaging of dry,liquid and aromatic herbal products.	1
9	Market study of herbal products- cosmetics, medicines, nutraceuticals.	1
10	Visits to industry related to herbal products and quality testing centres related to herbal products.	2

M. Sc II Botany Practical Paper (4 CR)

BOUP 245 based on BOUT 241 and BOUT 242

Sr. No	**Title of practical**	**No.**
	BOUT 241 Botanical Techniques (Any 12 Practical)	
1	Use of flurochromes to visualize specific cell components	1
2	Micrometry	2
3	Maceration technique	1
4	Electrical conductivity and pH measurements	1
5	Absorption spectra of BSA/DNA and determination of absorption maxima	1
6	Rocket immune electrophoresis	1
7	Separation of leaf pigments by paper chromatography and TLC	1
8	Separation of isozymes by native polyacrylamide gel electrophoresis	2
9	Microtomy- Processing, double staining, sectioning	2

10	Cytochemical analysis- Nucleus, Golgi bodies, Mitochondria	2
11	Databases and database searching and DNA and protein sequence comparison	1
	BOUT 242 Plant Ecology Ecology (Any 12 Practical, 15th is compulsory)	
1	Study of phytoplanktons and macrophytes from clean and polluted water bodies	1
2	Estimation of chlorides and alkalinity of the water sample	1
3	Prepare shoot/canopy profile of tree stand along the line transect.	1
4	Remote sensing techniques for vegetation/ plant diversity assessment using satellite imagery and aerial photographs	2
5	Methods for estimating above-ground biomass for carbon pool assessment	1
6	Find out various diversity indices with the help of computer software.	1
7	Find out the Simpson's Index of Dominance.	1
8	Find out the β-diversity, similarity and dissimilarity indices.	1
9	Comparison of stomatal index and pollen fertility of any two plants from polluted and non-polluted areas	1
10	Compare protected and unprotected herbaceous stand using community coefficients (similarity indices).	1
11	To find out relationship between two ecological variables using correlation and regression analysis.	1
12	To estimate dissolved oxygen content in eutrophic and oligotrophic water samples by azide modification of Winkler's method.	1
13	To determine percent soil organic carbon and organic matter in soils of cropland, grassland and forest.	1
14	To find out association between important herbaceous species using Chi-square test.	1
15	Visit to different types of ecosystems to understand the species composition and diversity (plateaus/grasslands/forests/wetlands/deserts/mangroves)	1

Note: A survey of a part of the town or city should be carried out by the entire class in batches. Individual student will select one avenue/road and locate the trees planted on the graph paper. They will identify the trees, mention their size, canopy shape, flowering and fruiting period and their status (healthy, diseased, infested, misused or dying) and report the situation of plants. (The purpose of this exercise is to make the students aware of the kinds of trees and value in urban ecosystem and ecological services.) Submission of report on this survey will be assessed and marks out of 15 will be added as internal marks.

Course No.: 32
Department: Zoology
Implemented from: 2021-2022
Detailed Syllabus:
Title: Project (Course Code – ZO 3611)
[Credits-2]

Syllabus of Course

" Project "

Objectives of the Course:

Students have to complete the research project in the stipulated time and present the dissertation at the time of the examination in a proper format. Students should be encouraged to take up laboratory work, hands-on practical investigation and design experimental setup. They have to carry out field work under proper supervision and to take permissions from the concerned authorities. Students should be made aware of plagiarism and research ethics.
Possible key aspects of the project work -

1. Planning the project
2. Selecting a suitable title
3. Significance of the work
4. Hypothesis, Objectives
5. Reviewing the available literature
6. Methodology to be used
7. Outcomes of the Project work
8. Conclusion and Discussion
9. Future plans

Course No.: 33
Department: Computer Science
Implemented from: 2021-2022
Detailed Syllabus:
Title: Project (Course Code – CS 3611)
[Credits-2]

Syllabus of Course

"Project"

Teaching Scheme: 03 Lect/ week/Batch

Batch Size: 20

No. of Credits: 2

Examination Scheme IE : 15 marks **UE:** 35 marks

Project Guidelines:

- Students should work in a team of minimum 3 and maximum 4 students.
- Students can choose a project topic and implement the same using any language/technology covered in the curriculum so far. The operating environment must be linux.
- The student group will work independently throughout the project work including: problem identification, information searching, literature study, design and analysis, implementation, testing, and the final reporting.
- Project guide must conduct project presentations (minimum 2) to monitor the progress of the project groups.
- At the end of the project, the group should prepare a report which should conform to international academic standards. The report should follow the style in academic journals and books, with clear elements such as: abstract, background, aim, design and implementation, testing, conclusion and full references, Tables and figures should be numbered and referenced to in the report.
- The final project presentation with demonstration (UE) will be evaluated by the project guide (appointed by the college) and one external examiner (appointed by the University).

Recommended Documentation contents:
Abstract
Introduction

- motivation
- problem statement
- purpose/objective and goals
- literature survey
- project scope and limitations

System analysis

- Existing systems
- scope and limitations of existing systems
- project perspective, features
- stakeholders

- Requirement analysis - Functional requirements, performance requirements, security requirements etc.

System Design

- Design constraints
- System Model: Using OOSE
- Data Model
- User interfaces

Implementation details

- Software/hardware specifications

Outputs and Reports Testing

- Test Plan, Black Box Testing or Data Validation Test Cases, White Box Testing or Functional Validation Test cases and results

Conclusion and Recommendations Future Scope

Bibliography and References

Project Related Assignments

Guidelines:

- The project assignments are a compulsory part of the project course and should be carried out by each project group.
- Project assignments are to be given by the guide for continuous internal evaluation.
- The project assignments are to be allotted to each group separately by the project guide on the basis of the implementation technology. A suggested list of assignments is given below.

1. Project Time management: plan (schedule table), Gantt chart, Roles and responsibilities, data collection, Implementation
2. Simple assignments to evaluate choice of technology
3. Assignments on UI elements in chosen technology
4. Assignments on User interfaces in the project
5. Assignments on event handling in chosen technology
6. Assignments on Data handling in chosen technology
7. Online and offline connectivity
8. Report generation
9. Deployment considerations
10. Test cases

- Each student within the group must work actively and contribute to the assignments, project work and report writing.
- **Evaluation guidelines:**

IA (15 marks)			**UE (35 marks)**		
First presentation	Second presentation	Assignments	Project Logic/ Presentation	Assignments and Project Documentation	Viva
5	5	5	20	10	5

Course No.: 34
Department: Computer Science
Implemented from: 2020-2021
Detailed Syllabus:
Title: Project (Course Code – CSDT124A)
[Credits-2]

Syllabus of Course

"Project "

Total Credits: 2
Teaching Scheme

- Project: 2 hours/week
- Batch Size: 5 students

Workload :

1. One project guide to be assigned to 5 students.
2. 2 hours /week to be allotted for 5 students

Guidelines:

- Students should work in a team of minimum 2 and maximum 3 students.
- Students can choose a project topic without any restriction on technology or domain.
- The student group will work independently throughout the project work including: problem identification, information searching, literature study, design and analysis, implementation, testing, and the final reporting.
- Project guide must conduct project presentations (minimum 2) to monitor the progress of the project groups.
- At the end of the project, the group should prepare a report which should conform to international academic standards. The report should follow the style in academic journals and books, with clear elements such as: abstract, background, aim, design and implementation, testing, conclusion and full references, Tables and figures should be numbered and referenced to in the report.
- The final project presentation with demonstration (UE) will be evaluated by the project guide (appointed by the college) and one external examiner (appointed by the University).
- **Evaluation guidelines:**

IA (15 marks)			**UE (35 marks)**		
First presentation	Second presentation	Assignments	Project Logic/ Presentation	Documentation	Viva
5	5	5	20	5	10

Recommended Documentation contents:
Abstract
Introduction

- motivation
- problem statement
- purpose/objective and goals
- literature survey
- project scope and limitations

System analysis

- Existing systems
- scope and limitations of existing systems

- project perspective, features
- Stakeholders
- Requirement analysis - Functional requirements, performance requirements, security requirements etc.

System Design

- Design constraints
- System Model: UML diagrams
- Data Model
- User interfaces

Implementation details

- Software/hardware specifications

Outputs and Reports Testing

- Test Plan, Black Box Testing or Data Validation Test Cases, White Box Testing or Functional Validation Test cases and results

Conclusion and Recommendations Future Scope

Bibliography and References

CSDP124A: Project Related Assignments

Total Credits: 2

Teaching Scheme

- 2 lectures/week

Workload :

2 lectures/week

Guidelines:

- The project assignments are a compulsory part of the project course and should be carried out by each project group.
- Project assignments are to be given by the guide for continuous internal evaluation.
- The project assignments are to be allotted to each group separately by the project guide on the basis of the implementation technology. A suggested list of assignments is given below.

1. Project Time management: plan (schedule table), Gantt chart, Roles and responsibilities, data collection, Implementation
2. Simple assignments to evaluate choice of technology
3. Assignments on UI elements in chosen technology
4. Assignments on User interfaces in the project
5. Assignments on event handling in chosen technology
6. Assignments on Data handling in chosen technology
7. Online and offline connectivity
8. Report generation
9. Deployment considerations
10. Test cases

- Each student within the group must work actively and contribute to the assignments, project work and report writing.
- **Evaluation guidelines:**

IA (15 marks)		**UE (35 marks)**	
Attendance	Assignments	Assignments	Viva
5	10	25	10

Course No.: 35
Department: Computer Science
Implemented from: 2021-2022
Detailed Syllabus:
Title: Industrial Training /Institutional (Course Code – CSUIT241)
[Credits-4]

Syllabus of Course

"Industrial Training /Institutional project "

Teaching Scheme:

- 2 hours/week

The Industrial Training /Institutional project is equivalent to 5 theory courses of 4 credits each. Marks per 4 credits = 100. The total weightage for Industrial/Institutional training is 500 marks.

Workload :

- One mentor to be assigned for 5 students.
- 2 hours /week to be allotted for 5 students

Guidelines:

- Each student must individually complete minimum 5 months full time Industrial training / Institutional project in the 4th semester.
- College should assign a student mentor to every student. The mentor will monitor the progress of the student throughout the semester for continuous assessment.
- Student should submit a valid offer letter and synopsis within two weeks of starting the internship.
- There will be continuous assessment of the work done by the student during the internship period.
- Continuous assessment guidelines:

1. Student should submit a weekly report in the college to the mentor.
2. The report should contain the following details: Name of student, project title, company name, company mentor, daily activities and results/output, proposed work for next week.
3. The weekly report should be duly signed by the student and company mentor/ institute guide (CM).
4. Student Mentor should maintain weekly attendance record for every student.
5. Two presentations should be conducted for each student (first presentation after first month and second presentation after 3rd month)
6. Student Mentor should take feedback from the Company mentor regarding overall performance of the student.

- At the end of the internship period, each student should prepare a report which should conform to international academic standards.
- The report should follow the style in academic journals and books, with contents such as: abstract, background, aim, design and implementation, testing, conclusion and full references, Tables and figures should be numbered and referenced to in the report.

Examination and Evaluation guidelines

- The project done during internship period will be evaluated in the following manner:

IA - 150 marks + UE-350 marks.

- The final presentation and documentation will be evaluated by three examiners:

1. Student mentor (appointed by respective college)
2. External examiner (appointed by the University)
3. IT expert (appointed by respective college)

IA (150 marks)				
Weekly Attendance	**Weekly Reports**	**First Presentation**	**Second Presentation**	**Documentation**
20	40	20	40	30

UE (350 marks)		
Mentor	IT Experts	External Examinar
100	125	125

Recommended Documentation contents:

- Title page
- Company / Institute certificate Internship completion certificate Abstract
- **Introduction**
    1. motivation
    2. problem statement
    3. purpose/objective and goals
    4. literature survey
    5. project scope and limitations
- **System analysis**
    1. Comparative study of Existing systems
    2. scope and limitations of existing systems
    3. project perspective, features
    4. stakeholders
    5. Requirement analysis - Functional requirements, performance requirements, security requirements etc.
- **System Design**
    Design constraints
    System Model: UML diagrams
    Data Model
    User interfaces
- **Implementation details**
    Software/hardware specifications, etc.
- **Reports**
- **Testing**
    Test Plan, Black Box Testing or Data Validation Test Cases, White Box Testing or Functional Validation Test cases and results
- **Conclusion and Recommendations**
- **Future Scope**
- **Bibliography and References**

Skill Based Programs

Course No.: 36
Department: B.Voc
Implemented from: 2018-19
Detailed Syllabus:
Title: Practical –IV (On Job Training) (Course code-REP-2-5)
[Credits-12]

Syllabus of Course

"Practical –IV (On Job Training)"

Trainer Prerequisites for Job role:

Solar PV Installer Training Course (Suryamitra)SGJ/Q0101

Solar PV Engineer (Option: Solar Water Pumping Engineer) (SGJ/Q0112)

Solar PV Business Development Executive (SGJ/Q0107)

Solar PV Structural Design Engineer (SGJ/Q0109)

Solar PV Manufacturing Technician (SGJ/Q0119)

Course No.: 37

Department: B.Voc
Implemented from: 2019-2020
Detailed Syllabus:
Title: Practical – VI (On Job Training) (Course code-REP-3-5)
[Credits-12]

Syllabus of Course

"Practical – VI (On Job Training)"

Course Code: REP-3-5 Practical – VI **(12 Credits)**

Course Title: On Job Training

1) Solar Thermal Engineer- Industrial Process Heat(Option Consultant) SGJ/Q0603
2) Solar Thermal Plant Installation and Maintenance Technician SGJ/Q0602
3) Solar Lighting Technician (Option: Home lighting system/ street light)SGJ/Q0201

Course No.: 38

Department: B.Voc
Implemented from: 2019-2020
Detailed Syllabus:
Title: Practical – VIII (On Job Training) (Course code-REP-4-5)
[Credits-12]

Syllabus of Course

"Practical – VIII (On Job Training)"

Course Code: REP-4-5 Practical – VIII **(12 Credits)**

Course Title: On Job Training

Work Report, Viva, Presentation, Industry Certificate.

1. Solar PV Project helper. SGJ/ Q0111
2. Solar site In-charge SGJ/Q0113
3. Solar PV maintenance Technician- Electrical (Ground mount) SGJ/Q0115
4. Solar PV maintenance Technician- Civil (Ground mount) SGJ/Q0116

Course No.: 39

Department: B.Voc
Implemented from: 2020-2021
Detailed Syllabus:
Title: Practical – X(On Job Training) (Course code-REP-5-5)
[Credits-12]

Syllabus of Course

"Practical – X(On Job Training)"

Course Code: REP-5-5

(12 credit)

Course Title: Practical- X (On Job Training)

1. Rooftop solar grid Engineer SGJ/Q0106
2. Solar PV designer SGJ/ Q0110
3. Solar off-grid Entrepreneur
4. Certificate course in solar system designing AutoCAD.
5. Certificate Course in Solar Power Installation

Course No.: 40

Department: B.Voc
Implemented from: 2020-2021
Detailed Syllabus:
Title: Practical – XII (On Job Training) (Course code-REP-6-5)
[Credits-12]

Syllabus of Course

"Practical – XII (On Job Training)"

Course Code: REP-6-5
Course Title: Practical – XII (On Job Training) (12 credits)

Industrial Project: The Project work must be carried out in an industry/ R&D organization for a period of 8/10 weeks. Students should follow the SPPU and industry guidelines to earn credits in their industrial project work and report writing.

1. Solar proposal evaluation specialist SGJ/Q0105
2. Rooftop solar photovoltaic Entrepreneur SGJ/Q0104
3. Solar PV site surveyor SGJ/Q0108
4. Solar PV project manager (E and C) SGJ/ Q0114
5. Solar PV O&M Engineer (SGJ/Q0117)