

COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY

(Abstract)

Faculty of Science - Four Year Under Graduate Programme (FYUGP) and Five Year Integrated Post Graduate Programme (FYIPGP) effective from 2024 admission onwards - Syllabi of Ability Enhancement Courses (AEC) and Value Addition Courses - Resolution of the Academic Council - Orders modified - reg.

ACADEMIC A SECTION

No.CUSAT/AC(A).A3/4297/2024

Dated,KOCHI-22,07.10.2024

Read:-1. Item No. I (g)(1) of the minutes of the meeting of the Academic Council held on 30.04.2024

2. U.O.No.CUSAT/ AC(A).A3/3587/2024 dated 22.08.2024.

ORDER

The resolution of the Academic Council meeting held on 30.04.2024 approving the curriculum structure and syllabi of the Five-Year Integrated M.Sc Post-Graduate programmes under Faculty of Science with effect from 2024 admissions was communicated vide paper read at (2) above, wherein the approved syllabi of Ability Enhancement courses and Value Added courses were not included.

The said U.O. stands modified with following added under (2) of the list of approved syllabi :-

vi. Syllabi of Ability Enhancement courses (Appendix VII)

vii. Syllabi of Value Added courses (Appendix VIII)

Orders are, therefore, issued accordingly.

Dr. Arun A U *

Registrar

To:

1. The Dean, Faculty of Science/Technology
2. Chairpersons, All BoS under Faculty of Science/ BoS in Photonics/Computer Science
3. The Heads concerned of Depts offering FYUG/FYPG programmes / Co-ordinator, Centre for Integrated Science
4. All AR/DR Examination wing - with a request to forward to concerned sections
5. The Director, IQAC/ DoA
6. CIRM/Conference Sections
7. PS To VC/PVC;PA To Registrar/CE.

* This is a computer generated document. Hence no signature is required.

COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY

KOCHI-22



Four Year Under Graduate Programme
Ability Enhancement CourseS (AEC)

(2024 Admission onwards)

S.NO.	COURSE CODE	COURSE NAME	DEPARTMENT
1		AEC-I: BASIC HINDI	HINDI
2		AEC-II: HINDI PROSE	HINDI
3		AEC-I: MALAYALAM (LITERATURE AND SOCIETY)	HINDI
4		AEC II: MALAYALAM (LANGUAGE AND TECHNOLOGY)	HINDI
5		AEC I: FUNCTIONAL SANSKRIT	HINDI
6		AEC II: FUNCTIONAL SANSKRIT	HINDI
7		AEC I: ENGLISH FOR COMMUNICATION-1	ENGLISH AND FOREIGN LANGUAGES
8		AEC I: ENGLISH FOR COMMUNICATION-2	ENGLISH AND FOREIGN LANGUAGES
9		AEC-I COMMUNICATIVE GERMAN -1	ENGLISH AND FOREIGN LANGUAGES
10		AEC-II COMMUNICATIVE GERMAN -2	ENGLISH AND FOREIGN LANGUAGES

AEC-I -BASIC HINDI3 CREDITS

Course description-The syllabus aims to improve and strengthen the knowledge in the Hindi language.

CourseOutcomes(CO)

After completing the course the student will be able to:

CO	CO Statement	CL	Class Hrs	Lab Hrs	PSO
CO1	The course helps to gain basic knowledge about the Concept of Communication.	Understand	4	0	1,2
CO2	Helps to understand the types of communication.	Understand	4	0	1,2
CO3	To develop an interest in Reading and Writing	Understand	4	0	1,2
CO4	To develop the skill in Writing	Apply	8	0	1,2
CO5	To provide basic knowledge in sentence formation in Hindi.	Understand	10	0	1,2
CO6	To understand basic grammar and structure of Hindi language.	Analyze	10	0	1,2
CO7	To understand the way of pronunciation of Vowels and Consonants	Understand	4	0	1,2
CO8	Learning Hindi through Artificial Intelligence	Apply	4	0	1,2
	Total Number of Hours		48	0	

Module-I

Introduction to Communication -Meaning - Definition- Types of Communication- Introduction to Hindi Language-Alphabets- - Pronunciation of vowels and consonants- Pronunciation of words.

Module-II

Writing Skills - Basic Hindi Grammar – Noun – Pronoun – Adjective –Verb –Adverb – Preposition – Conjunction – Interjection - Cases and Case Endings- Sentence Formation in Hindi.

Module-III

AI Tool – LILA.

Reference:

1. Vyakaran Pradip-Ramdev M.A,Hindi Bhavan,Alahabad-2.
2. Vyavaharik Hindi Vyakaran tatha Rachna – Hardev Bahari, Lokbharati Prakashan, Prayagraj- 211 00.
3. Samanya Hindi Vyakaran tatha Rachna – Srikrishna Panday, Vani Prakashan, New Delhi- 110 002.
4. Basic Hindi Grammar & Compostion - Dr. Augustine Melettu- Oriental Publications, Pala-686 575.
5. Sankshipt Hindi Vyakaran-Kamataprasad Guru- Vani Prakashan,New Delhi- 110 002.
6. <http://lilappp.cdac.in/>

AEC-II : HINDI PROSE 3 CREDITS

Course description-The syllabus aims to improve and strengthen the knowledge in the Hindi language. It also provides an idea on Hindi literature.

Course Outcomes(CO)

After completing the course the student will be able to:

CO	CO Statement	CL	Class Hrs	Lab Hrs	PS O
CO1	Understanding the Meaning, Definition and Various prose forms of Hindi.	Understand	8	0	1,2
CO2	To make aware of the origin and development of Hindi Prose.	Understand	8		
CO3	Understanding the Social Life of Human Being Depicted in Hindi Prose	Understand	12	0	1,2
CO4	Describing the features of Hindi Prose written in different periods	Understand	12	0	1,2
CO5	Impart awareness about famous Prose Writers in Hindi	Understand	8	0	1,2
	Total Number of Hours		48	0	

MODULE-I

Introduction to Hindi Prose – Various forms of Hindi Prose–Essay and Other Prose Forms - Essay: Definition- Development of Hindi Essay - Famous Writers.

Prescribed Essays:

1. Asha – Balkrishna Bhatt
2. Naakhon Kyon Badhte Hain- Hazariprasad Dwivedi

MODULE-II Sketch

Sketches – Features- Famous Writers

Prescribed Sketch

1. Raziya – Ramvruksh Benipuri

MODULE III: Other Prose Forms

Other Prose Forms- Features- Famous Writers

1. Chiksaireda – Asghar Wajahat
2. Vikalang Sraddha ka Dour – Harishankar Parsayi

Reference:

1. Hindi ka Gadhya Sahitya - Dr. Ramchandra Tiwari- Vishwavidhyalay
Prakashan, Varanasi- 221 001
2. Yatra Sahitya ka Udbhav aur Vikas- Dr.Surendra Mathur, Sahitya
Prakashan,Delhi

AEC-I : MALAYALAM 3 CREDITS

സാഹിത്യവും സമൂഹവും

Course description മലയാള സാഹിത്യത്തിലെ വ്യത്യസ്ത സാഹിത്യ രൂപങ്ങളെക്കുറിച്ച് അറിവ് നേടുന്നു. കാവ്യാഭിരുചിയും, കാവ്യാസ്വാദന താല്പര്യവും വളർത്തുന്നു. സൗന്ദര്യാത്മകവും സർഗ്ഗാത്മകവുമായി ചിന്തിക്കാനും പ്രവർത്തിക്കാനും പ്രാപ്തരാക്കുന്നു.

CourseOutcomes(CO)

After completing the course the student will be able to:

CO	CO Statement	CL	Class Hrs	Lab Hrs	PS O
CO1	സാഹിത്യഭിരുചിയും, സാഹിത്യസ്വാദന താല്പര്യവും രൂപപ്പെടുത്തുക	Understand	10	0	1,2
CO2	വ്യവഹാരിക തലത്തിൽ മാതൃഭാഷ ഉപയോഗിക്കുന്നതിനുള്ള കഴിവ് വളർത്തിയെടുക്കുക	Understand	16	0	1,2
CO3	സർഗ്ഗാത്മക ശേഷി പരിപോഷിപ്പിക്കുക, സാമൂഹികമായ ഇടപെടലിനുള്ള പ്രേരണ നൽകുക	Apply	15	0	1,2
CO4	വിവരസാങ്കേതിക വിദ്യയുടെ മേഖലകളിൽ ഭാഷയുടെ വിപുലമായ സാധ്യതകളെ കുറിച്ച് വിദ്യാർത്ഥികൾക്ക് അറിവ് പകരുക	Understand	7	0	1,2
Total Number of Hours			48		

സാഹിത്യവും സമൂഹവും

(മലയാള കവിതയുടെ ചരിത്രം, ആധുനിക പ്രവണതകൾ, പ്രമേയം, ഭാഷ സമൂഹവുമായുള്ള ബന്ധം എന്നിവ പരിചയപ്പെടുത്തുന്നു. കവിതയുടെ പുതു പ്രവണതകൾ, സ്ത്രീ, പരിസ്ഥിതി, ദളിത്, ആദിവാസി, ലിംഗ പദവി തുടങ്ങിയ പ്രമേയങ്ങൾ ചർച്ച ചെയ്യുന്നു)

മൊഡ്യൂൾ-1 കവിത

പാഠഭാഗങ്ങൾ

1. ബുദ്ധനും ഞാനും നരിയും - ഇടശ്ശേരി ഗോവിന്ദൻ നായർ
2. മോഷണം - അയ്യപ്പ പണിക്കർ
3. പാദപ്രതിഷ്ഠ - സുഗതകുമാരി

കവിത പുതുപ്രവണതകൾ

1. സ്കൂൾ - ബിനു എം പള്ളിപ്പാട്
2. ആൺ നടി - വിജയരാജ മല്ലിക
3. ഇറുകെ - അമ്മു ദീപ
4. ആനക്കുയി(മുതുവാൻഭാഷ കവിത) - അശോകൻ മറയൂർ

മൊഡ്യൂൾ2- കഥ

(മലയാള ചെറുകഥാ പ്രസ്ഥാനം - വിവിധ കാലഘട്ടങ്ങൾ - ആധുനിക ആധുനീകാനന്തര പ്രവണതകൾ എന്നിവ ചർച്ച ചെയ്യുന്നു)

1. പൊതിച്ചോർ - കാരൂർ നീലകണ്ഠ പിള്ള
2. ചോലമരങ്ങൾ - സരസ്വതിയമ്മ
3. തിരുത്ത് - എൻ എസ് മാധവൻ

കഥ പുതുപ്രവണതകൾ

(ആധുനീകാനന്തര പ്രവണതകൾ - സ്ത്രീ പരിസ്ഥിതി - ഭളിത്, പാർശ്വവത്ക്കരിക്കപ്പെട്ട വിഷയങ്ങൾ, സമകാലിക പ്രവണതകൾ എന്നിവ ചർച്ച ചെയ്യുന്നു)

1. സെപ്റ്റംബർ 30 - കെ ആർ മീര
2. ഒരു പാട്ടിന്റെ ദൂരം - ശിഹാബുദ്ധീൻ

പൊയ്ത്തുറകടവ്

3. ഞാറുകൾ - രേഖാ രാജ്

മൊഡ്യൂൾ3 - വിവർത്തന കൃതികൾ

(മലയാള വിവർത്തന ചരിത്രം, വിവർത്തന രീതികൾ - വിവർത്തനത്തിലെ പരിമിതികൾ - സാംസ്കാരിക

വിനിമയങ്ങൾ - ഇതര ഭാഷകളിൽ നിന്നുള്ള സാഹിത്യകൃതികൾ മലയാള സാഹിത്യത്തിൽ ചെലുത്തിയ സ്വാധീനം)

1. പാലസ്തീനിയൻ കാമുകൻ - മഹ്മൂദ് ദർവീശ് - വിവ. സച്ചിദാനന്ദൻ

2. ലോക കഥ - വിവ. എം.ടി വാസുദേവൻ - എം. പി മുഹമ്മദ്

സഹായക ഗ്രന്ഥങ്ങൾ

1 . സാഹിത്യചരിത്രം പ്രസ്ഥാനങ്ങളിലൂടെ - (എഡി)ഡോ.കെ.എം.ജോർജ്ജ് , നാഷണൽബുക്സ് , 1973

2. മലയാളകവിതാസാഹിത്യചരിത്രം - ഡോ.എം.ലീലാവതി, കേരളസാഹിത്യഅക്കാദമി, 2011

3. മലയാളകവിതാപഠനങ്ങൾ - സച്ചിദാനന്ദൻ ,മാത്യൂഭൂമിബുക്സ്, 2014

4. ചെറുകഥയെന്നലൈലൻ - എം.ആർ.ചുറ്റൻ എസ്.പി.സി.എസ്. 1981

5. കഥ ആഖ്യാനവും അനുഭവസത്തയും - കെ.പി. അപ്പൻ , ഡി.സി.ബുക്സ് 2005

6.ഭാവുകത്വംമാറുന്നു -നരേന്ദ്രപ്രസാദ് ഡി.സി.ബുക്സ് 1986

7. മലയാളചെറുകഥാസാഹിത്യചരിത്രം - എം.എം.ബഷീർ, കേരളസാഹിത്യഅക്കാദമി 2001

8. കഥയുംഭാവുകത്വപരിണാമവും - കെ.എസ് രവീകുമാർ എസ്.പി.സി.എസ്. 2011

9 .അന്ധനായദൈവം : മലയാളനോവലിന്റെ 100 വർഷങ്ങൾ-

പി. കെ രാജശേഖരൻ'
ഡിസിബുക്സ് 1999

- 10 . ചെറുകഥയുടെ ചരമസ്ഥിതി - വി.രാജകൃഷ്ണൻ ,
ഡി.സി.ബുക്സ് , 1997.
11. അജ്ഞാതവുമായുള്ള അഭിമുഖങ്ങൾ - സുനിൽ പി. ഇളയിടം,
നാഷണൽ ബുക്സ്റ്റാൾ , 2011
12. ദലിത്പഠനം: സ്വത്വം സംസ്കാരം, സാഹിത്യം -
പ്രദീപൻപാമ്പിരിക്കുന്ന്,
കേരളഭാഷാഇൻസ്റ്റിറ്റ്യൂട്ട്
2007
13. കഥയും പരിസ്ഥിതിയും - ജി.മധുസൂദനൻ , ഡി.സി. ബുക്സ്,
2000
14. വിവർത്തന ചിന്തകൾ - ഡോ. വി ആർ
പ്രബോധ ചന്ദ്രൻ
ഡി.സി. ബുക്സ് 1994

AEC-II : MALAYALAM 3 CREDITS

ഭാഷയും സാങ്കേതിക വിദ്യയും

Course description ഭാഷാ പഠനത്തെ സാങ്കേതികമായി സമീപിക്കുന്നു. ഇ-മലയാളത്തിന്റെ സാധ്യതകളെ മനസ്സിലാക്കുന്നു. സൈബർ സാഹിത്യവായനകളെയും, രചനകളെയും പ്രോത്സാഹിപ്പിക്കുന്നു.

Course Outcomes (CO)

After completing the course the student will be able to:

CO	CO Statement	CL	Class Hrs	Lab Hrs	PS O
CO1	ഭാഷാസാങ്കേതിക വിദ്യയുടെ സാധ്യതകൾ മനസ്സിലാക്കുക	Understand	12	0	1,2
CO2	മലയാളത്തിലെ സൈബർ സാഹിത്യകൃതികൾ പരിചയപ്പെടുക	Understand	18	0	1,2
CO3	ആധുനിക സാങ്കേതിക വിദ്യയുടെ മേഖലകളിൽ ക്രിയാത്മകമായ ഇടപെടലുകൾക്കും, സർഗാത്മകമായ രചനകൾ നിർവ്വഹിക്കാനുമുള്ള നൈപുണി വളർത്തുക	Apply	18	0	1,2
Total			48		

മൊഡ്യൂൾ 1- മലയാളം കമ്പ്യൂട്ടിംഗ്

മലയാളം സോഫ്റ്റ്‌വെയർ - അച്ചടിവന്ന മാറ്റം - സ്വതന്ത്ര മലയാളം കമ്പ്യൂട്ടിംഗിന്റെ സംഭാവനകൾ- യൂനികോഡ് ഫോണ്ടുകൾ - ഹാൻ്റ് റൈറ്റിംഗ് ഇൻപുട്ട് - വോയ്സ് ഇൻപുട്ട് -

മൊഡ്യൂൾ 2 - സൈബർ സാഹിത്യം

മലയാളത്തിലെ സൈബർ സാഹിത്യകൃതികൾ പരിചയപ്പെടുത്തുന്നു.

1. ഋതുഭേദങ്ങൾ - ഡോണ മയൂര
2. ആദിമധ്യാന്തം - എസ്. ജയേഷ്

ഓൺലൈൻമാഗസിനുകൾ

ഇ-ജേണലുകൾ, ഇ-സാഹിത്യം, ഇ-വായന

മൊഡ്യൂൾ 3 - മലയാളം ബ്ലോഗ്

ബ്ലോഗ് ഭാഷ സവിശേഷതകൾ- സാഹിത്യബ്ലോഗുകൾ - കഥ, കവിത, നിരൂപണങ്ങൾ - മലയാളം വിക്കിപീഡിയ - വിക്കി ഗ്രന്ഥ ശാല - വിക്കി നിഘണ്ടു. - ഓൺലൈബ്രറികൾ

നവ മാധ്യമങ്ങളും മലയാളവും

സോഷ്യൽ നെറ്റ് വർക്കിംഗ് സൈറ്റുകൾ ട്വിറ്റർ, ഫെയ്സ് ബുക്ക്, യൂ ട്യൂബ് - മലയാളം നവമാധ്യമ മലയാള ഭാഷ

സഹായക ഗ്രന്ഥങ്ങൾ

1. ഇൻഫർമേഷൻ ടെക്നോളജി - ഡോ. അച്യുത് ശങ്കർ എസ്

നായർ, കേരളാ ഭാഷാ ഇൻസ്റ്റിറ്റ്യൂട്ട്

2. മലയാളം കമ്പ്യൂട്ടിംഗ് : പ്രസക്തിയും പ്രയോഗവും

(ഏഡിറ്റർ) - ശ്രീകാന്ത് ആർ.

വി

കേരള സർവ്വകലാശാല

3. വരൂ നമുക്ക് കമ്പ്യൂട്ടറും ഇന്റർനെറ്റും
പരിചയപ്പെടാം

- വി.കെ ആദർശ് - ഡി.സി

ബുക്സ്

4. ഇനി വായന ഇ-വായന -വി.കെ ആദർശ് -
ഡി.സി ബുക്സ്

5. സൈബർ മലയാളം - സുനീത ടി. വി -
കറന്റ്ബുക്സ്

6. വിവര സാങ്കേതിക വിദ്യ നിത്യ ജീവിതത്തിൽ -
വി.കെ ആദർശ് - കേരള
ഭാഷാഇൻസ്റ്റിറ്റ്യൂട്ട്

7. ഇന്റർനെറ്റ് ഒരു പഠനം - പി. സേതുമാധവൻ -
ലിപി

പബ്ലിക്ഷൻസ്

8. ഭാവനാതീതം-മലയാളത്തിലെ സൈബർകഥകൾ - (ഏഡിറ്റർ) -
പി.കെ രാജശേഖരൻ - ഡി.സി ബുക്സ്

AEC-I FUNCTIONAL SANSKRIT 3 CREDITS

Course description- This course introduces students to the practical application of Sanskrit Language skills for various purposes such as reading ,writing, communicating and chanting verses. It often emphasizes both grammar and vocabulary along with cultural and historical insights to

enhance comprehension and usage. Understanding the historical development of Sanskrit, its influence on Indian culture and the significance of key literary and Philosophical

works.FunctionalSanskrit Course aims to provide students with the linguistic skills,cultural knowledge and practical proficiency needed to engage with Sanskrit texts and traditions effectively.

Course Outcomes(CO)

After completing the course the student will be able to:

CO	CO Statement	CL	Class Hrs	Lab Hrs	PSO
CO1	संस्कृतसाहित्यस्य संस्कृतभाषायाः पारम्परिकपद्धतेः अवगमनम्	Understand	15	0	1,2
CO2	संस्कृतस्य मूलसंरचनानाम् अवगमनम्	Understand	15	0	1,2
CO3	संस्कृतव्याकरणस्य सिद्धान्तानां प्रयोगपरिचयः	Apply	18	0	1,2
Total Hours			48	0	

MODULE I.

संस्कृतसाहित्यस्य संक्षिप्तम् अध्ययनम् -वैदिककालः, लौकिककालः|

Brief study of Sanskrit Literature - The Vedic Period, The Classical Period.

MODULE II.

संज्ञा,लिङ्ग विभक्तिवचनानां विस्तृताध्ययनम् | सुबन्तपरिचयः-

बालः,कवि,गुरुः,पितृ,रमा,नदी,मातृ,वनम्,अस्मद् ,युष्मद् ,तत् |

Detailed study of Nouns, introducing Linga, Vibhakti and Vachana,

बालः,कवि,गुरुः,पितृ,रमा,नदी,मातृ,वनम्,अस्मद् ,युष्मद् ,तत् |

तिङन्तपरिचयः- भू धातु -लट्,लङ्,लोट्,लृट् | वन्द् धातु -लट्,लङ् |

Detailed study of Lakaras. भू धातु -लट्,लङ्,लोट्,लृट् | वन्द् धातु -लट्,लङ् |

.एतान् शब्दान् प्रयुज्य वाक्यनिर्माणं करोतु - यदा-तदा ,यदि-तर्हि,यथा-तथा , सह , विना |

Sentence construction using यदा-तदा ,यदि-तर्हि,यथा-तथा , सह , विना |

MODULE III.

चितानि सुभाषितानि | Selected Subhashitas.

1.हंसः श्वेतो बकः श्वेतः को भेदो बकहंसयोः |

नीरक्षीरविवेके तु हंसो हंसो बको बकः |

2.आशा नाम मनुष्याणां काचिदाश्चर्यशृङ्खला |

यया बध्वा प्रधावन्ति मुक्तास्तिष्ठन्ति पङ्गुवत् ||

3.अपि स्वर्णमयी लङ्का न मे लक्ष्मण रोचते |

जननी जन्मभूमिश्च स्वर्गादपि गरीयसी ||

4.सदयं हृदयं यस्य भाषितं सत्यभूषितम् |

कायः परहिते यस्य कलिस्तस्य करोति किम् ||

5.ददाति प्रतिगृह्णाति गुह्यमाख्यन्ति पृच्छति |

भुङ्क्ते भोजयते चैव षट्विधं प्रीतिलक्षणम् ||

Prescribed Texts:

1.A Short History of Sanskrit Literature- T.K. Ramachandra Aiyar.Published by R.S Vadhyar & Sons, Kalpathi, Palaghat.Pages -1-13 & 24-54.

2.शब्दरूपावलीः,चौखम्बा कृष्णदास अकादमी ,वाराणसी |

3.धातुरूपावलीः,चौखम्बा कृष्णदास अकादमी ,वाराणसी |

4.सुभाषित संस्कृतम् , संस्कृतभारती,बेङ्गलूरु |

References:

A History of Sanskrit Literature., A.B Keith.

A Aistory of Ancient Sanskrit Literature- Max Muller.

AEC-II : FUNCTIONAL SANSKRIT (POETRY AND FABLES) 3 CREDITS

Course description- This course explores the rich traditions of poetry and fables, examining their historical significance and enduring relevance. Students will analyze various poetic forms, styles and techniques, as well as the moral lessons conveyed through fables. Through close reading, discussion and creative exercises, students will develop their understanding of literary devices and themes while honing their skills in critical thinking and interpretation.

Course Outcomes(CO)

After completing the course the student will be able to:

CO	CO Statement	CL	Class Hrs	Lab Hrs	PSO
CO1	संस्कृतकाव्यस्य पशुपक्षिकथानां च अवगमनम्	Understand	15	0	1,2
CO2	संस्कृतकाव्यस्य वैशिष्ट्यस्य अवगमनम् ।	Understand	15	0	1,2
CO3	पशुपक्षिसंबद्धकथामाध्यमेन छात्राणां नैतिकता शिक्षणम् ।	Understand	18	0	1,2
	Total		48	0	

Module I

काव्यसामान्यपरिचयः- पञ्चमहाकाव्यानि, मेघसन्देश एवं सन्देशकाव्यम्, कालिदासस्य ग्रन्थाः च ।

General introduction to Kavyas-Panchamahakavyas and Sandesakavyas like Meghasandesa and Kalidasa and his works.

रघुवंशमहाकाव्ये द्वितीयसर्गस्य समग्रमध्ययनम् । श्लोकाः 1-25.

Detailed study of Raghuvamsa II Canto of Kalidasa Verses 1-25

रघुवंशमहाकाव्ये द्वितीयसर्गस्य समग्रमध्ययनम् | श्लोकाः 26-40. Detailed study of Raghuvamsa II Canto of Kalidasa Verses 26-40.

Module II

पशुपक्षिकथानां परिचयः|पञ्चतन्त्रकथायाः समग्रमध्ययनम्- मित्रभेदः-बककुलीरकथा

An introduction to Fables. Detailed study of the story of Panchatantra (Mitrabheda)Bakakuleerakatha.

Module III

पञ्चतन्त्रकथायाः समग्रमध्ययनम्-मित्रभेदः-मन्दविसर्पिणिनाम यूककथा ,धर्मबुद्धि -पापबुद्धि च |

Detailed study of Panchatantra (Mitrabhedakatha) -Mandavisarpininama Yuka Katha- Dharmabuddhi and Papabuddhi.

Prescribed Texts:

1.A Short History of Sanskrit Literature- T.K. Ramachandra Aiyar.Published by R.S Vadhyar & Sons, Kalpathi, Palaghat. 3rd Edition 1998

2.Raghuvamsa of Kalidasa II Canto,T.K. Ramachandra Aiyar.Published by R.S Vadhyar & Sons, Kalpathi, Palaghat. 3rd 1998

3.Panchatantra of Vishnusarma.

References:

A History of Sanskrit Literature., A.B Keith.

A History of Ancient Sanskrit Literature- Max Muller.

AEC I: ENGLISH FOR COMMUNICATION -I (3 CREDITS)

Course Description

This course is designed so as to give the students a firm foundation in basic grammar and communication skills. It focuses on developing the core skills of English Communication: Listening, Speaking, Reading, and Writing (LSRW Skills).

Course Outcomes (CO)

After the completion of the course, the learners will be able to:

CO	CO Statement	CL	Class Hrs	Lab Hrs	PSO
CO 1	Improve their proficiency in Listening and Reading skills	Understand	5	0	5
CO 2	Improve their proficiency in Speaking skills	Understand	5	0	5
CO 3	Improve their proficiency in Writing skills.	Understand	8	0	5
CO 4	Enrich their vocabulary through reading practice.	Understand	4	0	5
CO 5	Strengthen their ability to write paragraphs, essays, emails, and letters.	Understand	8	0	5
CO 6	Improve their situational and structured conversational skills through practice	Understand	5	0	5
CO 7	Understand the importance of grammar and usage in communication.	Understand	10	0	5
	Total number of hours		45	0	

Module 1 Communicative Grammar

- I. Articles
- II. The Verb : Subject, Direct object, Indirect Object
- III. Find the Subject
- IV. Tenses: The Simple Present; The Present Continuous; The Present Perfect; The Simple Past; Past Continuous; Past Perfect
- V. Expressing the Future
- VI. Questions : Yes/No questions; Constituent Questions; Question Tags
- VII. Passives
- VIII. Relative pronouns and Relative adverbs
- IX. Comparatives
- X. Prepositions

Module 2: Reading Skills

This module aims to provide students with active reading experiences and equip them with strategies that will generate critical thinking.

A reading text will be provided as part of the course material and Pre-reading and After-reading activities will be included. Pre-reading includes introductory discussion questions, general awareness of the reading text and/or pictures based on the text.

After-reading activities will be: preparation of glossary, answering comprehensive questions based on the text, and enrichment of vocabulary.

Course material for teaching reading skills can be chosen by the teacher.

Module 3- Listening/Speaking Skills

Conversations based on common daily situations: Meeting people, Daily activities, Meeting at the airport, meeting at the railway station, asking directions, asking time, telephone conversations.

Conversation based on structures: Simple questions and negatives; short answers; interrogative words; irregular verbs; comparisons; tag questions; Short additions.

Module 4- Writing Skills

Factual Writing (Choose compositions that contain objective features)

Imaginative Writing (Narrative, Descriptive, Impressionistic, Dramatic, Discursive, Expository)

Letter writing: Friendly letters; Notes of Invitations; Letters to Newspapers

Email writing

References

Wren & Martin *High School English Grammar and Composition*, S. Chand Publishing, New Delhi. 2023

Wood, F.T., *A Remedial English Grammar For Foreign Students* Macmillan India, 2001.

Prof. Gunashekar, Paul, Prof. Jayaseelan K.A., Prof. Sasikumar V., *Book 1 Functional Grammar* OUP, 2003.

Taylor, Grant *English Conversation Practice* McGraw Hill India, 2004.

Prof. Aravindakshan V, Shubha N., *Effective Writing* MGU & Cosmo Books, Trissur, 2002.

AEC-II:ENGLISH FOR COMMUNICATION – 23 CREDITS)

Course Description

This course focuses on the aspects of vocabulary building, phrasal verbs and fixed expression. The importance the art of condensation, drafting letters of application and elements of editing and proof reading are also included in this course.

Learning Outcomes (LO)

After the completion of the course, the learners will be able to:

CO	CO Statement	CL	Class Hrs	Lab Hrs	PS O
CO1	Improve their English vocabulary	Understand	10	0	5
CO2	Improve their use of phrasal verbs and fixed expressions in English	Understand	10	0	5
CO3	Summarise their writing	Understand	4	0	5
CO4	Draft reports based on talks, activities and scientific experiments	Understand	8	0	5
CO5	Draft job application letter with CV	Understand	5	0	5
CO6	Edit and proof read their content successfully	Understand	8	0	5
	Total Number of Hours		45	0	

Module I

Vocabulary

1. Word formation –

Suffixes, prefixes, roots, homonyms

2. Connecting and linking -

Time (e.g. as soon as, while, afterwards)

Condition (e.g. unless, provided that)

Cause, reason, purpose and result (e.g. owing to, with the aim of, as a result)

Module II

1. Phrasal verbs

(bring up, break down, break into, look into, call off, take in, take after, take off, get by, get away with, get through, get up to, put across, put off, pick up, hold on, let down, look forward to, see off, run into, turn down, rip off, cut back, come in for, take over)

2. Idioms

(Be on cloud nine, be up to scratch, toe the line, sour grapes, upset the applecart, bark up the wrong tree, white elephant, couch potato, culture shock, carte blanche)

Module III

1. Summarising (Precis writing)
2. Report writing - A conference, a scientific experiment, an incident
3. Job application letter with CV

Module IV

Editing and Proofreading

1. Editing for making corrections
2. Proofreading for grammar, sentence structure, punctuation, spelling, and capitalization mistakes.

References

McCarthy, Michael; O'Dell, Felicity, *English Vocabulary in Use upper-intermediate* CUP, UK, 2003.

Applebee, Jane, Rush, Anton, *Help With Idioms* Heinemann Indian Edition, New Delhi, 1996.

Kumar, Sanjay ; Pushp Lata, *Communication Skills* OUP, Noida, 2011.

McCarthy, Michael; O'Dell, Felicity, *English Phrasal Verbs in Use* CUP, India, 2008.

McCarthy, Michael; O'Dell, Felicity, *English Idioms in Use*, CUP, India, 2002.

AEC-I COMMUNICATIVE GERMAN -1 3 CREDITS)

Course Description

This course focuses on basic linguistic and communicative structures of the German language.

Students will be introduced to various aspects of German culture and will learn to communicate in simple everyday situations through personal interactions.

The module will adopt an integrated approach to language learning and will emphasize equally all four skills of reading, writing, listening and speaking as well as the acquisition of grammar structures and vocabulary. Audio and video materials will also be used to supplement the textbook and to provide students with a better insight into Germany, her culture and the life of her people.

Course Structure and Schedule:

The duration of the course is 45hours and final exam at the course end. The exam comprises reading, listening, writing and speaking sections.

Course Outcomes (CO)

After the completion of the course, the learners will be able to:

CO	CO Statement	CL	Class Hrs	Lab Hrs	PS O
CO 1	Improve their proficiency in Listening and Reading skills	Understand	6	0	5
CO 2	Improve their proficiency in Speaking skills	Understand	6	0	5
CO 3	Improve their proficiency in Writing skills.	Understand	6	0	5
CO 4	Enrich their vocabulary through reading practice.	Understand	6	0	5
CO 5	Strengthen their ability in sentence skills	Understand	6	0	5
CO 6	Improve their situational and structured conversational skills through practice	Understand	6	0	5
CO 7	Understand the importance of grammar and usage in communication.	Understand	9	0	5
Total Number of			45		

Hours					
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MODULE 1. LISTENING

The student understands authentic texts related to situations, the contents of which correspond to their spheres of experience and interest.

They are in a position to grasp what they heard from the context, even when some expressions are unknown to them.

MODULE 2. SPEAKING

- Self introduction

Communication

The students are ready and able to participate actively in a conversation. They express their thoughts, opinions and feelings as the situation requires.

- Use of language

They make use of vocabulary available and employ their knowledge of grammar structures.

- Pronunciation and Intonation

They make use of understandable pronunciation and appropriate intonation.

MODULE 3. READING

- Reading and understanding

The student understands texts, grasp their contents, order the information acquired and combine new with known. They also enjoy reading texts in a foreign language.

MODULE 4. WRITING

Informal letter writing and form filling.

Course Content

Topics/Communicative Situations

Grammar

Greetings	Intonation of Words and Sentences
Self-Introduction	Conjugation of Regular Verbs
German Alphabet	Conjugation of Irregular Verbs
International Words in German Vocabulary	Nouns and Gender
Working with a Dictionary	Plural Forms of Nouns
Numbers 0-1000	Definite and Indefinite Articles
Communication and Things in the Classroom	Word Order: Statements and Questions
Asking Questions about a Person	Interrogative Pronouns
Travelling/Living Abroad	Personal Pronouns
Geography of Europe	Interrogative Pronouns
Describing One's Hobbies and Interests	Sentence Structures
Describing a Person	Negation using nicht
Conversational Discourse (Dialogues)	Negation using kein/keine
Conversing over the Phone	Imperative (formal, informal)
Vocabulary Learning & Grouping	Nominative, Accusative Case and Dativ Case
Meeting People	Negation in Accusative Case
Small Talk in a Café	Syntax: Nominative, Accusative
Food & Drinks	Complements
Ordering Food in a Restaurant	Separable Verbs
Writing a Letter	Modalverbs: möchten, können, wollen, sollen, müssen & mögen
Payment in a Restaurant	Prepositions with the Accusative and Dative Case
Telling Time	Possessive Pronouns
Time Phrases	Demonstrative Pronouns
Days of the Week	
Fixing an Appointment	

Making and Accepting an Invitation Introducing the Family/Family Life Food Items Measurements, Clothing & Colours Doing the Groceries	Possessivpronoun in Nominative and Accusative Welcher/dieser in Nominative and Accusative
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References

Dengler, Stefanie , *NETZWERK neu Deutsch als Fremdsprache A1* Lesson 1-6. Goyal Publishers Pvt. Ltd., India, 2020.

Paul Rusch

Helen Schmitz

AEC -II : COMMUNICATIVE GERMAN –2(3 CREDITS)

Course Description

This course is the continuation of Communicative German –1.

Students will be practicing various aspects of German culture and will learn to communicate in simple everyday situations through personal interactions.

The module will adopt an integrated approach to language learning and will emphasize equally all four skills of reading, writing, listening and speaking as well as the acquisition of grammar structures and vocabulary. Audio and video materials will also be used to supplement the textbook and to provide students with a better insight into Germany, her culture and the life of her people.

Course Outcomes (CO)

After the completion of the course, the learners will be able to:

CO	CO Statement	CL	Class Hrs	Lab Hrs	PS O
CO 1	Enhance their proficiency in Listening and Reading skills	Understand	6	0	5
CO 2	Improve their proficiency in Speaking skills	Understand	6	0	5
CO 3	Improve their proficiency in Writing skills.	Understand	6	0	5
CO 4	Further their vocabulary skills through reading	Understand	6	0	5
CO 5	Strengthen their ability to write emails and letters.	Understand	6	0	5
CO 6	Improve their situational and structured conversational skills through practice	Understand	6	0	5
CO 7	Understand the importance of grammar and usage in communication.	Understand	9	0	5
Total Number of Hours			45		

Course Structure and Schedule:

The duration of the course is 45 hours and final exam at the course end. The exam comprises reading, listening, writing and speaking sections.

MODULE 1. LISTENING

The student understands authentic texts related to situations, the contents of which correspond to their spheres of experience and interest.

They are in a position to grasp what they heard from the context, even when some expressions are unknown to them.

MODULE 2. **SPEAKING**

- Self introduction

Communication

The students are ready and able to participate actively in a conversation. They express their thoughts, opinions and feelings as the situation requires.

- Use of language

They make use of vocabulary available and employ their knowledge of grammar structures.

- Pronunciation and Intonation

They make use of understandable pronunciation and appropriate intonation.

MODULE 3. **READING**

- Reading and understanding

The student understands texts, grasp their contents, order the information acquired and combine new with known. They also enjoy reading texts in a foreign language.

MODULE 4. **WRITING**

Informal letter writing and form filling.

Course Content

Assuming regular attendance and independent study, the students should be able learn the following in German language by the end of this course:

- Speaking about food, eating habits, shopping in supermarket
- Daily routine
- Telephonic appointments
- Time
- Birthday celebration, birthday invitation writing and replying
- Placing order and making payment in restaurant.
- Framing w-questions and yes/no questions
- Exchange simple information about family, work, outings, holidays, home, etc.
- Introduce self and others in a simple way
- Talk about everyday activities and hobbies
- Ask and answer questions in a simple way about ordinary things: shopping, restaurants, cafés, etc.

Grammar –

- Accusative verbs.
- Prepositions
- Possessive pronouns
- Modal verbs
- Separable verbs (trennbare verben)
- Past tense of 'haben' and 'sein' verb

- **References**

-

- Dengler, Stefanie , Paul Rusch, Helen Schmitz, *NETZWERK neu Deutsch als Fremdsprache A1* Lesson 6-12. Goyal Publishers Pvt. Ltd., India, 2020.

APPENDIX VIII

LIST OF VALUE-ADDED COURSES (VAC) ALL ARE 3 CREDIT COURSES

S.NO.	COURSE CODE	COURSE NAME	DEPARTMENT
1		VAC-I - HEALTH AND FITNESS EDUCATION	PHYSICAL EDUCATION
2		VAC II- LIFESTYLE DISEASE AND PHYSICAL ACTIVITY	PHYSICAL EDUCATION
3		VAC -I: FUNDAMENTAL RIGHTS AND CONSTITUTIONAL PROTECTION	SCHOOL OF LEGAL STUDIES
4		VAC-II: LAWS ON HUMAN EXPERIMENTATION	SCHOOL OF LEGAL STUDIES
5		VAC-III: FUNDAMENTALS OF HUMAN RIGHTS	SCHOOL OF LEGAL STUDIES
6		VAC IV: FUNDAMENTALS OF CRIMINAL PROCESS	SCHOOL OF LEGAL STUDIES
7		VAC V: FUNDAMENTALS OF ENVIRONMENTAL PROTECTION LAW	SCHOOL OF LEGAL STUDIES
8		VAC-1 ENVIRONMENTAL STUDIES	SCHOOL OF ENVIRONMENTAL STUDIES
9		VAC-II: ENVIRONMENTAL SUSTAINABILITY PRACTICES	SCHOOL OF ENVIRONMENTAL STUDIES

VAC-I: HEALTH AND FITNESS EDUCATION (3CREDITS)

Course Description

The Health and Fitness Education course endeavours to furnish students with a thorough comprehension of the principles and methodologies essential for maintaining a healthy lifestyle, fostering fitness, and averting health-related challenges. Additionally, students will acquire practical skills and knowledge applicable to enhancing personal well-being or pursuing opportunities within health and fitness-related domains.

CO No.	Course Outcomes	CL
CO1	Understand the concept of fitness, and health education	Understand
CO2	Understand the Comprehend strategies for preventing and managing both communicable and non-communicable diseases.	Understand
CO3	Analyse the health concerns	Analyse
CO4	Understand the significance of hygiene practices and access to health services.	Understand
CO5	Learn skills in health assessment and record-keeping.	Apply
CO6	Interpret the functions of public health organizations and their intervention methods. Demonstrate correct exercise methods while prioritizing safety. Describe to individuals the correlation between physical activity and mental well-being, aiming to alleviate stress and anxiety while enhancing overall emotional health.	Analyse, Understand

Module I: Introduction to Health and Fitness (8 Hrs)

Basic concepts, definitions and dimensions of health and factors influencing health, recognizing the significance of health education. , Benefits of maintaining a healthy lifestyle. Physical fitness components: health related, performance related, and biological development influenced by fitness

Module II: Health Concerns (9 Hrs)

Diseases that can spread between people and those that cannot, Two different ways of Disease transmission: Immediate and indirect, Ways to prevent and control diseases, Significance of vaccines in disease prevention, Varieties of vaccines.

Module III: Healthcare facilities (9 Hrs)

Health care provisions and their goals, Health services in schools, The role of health education within educational institutions, The significance of health services in schools, Medical check-ups and examinations, The importance of personal hygiene, Environmental hygiene in school

settings, Methods for establishing and sustaining a healthy school environment, Nutritional principles to adhere to

Module IV: Public health and community wellness (9 Hrs)

Definition of public health, the breadth of its scope, and its objectives, Community health: its scope and goals, Public health initiatives conducted by both public and private sectors, Programs focused on community health, Promoting physical activity for health and wellness, Recommended guidelines for physical exercise.

Activities (10 Hrs)

Health screening: methodology and approaches, Evaluations of health status, Assessments of health and fitness, Measurement of height & weight, foundational strength, endurance, and flexibility, as well as cardiovascular health, Health-related fitness assessments

References:

- Lorraine Cale, Jo Harris & Ming Hung Chen (2014) Monitoring health, activity and fitness in physical education: its current and future state of health, Sport, Education and Society
- AK, D. U. (1992). Physical fitness: How to Develop.
- Garcia, L. M. (2021). Health Education and Promotion: Strategies for Improving Public Health (3rd ed.). Wiley.

VAC-II: LIFESTYLE DISEASE AND PHYSICAL ACTIVITY (3 CREDITS)

Course Description

The objective of this course is to equip students with the knowledge and skills necessary to advocate for healthy living and combat lifestyle diseases by making informed decisions regarding nutrition and physical activity.

Course Outcomes (CO):

CO	Course Outcomes	CL
CO1	Define the concept of lifestyle diseases and differentiate them from other health conditions.	Understand
CO2	Understand the significant risk factors linked to lifestyle diseases, such as inadequate nutrition, physical inactivity etc.	Understand
CO3	Analyse the influence of lifestyle decisions—such as dietary habits, exercise routines, and stress management—on overall health and susceptibility to diseases.	Analyse
CO4	Evaluate various types of exercises and assess their practicality for diverse individuals.	Apply
CO5	Understand the fundamentals about essential nutrients, encompassing carbohydrates, proteins, fats, vitamins, and minerals.	Understand
CO6	Develop the capacity to devise varied and efficient fitness regimens tailored to different fitness levels.	Apply

Module I: Introduction to Lifestyle-Related Health Conditions (8 Hrs)

Understanding Lifestyle-Related Health Conditions: Definition, Traits, and Prevalence, Impacts of Unhealthy Lifestyle Choices, The Significance of Physical Activity and Adopting Healthy Habits

Module II: Varieties of Lifestyle-Related Ailments (9 Hrs)

Diabetes, Obesity, Hypertension, Coronary Artery Disease, Osteoporosis, Chronic Back Pain, PCOS: Etiology, Symptoms, Risk Factors, and Treatment Options, Psychosomatic Disorders: Stress, Anxiety, Depression - Causes, Symptoms, Risk Factors, and Management Strategies

Module III: Physical Activity and Lifestyle-Related Health Conditions (9Hrs)

Vital Signs: Blood Pressure, Pulse Rate, Body Temperature, Respiratory Rate, Assessment: BMI, Waist-to-Hip Ratio, Fundamental Exercise Principles: Various Exercise Types.

Physical Activities: Bodyweight Exercises, Mobility Exercises, Resistance Band and Loop Exercises, Dumbbell and Kettlebell Exercises, Enhancing Physical Fitness Components - Strength, Endurance, Flexibility, Balance, and Coordination

Module IV: Dietary Patterns and Lifestyle-Related Health Conditions (9 Hrs)

Nutrients: Macronutrients and Micronutrients, Significance of Nutrition and Dietary Practices: Recommended Dietary Allowances (RDA) for the General Population and Specific Groups, Comprehending Basal Metabolic Rate (BMR), Calories, and Energy Equilibrium, Deficiency

Diseases Caused by Nutritional Imbalance, Rest, Sleep, Screen Time, Substance Abuse, and Sedentary Behaviour

Activities (10 Hrs)

Engaging in activities like Aerobics, Zumba, Yoga, and gym workouts etc. Keeping track of personal health data such as BMI, WHR, RHR, THR, etc.

References

1. Egger G, Bennis A, Rossner S; Sagner M (2017). Lifestyle Medicine Lifestyle, the Environmental and preventive Medicine and Disease. 3rd Edition, Academic publishers.
2. Rippe, J.M. (2017). Nutrition in Lifestyle Medicine: Overview. In: Rippe, J. (eds) Nutrition in Lifestyle Medicine. Nutrition and Health. Humana Press, Cham.
3. Silent Night D Jim Revees, Peter Jude K Antony (2015). Health and Physical fitness - Awareness, status and academics. Lambert Academic Publishing.
4. Singh D Anoop (2018). Physical Fitness and health. Delhin Random Publications.
5. Rosett W J, Jhangiani S S (2017). Obesity and Disease in an Interconnected World: A Systems Approach to Turn Huge Challenges into Amazing Opportunities. Bentham Books.
6. B. Srilakshmi (2014). Dietetics. 7th Edition, New age International publishers

VAC -I: FUNDAMENTAL RIGHTS AND CONSTITUTIONAL PROTECTION (3 CREDITS)

Course description-

Understanding the concept of State & Fundamental rights of Citizens. Understanding the meaning and relevance of Directive Principles of State Policy and to distinguish between the Fundamental Rights and Directive Principles in terms of justiciability and priority. To discuss the right to freedom and the reasonable restrictions on them. To analyse various fundamental rights in the light of relevant case laws. To understand the application and enforcement of fundamental rights under Articles 32 and 226.:

Course Outcomes (CO)

After completing the course the student will be able to:

CO	CO Statement	CL	Class Hrs	Lab Hrs	PS O
CO 1	Outline of the State and individual relationship in a constitutional system.	Understand	6	0	6,7
CO 2	Explain various fundamental rights guaranteed by the Constitution.	Understand	14	0	6,7
CO 3	Explain Directive Principles of State Policy and its significance.	Understand	12	0	6,7
CO 4	Understand the incorporation of new rights into part III of the Constitution and its significance.	Understand	8	0	6,7
CO 5	Formulate problems and enabling students to invoke and enforce constitutional rights.	Application	8	0	6,7
			48	0	

Module I: Concept of State- Functions of State, State under Constitution, Preamble of Indian Constitution.

Module II: Fundamental Rights- Part III of the Constitution, Right to equality, right to freedoms- reasonable restrictions- Right to Life- Right Against Exploitation- Rights of the Minorities.

Module III: Directive Principles of State Policy- Important directives- enforceability- incorporation into Part III- Fundamental Duties-Enforcement of Fundamental Rights- Articles 226 and 32- Distinction- Case laws.

Suggested Readings:

1. M.P. Jain, *Indian Constitutional Law*, Wadhwa and Company, New Delhi, 2008.
2. H.M. Seervai, *Constitutional Law of India, A Critical Commentary, Vol.3*, M.N. Tripathi Pvt. Ltd., Bombay, 1996.
3. Dr. Subhash C. Kashyap, *Constitution of India, Review and Reassessment*, Universal Law Publishing Co. Ltd., Delhi, 2006.
4. Hidayathullah- *Constitutional Law of India* (1984) Vol. 1.
5. Mahendra P. Singh- *Comparative Constitutional Law* (1989) Part III.

VAC-II: LAWS ON HUMAN EXPERIMENTATION (3 CREDITS)

Course description-

By the wake of science and technology the research interventions in human beings are evolving and the legal and ethical challenges are also emerging. The law and ethics of human experimentation is thus worth learning. The course tries to introduce the fundamental legal and ethical principles relating to human experimentation. It will create awareness among researchers and students from different discipline to learn the ethical and legal dimensions of research involving human subjects. The course can help to have creative debates in the area and will enable to suggest improvements for the law.

Course Outcomes (CO)

After completing the course the student will be able to:

CO	CO Statement	CL	Class Hrs	Lab Hrs	PS O
CO 1	Explain the idea of human experimentation and help to identify different instances of human experimentation.	Understand	6	0	6,7
CO 2	Analyse the international and national legal framework on human experimentation.	Understand	12	0	6,7
CO 3	Explain the guidelines on clinical trials.	Understand	9	0	6,7
CO 4	Concept of human life and ethical concerns in cases involving medical intervention	Application	6	0	6,7
CO 5	Explain the rights of various stakeholders in research involving human subjects.	Application	15	0	6,7
			48	0	

Course Contents:

Module I: Human experimentation- definition and evolutionary perspectives- Pre and Post Nuremberg laws- Human experimentation- international standards- Helsinki Declaration- Belmont Report- Universal Declaration on Bio Ethics and Human Rights.

Module II: Clinical Trials & Bio- medical Research- international regulatory framework- national regulatory framework- Drugs and Cosmetics Act- NDCT Rules- ICMR guidelines.

Module III: Balancing the Rights of Human Subjects and the Researchers- Rights of researchers- medical interventions having ethical challenges- Organ Transplantation, Euthanasia and Artificial Reproductive Techniques.

Suggested Readings

1. Robert J. Levine, *Ethics and Regulation of Clinical Research* (1988), Yale University Press, New Haven.
2. Jonathan Herring, *Medical Law and Ethics*, Oxford University Press.
3. Emily Jackson, *Medical Law: Texts Cases and Materials*, Oxford University Press.
4. Bonnie F. Fremgen, *Medical Law and Ethics*, Prentice Hall.
5. *Bioethics, Medicine and the Criminal Law*, (Edited Book in 3 Volumes), Cambridge University Press.
6. George P. Smith, *Human Rights and Biomedicine*, Nijhoff Publications
7. Shaun D. Pattinson, *Medical Law and Ethics*, Sweet and Maxwell, London.

VAC-III: FUNDAMENTALS OF HUMAN RIGHTS (3 CREDITS)

Course description-

The course intend to give a basic insight into international human rights law. It aims to identify and learn the Indian laws on human rights protection and its enforceability in Indian situations. Indian Constitution and its compatibility with international human rights law will inquired into as a part of this course. The course also helps to give a basic insight on the UNO and its important agencies.

Course Outcomes (CO)

After completing the course the student will be able to:

CO	CO Statement	CL	Class Hrs	Lab Hrs	PS O
CO 1	Outline the UNO and its mechanism for ensuring human rights.	Understand	6	0	6,7
CO 2	Explain the basic documents on human rights like UDHR, ICCPR, ICESCR.	Understand	14	0	6,7
CO 3	Explain the Indian law on protection of human rights.	Understand	12	0	6,7
CO 4	Analyse the fundamental rights guaranteed by Indian Constitution and its capability to enforce human rights.	Application	8	0	6,7
CO 5	Explain the Indian mechanism for enforcement of Human Rights.	Application	8	0	6,7
			48	0	

Course Contents:

Module I: UNO- UN Charter- Concept of Human Rights- UDHR, ICCPR and ICESCR, incorporation of international human rights norms into the domestic system.

Module II: Human Rights and Constitution of India- Fundamental Rights- Directive Principles of State Policy- Comparison of UDHR with the Indian Constitution- Influence of international human rights documents on Indian legal system- case laws.

Module III: Protection of Human Rights Act- Human Rights Commission- Enforcement of Human Rights- Constitutional framework- Human Right protection in India- analysis based on rights of arrested person, rights of prisoners, rights of women.

Suggested Readings

1. Mahendra Pal Singh, Vijaya Narain Shukla (Edrs), V.N. Shukla's Constitution of India, Eastern Book Company, (2008).
2. J. C. Johari, The Constitution of India A Politico-Legal Study, Sterling Publishers Private Limited, New Delhi (2007).
3. Mahabir Prashad Jain, Samaraditya Pal, Ruma Pal, (Edrs), M.P. Jain Indian Constitutional Law: With Constitutional Documents, Volume 1lexisnexis Butterworths Wadhwa Nagpur, 2010.
4. K. Sircar, Protection of Human Rights in India, Asia Law House, (2004).
5. Rachana Kaushal, Women and Human Rights in India, Kaveri Books, (2000).
6. C. J. Nirmal, Human Rights in India: Historical, Social, and Political Perspectives, Oxford University Press, (2002).
7. G. S. Bajwa, Human rights in India: implementation and violations, Anmol Publications, (1995).

VAC IV: FUNDAMENTALS OF CRIMINAL PROCESS (3 CREDITS)

Course description- This course is intended to equip the students with a comprehensive understanding of criminal process in India emphasizing the importance of safeguarding citizens' rights at every stage of proceeding. By delving into theoretical concepts, practical applications and case studies students will emerge with analytical skills necessary to critically evaluate criminal justice system and advocate for protection of individual liberties.

Course Outcomes (CO)

After completing the course the student will be able to:

CO	CO Statement	CL	Class Hrs	PS O
CO 1	Explain the key Legal principles governing criminal process	Understand	4	6,7
CO 2	Appraise the Procedural safeguards protecting Citizens' rights	Understand	4	6,7
CO 3	Explain the sequence of events from initiation to conclusion of legal proceedings.	Understand	6	6,7
CO 4	Interpret the significance of procedural safeguards in ensuring fair trial	Understand	8	6,7
CO 5	Apply legal provisions to hypothetical scenarios involving arrest, pre trial procedures and trial	Understand	8	6,7
CO 6	Assess the fairness and impartiality of criminal procedures from a citizens' rights perspective	Analyze	8	6,7
CO 7	Evaluate the adequacy of legal provisions in balancing the rights of the accused with societal interests	Analyse	10	6,7
	Total Number of Hours		48	

Module I- Classification of Offences- Functionaries in the Criminal justice Process

Hierarchy of Criminal Courts-Offences- cognizable and non-cognizable – Bailable and non-Bailable-summons case and warrant case- Police- Prosecutors- Role of Prosecutor-Defence Counsel- Judicial Magistrates- Prison Authorities

Module II- Initiation of Criminal Proceedings- Police -Powers- Citizens rights- Pre-trial Procedures

Initiation of Criminal proceedings – Constitutional safeguards of Citizens’ rights in criminal proceedings- Understanding FIR and its significance- Arrest- rights of arrested persons- rights during interrogation- Bail- Investigation – judicial custody and police custody- Rights vis-à-vis procedure for search - Final Report of Police- Complaint to Magistrate- Discharge

Module III- Trial and Sentencing

Framing of Charge- Plea of guilty- Rights of accused in criminal trial- child offenders- Inherent powers of High Court- Sentencing- compensation to victims.

References

1. Bhartiya Nagarik Suraksha Sanhita, 2023 (46 of 2023)
2. R.V. Kelkar, Criminal Procedure, Eastern Book Co. (6th Edn- 2018)
3. V. Sithannan, Police Investigation Powers, Tactics and Techniques

VAC V: FUNDAMENTALS OF ENVIRONMENTAL PROTECTION LAW (3 CREDITS)

Course provides an overview of environmental protection law, the foundational principles and frameworks that underpin modern environmental governance. Students will gain insight into the regulatory frameworks and institutions governing environmental protection at the domestic level and global level. Additionally, the course will provide an experience of application of fundamental legal principles fostering critical analysis and evaluation of environmental legal issues in addition to knowledge of adjudicatory mechanism for environmental issues.

Course Outcomes (CO)

After completing the course the student will be able to:

Course Objectives	CO Statement	CL	Class Hours	Lab Hours	PSO
CO1	Outline Origin and Development of Environmental Protection.	Understand	6	0	6,7
CO2	Understand National Regulatory and Institutional Mechanism for Environmental Governance	Understand	14	0	6,7
CO3	Explain various Fundamental Principles Underlying Environmental Protection.	Understand	12	0	6,7
CO4	Understand Judicial Bodies and their functions to Protect Environment.	Understand	8	0	6,7
CO5	Formulate issues to enable students to take up and enforce measures for Protection of Environment.	Application	8	0	6,7
			48	0	

Module 1: Introduction to Environmental Law and Policy: Overview of International Environmental Law: Historical Development, Treaties, Conventions, and agreements; National Environmental Policy, Legislations and Environmental Governance Agencies.

Module II: Principles and Frameworks of Environmental Protection: Precautionary principle- Polluter Pays Principle, Sustainable Development, Intergenerational Equity & Common but Differentiated Responsibility principle.

Module –III: General & Specialized Environmental courts and Tribunals- NGT- Structure, Jurisdiction, and Functions – PIL.

Suggested Readings:

1. P. Leelakrishnan, Environmental Law in India, Lexis Nexis Vol 1 (2021).
2. Jacqueline Peel and Philippe Sands, Principles of International Environmental Law, 4th Edn. (2018)
3. Dr. P.S. Jaswal, Environmental Law, Allahabad Law Agency (2023).
4. Elizabeth Fisher, Environmental Law Text, Cases & Materials, 2nd Edn (2019).
5. Down to earth (All Issues)

CORE MODULE SYLLABUS FOR ENVIRONMENTAL STUDIES FOR UNDER GRADUATE COURSES OF ALL BRANCHES OF HIGHER EDUCATION

VAC-1 ENVIRONMENTAL STUDIES- (3 CREDITS)

Course Description:

This course deals with the intricate relationship between human activities and the environment, focusing on understanding the complexities of natural resources, ecosystems, biodiversity, environmental pollution, and social issues intertwined with environmental concerns. Through comprehensive exploration and analysis, this course will equip you with the knowledge and skills necessary to become informed stewards of our planet.

Course Outcomes:

After completing the course the student will be able to:

CO	CO Statement	CL	Class Hrs	Lab Hrs	PSO
CO1	Assess the significance of renewable and non-renewable natural resources, recognize their exploitation patterns, and propose measures for sustainable resource management.	Understand	8	0	1,2
CO2	Explain the structure and functioning of ecosystems, analyze their components, and evaluate their resilience to disturbances.	Understand	8	0	6,7
CO3	Appreciate the value of biodiversity, identify threats to its conservation, and propose conservation strategies at different levels.	Understand /Apply	8	2	1,6
CO4	Analyze the causes and effects of various types of environmental pollution, and suggest effective control and mitigation measures.	Analyze	8	0	1,3
CO5	Evaluate social issues related to the environment, propose sustainable development approaches, and advocate for environmental ethics and awareness.	Evaluate	8	0	1,7
CO6	Demonstrate knowledge of relevant environmental legislation and understand the responsibilities of individuals in environmental protection and disaster management. Lab/Field work	Understand /Apply	9	2	3,7
Total Number of Hours			41	4	

Module-1

Natural Resources : Renewable and non-renewable resources : Natural resources and associated problems. a) Forest resources : Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forest and tribal people. b) Water resources : Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems. c) Mineral resources : Use and exploitation, environmental effects of extracting and using mineral resources, case studies. d) Food resources : World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies. e) Energy resources : Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources. Case studies. f) Land resources : Land as a resource, land degradation, man induced landslides, soil erosion and desertification. Role of an individual in conservation of natural resources. Equitable use of resources for sustainable lifestyles.

Module 2

Ecosystems. Concept of an ecosystem. Structure and function of an ecosystem. Producers, consumers and decomposers. Energy flow in the ecosystem. Ecological succession. Food chains, food webs and ecological pyramids. Introduction, types, characteristic features, structure and function of the following ecosystem :- a. Forest ecosystem b. Grassland ecosystem c. Desert ecosystem d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

Module 3

Biodiversity and its conservation. Introduction – Definition : genetic, species and ecosystem diversity. Biogeographical classification of India. Value of biodiversity : consumptive use, productive use, social, ethical, aesthetic and option values. Biodiversity at global, National and local levels. India as a mega-diversity nation. Hot-spots of biodiversity. Threats to biodiversity : habitat loss, poaching of wildlife, man-wildlife conflicts. Endangered and endemic species of India. Conservation of biodiversity : In-situ and Ex-situ conservation of biodiversity.

Module 4

Environmental Pollution Definition. Cause, effects and control measures of :- a. Air pollution b. Water pollution c. Soil pollution d. Marine pollution e. Noise pollution f. Thermal pollution g. Nuclear hazards. Solid waste Management : Causes, effects and control measures of urban and industrial wastes. Role of an individual in prevention of pollution. Pollution case studies. Disaster management : floods, earthquake, cyclone and landslides.

Module 5

Social Issues and the Environment. Human Population and the Environment. Urban problems related to energy. Water conservation, rain water harvesting, watershed management. Resettlement and rehabilitation of people; its problems and concerns. Case Studies. Environmental ethics: Issues and possible solutions. Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case Studies. Wasteland reclamation. Consumerism and waste products. Environment Protection Act. Air (Prevention and Control of Pollution) Act. Water (Prevention and control of Pollution) Act. Wildlife Protection Act. Forest Conservation Act. Issues involved in enforcement of environmental legislation. Public awareness.

Field work. Visit to a local area to document environmental assets river/forest/grassland/hill/mountain. Visit to a local polluted site-Urban/Rural/Industrial/Agricultural. Study of common plants, insects, birds. Study of simple ecosystems-pond, river, hill slopes, etc.

References:

1. Rajagopalan, Raghavachari. *Environmental studies: from crisis to cure*. No. Ed. 3. 2015.
2. Bharucha, Erach. *Textbook of environmental studies for undergraduate courses*. Universities Press, 2005.
3. Masters, Gilbert M. *Introduction to environmental engineering and science*. Vol. 3. Englewood Cliffs, NJ: Prentice Hall, 1991.
4. Cunningham, William P., and Mary Anne Cunningham. "Principles of environmental science." *Inquiry & Applications (McGraw-Hill, NY 2008)* (2004).
5. Read, Rupert, and Tim O'Riordan. "The precautionary principle under fire." *Environment: Science and Policy for Sustainable Development* 59, no. 5 (2017): 4-15.
6. Primack, Richard B. *Essentials of conservation biology*. Vol. 23. Sunderland: Sinauer Associates, 2006.

VAC-II: ENVIRONMENTAL SUSTAINABILITY PRACTICES (3 CREDITS)

Credits: 3

Course Description:

This course provides an in-depth exploration of environmental sustainability practices with a focus on real-world applications and solutions. Students will examine key concepts such as sustainable development, environmental conservation, and eco-friendly practices across various sectors.

Course Outcomes:

After completing the course the student will be able to:

CO	CO Statement	CL	Class Hrs	Lab Hrs	PSO
CO1	Understand the principles and importance of environmental sustainability. Explore the interconnections of environmental, social, and economic systems.	Understand	10	0	1,2
CO2	Identify environmental challenges and their impacts on ecosystems and human communities.	Analyse	8	0	6,7
CO3	Analyze sustainable practices across different sectors, including agriculture, energy, transportation, and waste management.	Analyse	10	0	1,6
CO4	Evaluate the effectiveness of sustainability initiatives and policies.	Evaluate	8	0	1,3
CO5	Develop strategies for promoting sustainability in personal and professional settings.	Apply	9	0	1,7
Total Number of Hours			45		

Course Syllabus:

Module 1: Introduction to Environmental Sustainability

Definition and scope of sustainability, Concepts of environmental stewardship and resilience, Historical perspectives on environmental movements and policies; Overview of ecosystems and biodiversity, Understanding the water, energy, and nutrient cycles, Impacts of climate change and global environmental challenges

Module 2: Sustainable Practices in Agriculture and Food Systems

Principles of sustainable agriculture, Organic farming techniques and permaculture, Sustainable food production and consumption patterns. Water conservation and sustainable use.

Module 3: Renewable Energy and Sustainable Transportation

Introduction to renewable energy sources (solar, wind, hydro, etc.), Energy conservation strategies and technologies, Case studies of successful renewable energy projects; Sustainable Transportation and Urban Planning- Sustainable transportation modes, Addressing transportation-related environmental and social challenges

Module 4: Waste Management and Circular Economy

Strategies for reducing, reusing, and recycling waste, Circular economy principles and closed-loop systems, Innovative approaches to waste management and resource recovery

Module 5: Environmental Policy and Governance

Overview of environmental laws and regulations, Role of government agencies and international organizations in environmental protection, Stakeholder engagement and community involvement in decision-making; corporate social responsibility (CSR) and sustainable business practices, Sustainable supply chain management, Social entrepreneurship and sustainable development goals (SDGs)

Reference Texts:

1. Brinkmann, Robert. Introduction to sustainability. John Wiley & Sons, 2016.
2. MacKay, David JC. Sustainable Energy-without the hot air. Bloomsbury Publishing, 2016.
3. McDonough, William, and Michael Braungart. Cradle to cradle: Remaking the way we make things. North point press, 2010.
4. Ukaga, Okechukwu, Chris Maser, and Michael Reichenbach, eds. Sustainable development: Principles, frameworks, and case studies. CRC Press, 2010.
5. Shiva, Vandana. Making peace with the earth. London: Pluto Press, 2013.