



**KG COLLEGE OF ARTS AND SCIENCE**  
 Autonomous Institution | Affiliated to Bharathiar University  
 Accredited with A++ Grade by NAAC  
 ISO 9001:2015 Certified Institution  
**KGiSL** Campus, Saravanampatti, Coimbatore - 641 035

## Regulations 2025 - 26 for Undergraduate Programme

**Learning Outcomes Based Curriculum Framework-  
 (LOCF) model with Choice Based Credit System (CBCS)**

**Programme: B.Com. Computer Applications (B.Com.CA)  
 Programme Code: BCC**

**(Applicable for the Students admitted during the academic year 2025-26 onwards)**

### Eligibility

The student should have passed Higher Secondary Examination. (As per the eligibility condition given Ref. BU/R/B3-B4/Eligibility Condition/7960/2025 dated 08/05/2025)

### Program Learning Outcomes (PLOs)

The successful completion of the B.Com. Computer Applications programme shall enable the students to:

PLO1	Provide students with specific knowledge and skills relevant to their disciplines and careers.
PLO2	Make the students acquainted with technical and practical concepts; founders must solve real business problems using different programming languages.
PLO3	Improve accounting and computer skills required to develop lifelong learning through IT-enabled knowledge and practice with value-based add-ons and job-oriented courses that ensure their sustainability at the organization level.
PLO4	Demonstrate leadership traits, communication skills, and innovative thinking for optimal performance in personal, professional, societal, and environmental domains.
PLO5	Demonstrate high standards of ethical conduct in the application of computers in accounting and finance and become socially responsible citizens, contribute to the sustainable growth of the profession and the community.

## B.Com.CA Curriculum

Semester 1									
Course Code	Part	Course Category	Course Name	Hours /Week	Examination				Credits
					Duration in Hours	Max Marks			
						CIA	ESE	Total	
25TAM1L	I	Language - I	Tamil – I	4	3	25	75	100	3
25HIN11L	I		Hindi – I						
25MAL11L	I		Malayalam– I						
25FRE11L	I		French – I						
25ENG12L	II	Language - II	English – I	4	3	25	75	100	3
25BCC13C	III	Core - I	Financial Accounting – I	6	3	25	75	100	4
25BCC14C	III	Core - II	Programming with C++	4	3	25	75	100	4
25BCC15P	III	Core Lab -I	Advanced Excel & Financial Modeling Lab	4	3	40	60	100	3
25BCC16A	III	Allied – I	Principles of Management	4	3	25	75	100	3
25ENV1FC	IV	FC – I	Environmental Studies	2	2	50	-	50	2
25SOF1AE	IV	AECC - I	Soft Skills	2	2	-	50	50	2
Total				30				700	24

Semester 2									
Course Code	Part	Course Category	Course Name	Hours/ Week	Examination				Credits
					Duration in Hours	Max Marks			
						CIA	ESE	Total	
25TAM21L	I	Language – I	Tamil– II	4	3	25	75	100	3
25HIN21L	I		Hindi– II						
25MAL21L	I		Malayalam– II						
25FRE21L	I		French– II						
25ENG22L	II	Language – II	English– II	4	3	25	75	100	3
25BCC23C	III	Core – III	Financial Accounting– II	6	3	25	75	100	4
25BCC24P	III	Core Lab - II	Programming with C++ Lab	4	3	40	60	100	2
25BCC25P	III	Core Lab – III	Fintech & Digital Finance Innovation Lab	4	3	40	60	100	3
25BCC26A	III	Allied – II	Business Law	4	3	25	75	100	3
25HUM2FC/	IV	FC – II	Human Rights/	2	2	50	-	50	2
25DIM2FC			Disaster Management						
25IDT2AE	IV	AECC – II	Innovation & Design Thinking/	2	2	-	50	50	2
25IPR2AE			Intellectual Property Rights /						
25END2AE			Entrepreneurship Development						
Total				30				700	22

Semester – 3									
Course Code	Part	Course Category	Course Name	Hours/ Week	Examination				Credits
					Duration in Hours	Max Marks			
						CIA	ESE	Total	
	I	Language – I	Tamil– III	4	3	25	75	100	3
	I		Hindi– III						
	I		Malayalam– III						
	I		French – III						
	II	Language – II	English – III	4	3	25	75	100	3
	III	Core – V	Corporate Accounting – I	6	3	25	75	100	4
	III	Core – VI	Python Programming	6	3	25	75	100	4
	III	Core Lab– III	Data Analytics for Finance Lab	4	3	40	60	100	3
	III	Allied – III	Company Law	4	3	25	75	100	3
	III	SEC Lab – I	Python Programming Lab	2	3	40	60	100	2
	IV	FC – II	Basic Tamil / Advanced Tamil	-	2	-	50	50	2
			Indian Knowledge Systems (IKS)*						
	IV	AECC – III	Online Course - MOOC	-	-	50	-	50	2
Total				30				800	26

Semester – 4									
Course Code	Part	Course Category	Course Name	Hours /Week	Examination				Credits
					Duration in Hours	Max Marks			
						CIA	ESE	Total	
	I	Language – I	Tamil – IV	4	3	25	75	100	3
	I		Hindi – IV						
	I		Malayalam– IV						
	I		French – IV						
	II	Language - II	English – IV	4	3	25	75	100	3
	III	Core – VII	Corporate Accounting – II	6	3	25	75	100	4
	III	Core Lab – IV	Database Management System Lab	4	3	40	60	100	2
	III	Core Lab – V	Advanced Applications of Data Analytics in Fintech	4	3	40	60	100	3
	III	Allied – IV	Business Mathematics and Statistics	4	3	25	75	100	3
	III	SEC Lab – II	Computer Applications: GST with Tally – I Lab	2	3	40	60	100	2
	IV	AECC – IV	Quantitative Aptitude	2	2	-	50	50	2
	IV	Extra-Curricular and Co-Curricular	Liberal Arts	-	-	50	-	50	2
Total				30				800	24

Semester – 5									
Course Code	Part	Course Category	Course Name	Hours/ Week	Examination				Credits
					Duration in hrs.	MaxMarks			
						CIA	ESE	Total	
	III	Core – VIII	Cost Accounting	6	3	25	75	100	4
	III	Core – IX	Banking Law and Practice	6	3	25	75	100	4
	III	Core – X	Income Tax Law and Practice	5	3	25	75	100	4
	III	Core – XI	Auditing and Corporate Governance	4	3	25	75	100	3
	III	Core Lab – VI	Computer Applications: GST with Tally II Lab	4	3	40	60	100	2
	III	Elective – I	Financial Markets & Institutions	5	3	25	75	100	3
			Computer Networks						
			Brand Management						
	III	SEC-III	Internship	-	-	50	-	50	2
Total				30				650	22

Semester – 6									
Course Code	Part	Course Category	Course Name	Hours/ Week	Examination				Credits
					Duration in hrs.	Max Marks			
						CIA	ESE	Total	
	III	Core – XII	Management Information System	5	3	25	75	100	4
	III	Core – XIII	E-Commerce Technology	6	3	25	75	100	4
	III	Core – XIV	Management Accounting	6	3	25	75	100	4
	III	Elective– II	Micro Finance	5	3	25	75	100	3
			Cloud Computing						
			Digital Marketing						
	III	SEC Lab – III	Practice of Life Insurance	2	3	40	60	100	2
	IV	Core	Project Work	6	4	40	60	100	5
Total				30				600	22
Grand Total				180				4250	140

# Semester 1



Semester 1									
Course Code	Part	Course Category	Course Name	Hrs./ Week	Examination				Credits
					Duration in hrs.	Max Marks			
						CIA	ESE	Total	
25TAM1L	I	Language - I	Tamil – I	4	3	25	75	100	3
25HIN11L	I		Hindi – I						
25MAL11L	I		Malayalam– I						
25FRE11L	I		French – I						
25ENG12L	II	Language - II	English – I	4	3	25	75	100	3
25BCC13C	III	Core - I	Financial Accounting – I	6	3	25	75	100	4
25BCC14C	III	Core - II	Programming with C++	4	3	25	75	100	4
25BCC15P	III	Core Lab -I	Advanced Excel & Financial Modeling Lab	4	3	40	60	100	3
25BCC16A	III	Allied – I	Principles of Management	4	3	25	75	100	3
25ENV1FC	IV	FC – I	Environmental Studies	2	2	50	-	50	2
25SOF1AE	IV	AECC - I	Soft Skills	2	2	-	50	50	2
Total				30				700	24

### Part – I : Language I –Tamil I

Course Code	Course Name	Category	Hours / Week	Credits
25TAM11L	Tamil - I	Language – I	4	3

#### Course Objectives

- இலக்கிய வளர்ச்சியை அறிந்து கொள்ளுதல்
- இலக்கியம் படைக்கும் திறன்
- இலக்கிய இலக்கண உரைசெய்தல்
- திறனாய்வு முறையினைக் கற்றுத்தேர்தல்

#### Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO	CLO Statements	Knowledge Level
CLO1	புதுக்கவிதையின் மூலம் வாழ்வியல் விழுமியங்களை உணர்ந்து கொள்ளுதல்.	K1, K2
CLO2	சிறந்த மற்றும் வாழும் கவிஞர்களை அறிந்து கொள்ளுதல்.	K2, K3
CLO3	சிறந்த படைப்பாளர்களின் சிறுகதையில் வெளிப்படும் சமூகச் சிந்தனைகளை அறிந்து விழிப்புணர்வைப் பெறுதல்.	K3
CLO4	தற்கால இலக்கியங்களான புதுக்கவிதை, சிறுகதை தோன்றி வளர்ந்த பின்புலத்தை அறிதல்.	K1, K3
CLO5	மொழியைப் பிழையின்றி பேச எழுத கற்கத் தேவையானதமிழ் இலக்கணத்தின் இன்றியமையாமையை உணர்தல். நடைமுறை வாழ்வியலுக்குத் தேவைப்படும் ஆங்கிலக் கடிதத்தைத் தமிழாக்கம் செய்தலுக்கான பயிற்சி அடைதல்.	K2, K3
K1 - Remember; K2 - Understand; K3 - Apply		

**Part – I: Language I - Tamil – I**

Unit	Content	No. of Hours
I	<b>நாட்டுப்பற்று</b> 1. உலகத்தைநோக்கிவினவுதல் - பாரதியார் 2. பாரதிதாசன்கவிதைகள் - பாரதிதாசன் • தமிழ்ப்பேறு 3. ஒற்றுமையேஉயிர்நிலை - நாமக்கல்கவிஞர் 4. தேவதேவன்கவிதைகள் - தேவதேவன் • சாலையும்மரங்களும்செருப்பும் • புதியவீடு 5. ஆலாபனை - கவிக்கோஅப்துல்ரகுமான் • போட்டி • பாதை 6. புத்தகச்சந்தை - கவிஞர்வாலி	14
II	<b>சமூகம்</b> 1. எட்டாவதுசீர்..... - ஈரோடு தமிழன்பன் 2. தொலைந்துபோனேன் - கவிஞர்தாமரை 3. திருநங்கைகள் காகிதப் பூக்கள் - நா. காமராசன் 4. மரங்களைப் பாடுவேன் - வைரமுத்து 5. புள்ளிப் பூக்கள் (ஹைக்கூ) - அமுத பாரதி 6. நாட்டுப்புறப் பாடல்கள் (தாலாட்டுப் பாடல் , தெம்மாங்குப் பாடல், உழவுத்தொழில்)	14
III	<b>சிறுகதை</b> 1. காஞ்சனை - புதுமைப்பித்தன் 2. சுமைதாங்கி - ஜெயகாந்தன் 3. சோற்றுக் கணக்கு - ஜெயமோகன் 4. ஆறு யானைகள் - எஸ்.ராமகிருஷ்ணன் 5. மரத்தைக்கர்ப்பம்சுமந்தவள் - ஆண்டாள்பிரியதர்சினி	12
IV	<b>இலக்கியவரலாறு</b> 1. மரபுக்கவிதையின்தோற்றமும்வளர்ச்சியும் 2. புதுக்கவிதையின்தோற்றமும்வளர்ச்சியும் 3. ஹைக்கூகவிதையின்தோற்றமும்வளர்ச்சியும் 4. சிறுகதையின்தோற்றமும்வளர்ச்சியும்	10

Unit	Content	No. of Hours
V	<b>இலக்கணம்</b> 1. எழுத்துகள் (முதல்எழுத்துகள், சார்பெழுத்துகள்) 2. எழுத்துக்களிற்பிறப்பு 3. மாத்திரைகள் 4. பயிற்சிக்குரியன - மொழிபெயர்ப்பு (ஆங்கிலத்திலிருந்துதமிழுக்குமொழிபெயர்த்தல்)	10
<b>Total Hours</b>		<b>60</b>
<b>Reference Books</b>		
1	பேரா. குருசாமி, ம.ரா.போ. (2014), பாரதிபாடல்கள், ஆய்வுப்பாதிப்பு, தமிழ்ப்பல்கலைக்கழகம், தஞ்சாவூர்.	
2	அப்துல்ரகுமான்,(2000), ஆலாபனை, கவிக்கோபதிப்பகம்	
3	தாமரைகவிதைகள், (2012), நியூசெஞ்சுரிபுக்ஹவுஸ்	
4	வரதராசனார் மு, (2021), தமிழ் இலக்கிய வரலாறு, சாகித்ய அகாடமி பதிப்பு.	
5	முனைவர் பஞ்சாங்கம் கா, (2017), தமிழ் இலக்கிய வரலாறு, காவ்யா பதிப்பகம்.	
6	முனைவர் வேங்கடராமன் கா. கோ (2008), தமிழ் இலக்கிய வரலாறு, கலையக வெளியீடு.	
7	பரந்தாமனார் அ.கி. (2002), நல்ல தமிழ் எழுத வேண்டுமா?,அல்லி நிலையம்.	
8	ராமகிருஷ்ணன் எஸ் (2006), 100 சிறந்த சிறுகதைகள் ( தொகுதி 1 & 2 ) பதிப்பகம்: தேசாந்திரி பதிப்பகம்	
9	குமரன்கோ (2010), தமிழ்இலக்கணம்எளியஅறிமுகம் , சந்தியாபதிப்பகம்	
10	சக்திவேல்சு,(2012), நாட்டுப்புறவியல், மணிவாசகர்பதிப்பகம்	

Course Code	Course Name	Category	Hours/Week	Credits
25HIN11L	Hindi-I	Language-I	4	3

### Course Objectives

The course intends to

- Improve grammatical knowledge.
- Read and learn about articles and think about them.
- Read and understand short stories and understand the thoughts and life of the people of this state.
- Have Translation knowledge and the ability to read and analyze a message are also available.

### Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO	CLO Statements	Knowledge Level
CLO1	Understand the text styles and grammatical elements	K1,K2
CLO2	Discuss the content of a reading passage	K2,K3
CLO3	Develop an interest in the appreciation of short stories	K3
CLO4	Comprehend the grammatical structures and sentence making	K1,K3
CLO5	Understand the language and developing English to Hindi translation skill	K2,K3
K1-Remember; K2 -Understand; K3 –Apply		

**Part-I: Language I - Hindi-I**

Unit	Content	Hours
I	<b>Prose: Nuthan Gadya Sangrah</b> Lesson 1 – Bharathiya Sanskurthi - Dr.Rajendra Prasad Lesson 3 – Razia - RamavikshaBenipuri Lesson 4 – Makreal - Yespal Lesson 5 – Bahtha Pani Nirmala - ‘Ageya’ Lesson 6 – Rashtrapitha Mahathma Gandhi - Mukthibodh Lesson 9 – Ninda Ras - Harishankar Parsayi.	14
II	<b>Non Detailed Text Short Stories: Kahani Kunj</b> Pareksha - Premchand Mamtha - Jayashankar Prasad Apnaparaya - Jaynendrakumar Admikabachcha - Yespal Bolaramkajeev - Harishankar Parsayi Vapasi - MannuBhandari	14
III	<b>Grammar: Shabdha Vichar Only</b> (Noun, Pronoun, Adjective, Verb, Tense, Case, Endings) Theoretical & Applied.	12
IV	<b>Translation: English –Hindi Only.</b> Anuvadh Abhyas – III (1 - 15 Lessons Only)	10
V	<b>Comprehension:</b> 1 Passage From Anuvadh Abhyas – III (16 - 30)	10
<b>Total Hours</b>		<b>60</b>

<b>Text Books</b>	
1	Jayaprakash, (2009), Nuthan Gadya Sangrah, Publisher: Sumitra Prakashan Sumitravas, 16/4, Hastings Road, Allahabad – 211001.
2	Amithab.V.P.(2011), Kahani Kunj, Publisher: Govind Prakashan Sadhar Bagaar, Mathura, UttarPradesh, –281 001

Course Code	Course Name	Category	Hours/Week	Credits
25MAL11L	Malayalam-I	Language-I	4	3

### Course Objectives

The course intends to

- Improve grammatical knowledge
- Read and learn about articles and think about them
- Read and understand short stories and understand the thoughts and life of the people of this state
- Have Translation knowledge and the ability to read and analyze a message are also available
- Have Translation knowledge and the ability to read and analyze a message are also

### Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO	CLO Statements	Knowledge Level
CLO1	Understand the text styles and grammatical elements	K1
CLO2	Discuss the content of a reading passage	K1
CLO3	Develop an interest in the appreciation of short stories	K2
CLO4	Comprehend the grammatical structures and sentence making	K3
CLO5	Understand the language and developing English to Malayalam translation skill	K4
<b>K1-Remember; K2-Understand; K3 –Apply;K4-Analyse</b>		

**Part-I: Language I - Malayalam-I**

Unit	Content	Hours
I	Novel – Pathummayude Aadu-Vaikam Muhammed Basheer	14
II	Novel - Pathummayude Aadu-Vaikam Muhammed Basheer	14
III	Short Story – Ente Priyappeta Kadhakal – Akbar Kakkattil)	12
IV	Short Story – Ente Priyappeta Kadhakal – Akbar Kakkattil)	10
V	Composition & Translation (English to Malayalam)	10
<b>Total Hours</b>		<b>60</b>

**Text Books**

1	Vaikam Muhammed Basheer, (2012), Novel – Pathummayude Aadu, D.C. Books, Kottayam, Kerala
2	Akbar Kakkattil, (2009), Short Story – Ente Priyappeta Kadhakal

**Reference Books**

1	Tharakan K.M, (2016), Malayala Novel Sahithya Charitram, N.B.S.Kottayam.
2	Achuyuthan M, (2014), Cherukatha Innale Innu - M.Achuyuthan D.C Books,Kottayam.
3	Dr.George K.M, (2011) Sahithya Charitram Prasthanangalilude, D.C.Books Kottayam.
4	Sukumar Azheekode, (2015), Malayala Sahithyavimarsam, D.C.Books



Course Code	Course Name	Category	Hours/ Week	Credits
25FRE11L	French–I	Language–I	4	3

### Course Objective

The course intends

To understand, speak, read and write simple, standard speech which is very slow and is carefully articulated and can recognize familiar words and very basic phrases concerning themselves, their family and immediate concrete surroundings when people speak slowly and clearly.

### Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO	Course Outcome	Knowledge Level
CLO1	Comprehend basic vocabulary	K1
CLO2	Understand basic syntax and grammar patterns	K2
CLO3	Converse slowly in known situations	K2
CLO4	Translate small basic sentences	K3
K1-Remember; K2-Understand; K3 –Apply		

### Part–I: French–I

Unit	Content	No. of Hours
I	Etape0	14
	Etape1 (Lecons1- 3)	
II	Etape2 (Lecons1- 3)	14
III	Etape3 -Leçons1–2	12
IV	Etape3–Leçon3	10
	Etape4–Leçon1	
V	Etape4 –Leçons2–3	10
Total Hours		60

#### Text Book

1	Céline Himber, Corina Brilliant, Sophie Erlich, (2008), Adomania1–Methodede francais, Publisher-Hachette Fle
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#### Reference Book

1	Yves Loiseau, Régine, (2014), Latitudes1, Merieux Publisher: French and European Publications Inc.
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Course Code	Course Name	Category	Hours/Week	Credits
25ENG12L	English-I	Language II	4	3

### Course Objectives

The course intends to cover

- Various genres of literature.
- Active and passive vocabulary.
- Usage of Grammar and Communication.

### Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO	CLO Statements	Knowledge Level
CLO1	Identify aesthetic sense and appreciate poetry, enhancing creativity and understanding relevant to professional environments.	K1
CLO2	Understand diverse styles of prose, facilitating versatility in writing and inculcating interpersonal skills.	K2
CLO3	Apply the characters and the narrative techniques in creative writing and content creation ethically.	K3
CLO4	Employ vocabulary and grammatical proficiency in communication to enhance clarity in workplace interactions.	K3
CLO5	Enhance overall communication competence. Practicing these skills. In combination reinforces learning and provides students with opportunities to use the language in authentic contexts.	K3
K1-Remember; K2-Understand; K3–Apply		

**Part-II: English–I**

Unit	Content	No. of Hours
I	<b>Poetry:</b> Nature 1. I Wandered Lonely as a Cloud – William Wordsworth 2. The Sparrow – Paul Laurence Dunbar 3. Stopping by woods on a snowy Evening – Robert Frost	12
II	<b>Prose:</b> Friendship 1. The Man in Black – Oliver Goldsmith 2. Of Friendship – Francis Bacon 3. The Blessing of Friends – Sir John Lubbock	12
III	<b>Short Stories:</b> Morality 1. The Necklace – Guy de Maupassant 2. The Lottery - Shirley Jackson 3. The Monkey’s Paw - W.W.Jacobs	12
IV	<b>Language Competency</b> 1. Vocabulary: Synonyms, Antonyms, Word Formation 2. Parts of Speech 3. Error correction	12
V	<b>English for Communication</b> 1. Listening for General and Specific Information. 2. Self-Introduction, Introducing others, Greetings. 3. Reading a prose passage, Reading a poem and Reading a short story 4. Descriptive writing – Writing a short descriptive essay of two to three paragraphs.	12
<b>Total Hours</b>		<b>60</b>
<b>Text Books</b>		
1.	Zama,M. (2004). Poetry Down the Ages. Orient Blackswan.	
2.	Goldsmith,O. (1869). The Works of Oliver Goldsmith. J. Dicks	
3.	Bacon,F., & Montagu,B. (1857). The Works of Francis Bacon (Vol. 1). Parry & McMillan.	
<b>Reference Books</b>		
1.	Kumar,V.T. Bhavani, Durga.K. Srinivas.YL.(2018). English in Use –A text book for College Students. (English, Paperback).	
2.	Swan,M.(2005).Practical English usage (Vol.7). Oxford: Oxford university press.	
<b>Web Resources (Swayam/NPTEL)</b>		
1.	<a href="https://nptel.ac.in/courses/109105205">https://nptel.ac.in/courses/109105205</a>	

Course Code	Course Name	Category	Hours/Week	Credits
25BCC13C	Financial Accounting – I	Core - I	6	4

### Course Objectives

This course intends to cover

- Learn basic Principles of Accountancy.
- Preparation and presentation of the final accounts of a sole trader.
- Accounting treatment of bills of exchange and accounting for professionals.
- Various methods of calculating profit under a single-entry system.

### Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO	CLO Statements	Knowledge Level
CLO1	Remember Accounting Concepts and Conventions and applying rules to record business transactions	K1
CLO2	Construct the final accounts of a sole trader and identify errors.	K3
CLO3	Familiarize the concepts of bills of exchange, average due date, and account current.	K2
CLO4	Analyze the bank reconciliation statement and prepare necessary records for Non – Profit organization.	K4
CLO5	Interpret financial statements from incomplete records.	K2
<b>K1- Remember; K2- Understand; K3- Apply; K4 – Analyze</b>		

### CLO – PLO Mapping

CLOs/PLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	3	3	3	3	3
CLO2	3	3	3	3	2
CLO3	3	2	2	3	2
CLO4	3	3	3	3	2
CLO5	3	3	2	2	1
<b>3-Substantial(high)</b>		<b>2-Moderate (medium)</b>		<b>1-Slight (low)</b>	

**Core - I: Financial Accounting – I**

Unit	Content	No. of Hours
I	<b>Fundamentals of Book Keeping:</b> Introduction – Book Keeping – Accounting – Definition – Accounting Concepts and Conventions – Accounting Terms - Double Entry System – Accounting Equation – Journal – Ledger – Subsidiary books – Trial balance.	18
II	<b>Final accounts of a Sole trader:</b> Concept - Trading Account, Profit and Loss Account and Balance Sheet – Adjustments: Closing stock – Outstanding Expenses – Accrued Income – Income Received in Advance– Bad debts – Bad debts provisions – Depreciation <b>Rectification of Errors:</b> Meaning – Types of Errors.	18
III	<b>Bills of Exchange:</b> Definition – Specimens – Discounting of Bills – Endorsement of Bill – Collection – Noting – Renewal – Retirement of Bill under rebate – Insolvency of Acceptor – Accommodation Bills. <b>Average Due Date and Account Current:</b> Meaning – Methods.	18
IV	<b>Bank Reconciliation Statement:</b> Meaning, Objectives, Advantages and disadvantages- Preparation of BRS. <b>Non-Profit Organization:</b> Receipts and Payments, Income and Expenditure account and Balance sheet.	18
V	<b>Accounting from Incomplete Records:</b> Meaning and Features – Limitations – Difference between Incomplete Records and Double Entry System – Methods of Calculation of Profit – Statement of Affairs Method – Conversion method.	18
<b>Total Hours</b>		<b>90</b>
<b>Problem 80% &amp; Theory 20%</b>		
<b>Text Books</b>		
1.	Jain.S.P., and Narang.K.L., (2022), Advanced Accountancy (21 <sup>st</sup> ed ), Kalyani Publishers.	
2.	Reddy and Murthy.A, (2015), Financial Accounting (7 <sup>th</sup> , ed.), Margham Publications.	
3.	Radhaswamy L and Gupta.R.L., (2015), Advanced Accounting (Vol: II), Sultan Chand & Sons Publications.	
<b>Reference Books</b>		
1.	Dr. Tulsian P C &Tushar Tulsian, et al, (2023), Advanced Accounting (3 <sup>rd</sup> ), Sultan Chand & Sons Publications.	
2.	Charumathi B and Vinayagam N, (2004), Financial Accounting, Sultan Chand & Sons Publications.	
3.	Maheshwari.S.N., (2010), Financial and Management Accounting, Vikas Publications.	
<b>Web Resources (Swayam/NPTEL)</b>		
1.	<a href="https://archive.nptel.ac.in/courses/110/101/110101131/">https://archive.nptel.ac.in/courses/110/101/110101131/</a>	
2.	<a href="https://archive.nptel.ac.in/courses/110/106/110106147/">https://archive.nptel.ac.in/courses/110/106/110106147/</a>	
3.	<a href="https://onlinecourses.swayam2.ac.in/cec24_mg05/preview">https://onlinecourses.swayam2.ac.in/cec24_mg05/preview</a>	

Course Code	Course Name	Category	Hours/Week	Credits
25BCC14C	Programming with C++	Core – II	4	4

### Course Objectives

This course intends to cover

- Object-oriented languages and their applications.
- Basic concepts of the C++ language.
- Concepts about various conversions.
- Various inheritance systems.
- Knowledge on files and exception handling.

### Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO	CLO Statements	Knowledge Level
CLO1	Remember various concepts relating to languages and applications	K1
CLO2	Understanding various functions of C++ language	K2
CLO3	Applying various classes and objects	K3
CLO4	Analyzing different types of inheritance system	K4
CLO5	Understanding working about files and exception handling	K2
<b>K1 - Remember; K2 - Understand; K3 – Apply; K4 – Analyze</b>		

### CLO – PLO Mapping

CLOs/PLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	3	2	3	2	2
CLO2	3	2	3	2	2
CLO3	3	2	3	2	2
CLO4	3	2	3	2	2
CLO5	3	2	3	2	2
<b>3 - Substantial (high)</b>		<b>2 - Moderate (medium)</b>		<b>1 - Slight (low)</b>	

**Core - II: Programming with C++**

Unit	Content	No. of Hours
I	<b>Introduction to C++:</b> Tokens, Keywords, Identifiers, Variables, Operators, Manipulators, Data types -Expressions and Control Structures in C++; Simple C++ Programs.	12
II	<b>Functions in C++:</b> Main Function - Function Prototyping -Parameters Passing in Functions - Values Return by Functions – Inline Functions - Friend and Virtual Functions	12
III	<b>Classes and Objects:</b> Constructors and Destructors; Operator Overloading And Type Conversions - Type of Constructors – Function Definition – Function overloading – Function Overriding.	12
IV	<b>Inheritance:</b> Single Inheritance- Multilevel Inheritance - Multiple Inheritance - Hierarchical Inheritance - Hybrid Inheritance – Pointer Virtual Functions and Polymorphism; Managing Console I/O operations.	12
V	<b>Working with Files:</b> Classes for File Stream Operations -Opening and Closing a File – End of File Detection - File Pointers - Updating a File - Error Handling during File Operations - Command-line Arguments.	12
<b>Total Hours</b>		<b>60</b>

**Text Books**

1	Balagurusamy. E., (1995) Object Oriented Programming with C++, Tata McGraw- Hill, Publishing Company Ltd
2	Ulla Kirh-Prinz, Peter Prinz, (2002), A Complete guide to Programming in C++, Jones and Bartlett Publications,
3	BjarneStroustrup, (2000), The C++ Programming, Pearson Education,
4	Herbert Schilt., (1999), C++ -The Complete Reference:, (3 <sup>rd</sup> ,ed.), Tata McGraw Hill, Pub– Ltd,
5	John R.Hubbard., Schaum’s., (1996), Programming with C++ - outline series.

**Reference Books**

1	Robert Lafore, Object Oriented Programming in Microsoft C++, Galgotia publication
2	Schildt.H, (1998), C++, The Complete Reference. TMH Edition.
3	Yeswant Kanetkar, (1999), Let us C++ — BPB Publications,

**Web Resources (Swayam / NPTEL)**

1	<a href="https://onlinecourses.nptel.ac.in/noc24_cs30/preview">https://onlinecourses.nptel.ac.in/noc24_cs30/preview</a>
2	<a href="https://onlinecourses.swayam2.ac.in/nou24_cs06/preview">https://onlinecourses.swayam2.ac.in/nou24_cs06/preview</a>
3	<a href="https://onlinecourses.nptel.ac.in/noc24_cs02/preview">https://onlinecourses.nptel.ac.in/noc24_cs02/preview</a>
4	<a href="https://onlinecourses.nptel.ac.in/noc24_cs44/">https://onlinecourses.nptel.ac.in/noc24_cs44/</a>
5	<a href="https://onlinecourses.swayam2.ac.in/aic20_sp01/preview">https://onlinecourses.swayam2.ac.in/aic20_sp01/preview</a>

Course Code	Course Name	Category	Hours/Week	Credits
25BCC15P	Advanced Excel and Financial Modelling Lab	Core Lab - I	4	3

## Course Objectives

This course intends to cover

- Advanced features and functions of spreadsheet for data analysis and financial modelling
- Basic finance concepts and their application in Excel-based financial analysis and modelling.
- Use of Generative AI tools to enhance productivity and insights in Excel

## Course Learning Outcomes

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

CLO	CLO Statements	Knowledge Level
CLO1	Demonstrate proficiency in using advanced Excel features and functions for data analysis and manipulation	K3
CLO2	Understand and apply basic finance concepts and terminology in the context of financial analysis and modelling	K1 - K2
CLO3	Build basic financial models in Excel, incorporating assumptions, inputs, and forecasting techniques	K3
CLO4	Use Generative AI tools in Excel to automate tasks, gain insights, and enhance productivity	K3
CLO5	Analyze and interpret financial data, perform sensitivity analysis, and make data-driven decisions using Excel	K4
<b>K1- Remember; K2- Understand; K3- Apply; K4 – Analyze</b>		

## CLO – PLO Mapping

CLOs/PLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	3	3	2	1	2
CLO2	3	2	1	2	3
CLO3	3	3	3	2	2
CLO4	3	3	3	2	2
CLO5	3	3	2	2	3
<b>3 - Substantial (high)</b>	<b>2 - Moderate (medium)</b>		<b>1 - Slight (low)</b>		



### Core Lab - I: Advanced Excel and Financial Modelling Lab

Unit	Content	No of Hours
I	<b>Introduction to Excel:</b> Interface, Navigation, and Basic Functions – Data Types and Formatting – Formulas and Functions – Relative and Absolute Cell Referencing – Conditional Formatting – Data Validation – Charts and Graphs. Advanced Functions (VLOOKUP, HLOOKUP, INDEX, MATCH) – Data Manipulation (Sort, Filter, Subtotal, Pivot Tables) – Data Analysis (Goal Seek, Scenario Manager, Data Tables) – Excel Shortcuts and Productivity Tips	13
II	<b>Advanced Excel:</b> Array Formulas – Named Ranges and Dynamic Named Ranges – Excel Tables – Recording and Running Macros – Introduction to Excel VBA – User Forms and Controls – Excel Add-ins and Customization. <b>Generative AI Tools in Excel:</b> Introduction to Generative AI – AI-powered Data Analysis and Insights – Automating Tasks with AI-driven Macros – Best Practices and Limitations of AI in Excel Power Query in Excel.	15
III	<b>Introduction to Finance:</b> Basic Financial Concepts and Terminology – Understanding Financial Statements (Balance Sheet, Income Statement, Cash Flow Statement) – Ratios and Financial Analysis – Time Value of Money Concepts.	12
IV	<b>Excel for Financial Analysis:</b> Financial Functions (PV, FV, NPV, IRR) – Loan and Investment Calculations – Depreciation Schedules – Sensitivity Analysis (Goal Seek, Data Tables)	10
V	<b>Basic Financial Modelling:</b> Purpose and Structure of Financial Models – Building a Basic Financial Model in Excel – Assumptions and Inputs – Forecasting Techniques – Scenario Analysis and Sensitivity Testing.	10
<b>Total Hours</b>		<b>60</b>
<b>Text Books</b>		
1.	Paul McFedries, Greg Harvey, (2021), Excel 2021 All-in-One For Dummies, Wiley Publishers.	
2.	Alexander, M., Walkenbach, J., Kusleika, D., & Cox, C. (2018), Microsoft Excel 2019 Bible. Wiley.	
<b>Reference Books</b>		
1.	Winston, W. L. (2019), Microsoft Excel Data Analysis and Business Modeling (6 <sup>th</sup> , ed.), Microsoft Press.	
2.	Mayes, T. R., & Shank, T. M. (2020), Financial Analysis with Microsoft Excel (9 <sup>th</sup> , ed.), Cengage Learning.	
3.	Day, A. (2012). Mastering Financial Modelling in Microsoft Excel: A Practitioner's Guide to Applied Corporate Finance (3 <sup>rd</sup> , ed.), FT Press.	
<b>Web Resources (Swayam/NPTEL)</b>		
1.	<a href="https://onlinecourses.nptel.ac.in/noc22_mg35/preview">https://onlinecourses.nptel.ac.in/noc22_mg35/preview</a>	

S.No	List of Programs
1.	<b>Interface Navigation and Basic Functions</b> <b>Exercise:</b> Explore Excel's interface, navigate through menus and ribbons, and understand basic navigation. Create a worksheet, apply various formatting techniques (font styles, sizes, cell colors), and use basic functions like SUM and AVERAGE.
2.	<b>Formulas and Functions</b> <b>Exercise:</b> Calculate total sales for a week using SUM, average daily sales using AVERAGE, and highest sales using MAX. Use formulas to calculate simple arithmetic operations. Include more complex functions like IF, COUNTIF, and nested functions.
3.	<b>Relative and Absolute Cell Referencing</b> <b>Exercise:</b> Create a budget spreadsheet: use relative and absolute references to calculate total costs by applying discounts/taxes to different items. Include exercises on using named ranges and dynamic references in complex formulas.
4.	<b>Conditional Formatting and Data Validation</b> <b>Exercise:</b> Highlight cells in a sales report that meet certain criteria (e.g., sales > \$1000). Use color scales and data bars to visually represent data trends. Set up data validation rules for a data entry form: restrict entries to certain dates, create drop-down lists, and validate numeric ranges.
5.	<b>Charts and Graphs Creation</b> <b>Exercise:</b> Create a sales performance chart: use different types of charts (bar, line, pie) to represent data visually. Customize chart elements like titles, legends, and data labels. Create advanced chart types like combo charts and use sparklines for data visualization.
6.	<b>Advanced Functions: VLOOKUP, HLOOKUP, INDEX</b> <b>Exercise:</b> Use VLOOKUP to find prices of products in a list and HLOOKUP to retrieve student grades from a table based on different criteria. Practice using INDEX and MATCH functions to create a more dynamic and flexible lookup solution for a dataset.
7.	<b>Data Manipulation: Sorting, Filtering, Pivot</b> <b>Exercise:</b> Sort and filter a list of employees based on department and salary. Use subtotals to summarize data. Create pivot tables for detailed analysis. Include exercises on grouping data, creating calculated fields/items, and using slicers for interactive analysis.
8.	<b>Power Query Data Transformation</b> <b>Exercise:</b> Open Excel and navigate to the Power Query editor. Familiarize with the Power Query interface: ribbon, query pane, and data preview area. <b>Importing Data:</b> Import data from various sources such as an Excel file, CSV file, and a web page. Combine multiple data sources into a single query. <b>Data Cleaning and Transformation:</b> Remove unnecessary columns and rows. Filter data based on specific criteria (e.g., date ranges, text values). Split columns by delimiter and merge columns. <b>Data Aggregation:</b> Group data by specific columns and perform aggregation functions like sum, average, count, etc. Unpivot data to transform it into a more suitable format for analysis. <b>Data Merging and Appending:</b> Merge queries to combine related data from Different Sources. Append queries to stack data from multiple tables or files.

S.No	List of Programs
9.	<b>Excel Macros and VBA Basics</b> <b>Exercise:</b> Record and run macros to automate repetitive tasks. Introduction to VBA: create simple VBA scripts to enhance Excel functionality. Include exercises on using VBA to automate data cleaning, report generation, and interactive user forms.
10.	<b>Financial Analysis and Functions</b> <b>Exercise:</b> Use financial functions (PV, FV, NPV, IRR) to perform loan and investment calculations. Create depreciation schedules and perform sensitivity analysis using Goal Seek and Data Tables. Include exercises on creating financial models and using Excel for financial forecasting.
11.	<b>Basic Financial Modelling</b> <b>Exercise:</b> Build a basic financial model in Excel: define assumptions, inputs, and outputs. Perform scenario analysis and sensitivity testing. Include exercises on creating dynamic models with linked inputs and automated summary reports.
<div>Total Hours</div> <div>60</div>	

Course Code	Course Name	Category	Hours/Week	Credits
25BCC16A	Principles of Management	Allied – I	4	3

### Course Objectives

This course intends to cover

- Evolution, Fundamentals and theories of management.
- Elements of planning and steps in decision making
- Concepts of organization structure and the roles of authority and responsibility.
- Recruitment process and employee appraisal.
- Leadership styles and controlling techniques.

### Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO	CLO Statements	Knowledge Level
CLO1	Exhibit Awareness of ideas that shaped management thinking by the Gurus of management.	K1
CLO2	Examine the importance of planning and decision making in an organization.	K3
CLO3	Comprehend the concept of various authorities and responsibilities of an organization.	K2
CLO4	Understand the process of employee recruitment and tabulate performance appraisals.	K2
CLO5	Apply the knowledge of leading and controlling an Organization.	K3
<b>K1- Remember; K2- Understand; K3- Apply</b>		

### CLO – PLO Mapping

CLOs/PLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	3	3	2	2	3
CLO2	3	2	-	-	3
CLO3	2	3	-	2	3
CLO4	1	3	2	3	3
CLO5	3	3	3	3	3
<b>3-Substantial(high)</b>		<b>2-Moderate (medium)</b>		<b>1-Slight (low)</b>	

**Allied – I: Principles of Management**

Unit	Content	No. of Hours
I	<b>Introduction to Management:</b> Meaning- Definitions – Nature and Scope Levels of Management -Importance- Functions of Management Vs Administration – Management is Science or Art – Managerial Roles. <b>Evolution of Management Thoughts:</b> F. W. Taylor, Henry Fayol, Peter F. Drucker, Elton Mayo.	12
II	<b>Planning:</b> Meaning – Definitions – Nature – Scope and Functions – Importance and Elements – Types – Planning Process - Tools and Techniques. <b>Management by Objective (MBO).</b> <b>Decision Making:</b> Meaning – Characteristics – Types – Steps – Forecasting.	12
III	<b>Organizing:</b> Meaning - Definitions - Nature and Scope – Characteristics – Importance – Types - Formal and Informal Organization – Organization Chart. <b>Organization Structure:</b> Meaning and Types – Departmentalization – Delegation of Authority – Centralization and Decentralization – Span of Management.	12
IV	<b>Staffing:</b> Meaning - Nature and importance - Process – Manpower Planning <b>Recruitment:</b> Sources of Recruitment – Selection Process – Interview and its types. <b>Training:</b> Need – Types – Performance Appraisal - Meaning and Methods – Promotion and Transfer.	12
V	<b>Directing and Controlling:</b> Meaning, Importance and Theories – Communication – Types – Barriers to Communications. <b>Leadership:</b> Nature – Styles of Leadership - Qualities of a Good Leader. <b>Co-ordination:</b> Meaning - Techniques of Co- ordination. <b>Controlling:</b> Characteristics, Importance, Control Process, Requisites of Effective Control and Controlling Techniques.	12
<b>Total Hours</b>		<b>60</b>
<b>Text Books</b>		
1.	Gupta.C.B., (2013), Business Management, (2 <sup>nd</sup> ed.), Sultan Chand & Sons Publications.	
2.	DinkarPagare. (2018), Principles of Management, (2 <sup>nd</sup> ed.), Sultan Chand & Sons Publications.	
3.	Tripathi.P.C.,Reddy.P.N., AshishBajpai, Mark V Cannice, (2022), Principles of Management, (11 <sup>th</sup> ed.), Tata McGraw Hill, Noida.	
4.	Prasad.L.M., (2019), Principles of Management, ( 7 <sup>th</sup> ,ed.), S.Chand& Sons Co. Ltd., NewDelhi,	

Reference Books	
1.	Harold Koontz., Heinz Weihrich.,(2020), Essentials of Management, (11 <sup>th</sup> ,ed.) , McGraw Hill, Noida.
2.	Ramasamy.T, (2010), Principles of Management, Himalaya Publishing House.
3.	Balaji.C.D, (2019), Principles of Management, MarghamPublications.
Web Resources(Swayam/NPTEL)	
1.	<a href="https://onlinecourses.swayam2.ac.in/aic22_ge19/preview">https://onlinecourses.swayam2.ac.in/aic22_ge19/preview</a>
2.	<a href="https://onlinecourses.nptel.ac.in/noc21_mg88/preview">https://onlinecourses.nptel.ac.in/noc21_mg88/preview</a>
3.	<a href="https://onlinecourses.nptel.ac.in/noc22_mg42/preview">https://onlinecourses.nptel.ac.in/noc22_mg42/preview</a>

Course Code	Course Name	Category	Hours / Week	Credits
25ENV1FC	Environmental Studies	FC- I	2	2

Unit	Content
I	The Multidisciplinary nature of environmental studies Definition; Scope and importance, Need for public awareness.
II	<p><b>Natural Resources:</b> Renewable and non-renewable resources: Natural resources and associated problems.</p> <ul style="list-style-type: none"> <li>- Forest resources: Use and Over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.</li> <li>- Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams benefits and problems.</li> <li>- Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies.</li> <li>- Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.</li> <li>- Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources, Case studies.</li> <li>- Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification.</li> </ul> <p>Role of an individual in conservation of natural resources. Equitable use of resources for sustainable lifestyles.</p>
III	<p><b>Ecosystems</b></p> <ul style="list-style-type: none"> <li>- Concept of an ecosystem.</li> <li>- Structure and function of an ecosystem.</li> <li>- Producers, consumers and decomposers.</li> <li>- Energy flow in the ecosystem.</li> <li>- Ecological succession.</li> <li>- Food chains, food webs and ecological pyramids.</li> <li>- Introduction, types, characteristic features, structure and function of the following ecosystem: - <ul style="list-style-type: none"> <li>a. Forest ecosystem</li> <li>b. Grassland ecosystem</li> <li>c. Desert ecosystem</li> <li>d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries).</li> </ul> </li> </ul>
IV	<p><b>Biodiversity and its Conservation</b></p> <ul style="list-style-type: none"> <li>- Introduction-Definition: genetic, species and ecosystem diversity.</li> <li>- Bio geographical classification of India.</li> <li>- Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values.</li> <li>- Biodiversity at global, National and local levels.</li> <li>- India as a mega-diversity nation.</li> <li>- Hot-spots of biodiversity.</li> <li>- Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts.</li> <li>- Endangered and endemic species of India.</li> <li>- Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.</li> </ul>

Unit	Content
V	<p><b>Environmental Pollution Definition</b></p> <ul style="list-style-type: none"> <li>- Causes, effects and control measures of: -               <ul style="list-style-type: none"> <li>a. Air pollution</li> <li>b. Water pollution</li> <li>c. Soil pollution</li> <li>d. Marine pollution</li> <li>e. Noise pollution</li> <li>f. Thermal pollution</li> <li>g. Nuclear hazards</li> </ul> </li> <li>- Solid waste Management: Causes, effects and control measures of urban and industrial wastes.</li> <li>- Role of an individual in prevention of pollution.</li> <li>- Pollution case studies.</li> <li>- Disaster management: floods, earthquake, cyclone and landslides.</li> </ul>
VI	<p><b>Social Issues and the Environment</b></p> <ul style="list-style-type: none"> <li>- From Unsustainable to Sustainable development.</li> <li>- Urban problems related to energy.</li> <li>- Water conservation, rain water harvesting, watershed management.</li> <li>- Resettlement and rehabilitation of people; its problems and concerns. Case studies.</li> <li>- Environmental ethics: Issues and possible solutions.</li> <li>- Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case studies.</li> <li>- Wasteland reclamation.</li> <li>- Consumerism and waste products.</li> <li>- Environment Protection Act.</li> <li>- Air (Prevention and Control of Pollution) Act.</li> <li>- Water (Prevention and Control of Pollution) Act.</li> <li>- Wildlife Protection Act. - Forest Conservation Act.</li> <li>- Issues involved in enforcement of environmental legislation.</li> <li>- Public awareness.</li> </ul>



VII	<b>Human Population and the Environment</b> <ul style="list-style-type: none"> <li>- Population growth, variation among nations.</li> <li>- Population explosion-Family welfare Programme.</li> <li>- Environment and human health.</li> <li>- Human Rights.</li> <li>- Value Education.</li> <li>- HIV/AIDS.</li> <li>- Women and Child Welfare.</li> <li>- Role of information Technology in Environment and human health.</li> <li>- Case Studies.</li> </ul> <b>Biosafety and Biosecurity</b> The basic principles of biosafety. <ul style="list-style-type: none"> <li>- Biological hazards and assess risk in laboratory settings.</li> <li>- Biosafety protocols to minimize risks associated with biological agents.</li> <li>- Role of biosafety in the protection of public health, environment, and national security.</li> </ul> The theoretical knowledge as well as practical applications to prepare learners for real-world biosafety challenges. <ol style="list-style-type: none"> <li>1. Introduction to Biosafety               <ul style="list-style-type: none"> <li>- Definition and importance of biosafety.</li> <li>- Historical perspective on biosafety incidents.</li> <li>- Biosafety vs. biosecurity: Key differences.</li> </ul> </li> <li>2. Biological Hazards and Risk Assessment.               <ul style="list-style-type: none"> <li>- Risk assessment methodology: Identifying hazards, evaluating risks, and control measures.</li> </ul> </li> <li>3. Biological Waste Management               <ul style="list-style-type: none"> <li>- Types of biological waste: Solid, liquid, sharps, etc.</li> <li>- Waste disposal techniques: Autoclaving, incineration, chemical disinfection.</li> <li>- Environmental impact and regulations surrounding waste management.</li> </ul> </li> <li>4. Standard Operating Procedures (SOPs) and Safety Practices               <ul style="list-style-type: none"> <li>- Developing and implementing SOPs for laboratory safety.</li> <li>- Practices for handling, storing, and disposing of biological materials.</li> </ul> </li> </ol>	
	<b>Field Work (Practical).</b> <ul style="list-style-type: none"> <li>- Visit to a local area to document environmental assets-river/forest/grassland/hill/mountain.</li> <li>- Visit to a local polluted site-Urban/Rural/Industrial/Agricultural.</li> <li>- Study of common plants, insects, birds.</li> <li>- Study of simple ecosystems-pond, river, hill slopes, etc.</li> </ul>	
<b>Total Hours</b>		<b>30</b>
<b>Web Resources</b>		
1.	<a href="https://www.ugc.gov.in/oldpdf/modelcurriculum/env.pdf">https://www.ugc.gov.in/oldpdf/modelcurriculum/env.pdf</a>	
2.	Biosafety in Microbiological and Biomedical Laboratories (CDC, NIH). (BMBL) 6 <sup>th</sup> Edition	
3.	Sateesh, M. K. (2010). Bioethics and Biosafety. New Delhi: I. K. International Pvt Ltd.	
4.	Additional Readings: Relevant journal articles, government publications, and guidelines (e.g., WHO, CDC, European Union, etc.). <a href="https://www.iberdrola.com/innovation/what-is-biosafety">https://www.iberdrola.com/innovation/what-is-biosafety</a>	

Course Code	Course Name	Category	Hours / Week	Credits
25SOF1AE	Soft Skills	AECC - I	2	2

### Course Objectives

The course intends to cover

- The essential soft skills that is crucial for success in today's dynamic and interconnected workplace.

### Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO	CLO Statements	Knowledge Level
CLO1	Understand the comprehensive skills to participate actively in conversation, writing short texts with expression	K1, K2, K3
CLO2	Infer the cohesive devices to describe and discuss any objects, pictures using compound, complex sentence forms.	K2, K3
CLO3	Comprehend the logic in the given situation to organize the ideas to write formal and informal letters.	K2, K3
CLO4	Understand the given material to organize it in a logical sequence to present a paragraph with main and supporting ideas with concluding sentences.	K3
CLO5	Present valuable ideas in conversation to emulate the main ideas and key points in short essays.	K3
K1 - Remember; K2 - Understand; K3 - Apply;		

### Ability Enhancement Compulsory Course - I: Soft Skills

Module	Unit	Details	No. of Hours
I	<b>Presentation Skills</b>		
	1	<b>Getting to Know You:</b> Grammar: Introduction to Tenses, Everyday English, Role-Play. Reading Activity: Different ways of communication. <i>Activities:</i> Fill in the blanks (Listening), Self Introduction (Speaking).	6
	2	<b>My Day:</b> Grammar: Present simple positive & negative/Adverbs of Frequency, Vocabulary & Speaking about Daily Activities. Listening: Observe and Answer/ Telling the time. <i>Activities:</i> Reading & Writing: Describe where you live.	
	3	<b>Your World:</b> Grammar: Possessive determiners. Listening: Positive & negative contractions. Reading & Writing: Personal profile. <i>Activities:</i> Talk about countries, nationalities (Vocabulary & Speaking).	
	4	<b>The World of Work:</b> Grammar: Yes/No & Wh Questions. Vocabulary & Speaking: Jobs. Listening: Recognize the schwa sound. <i>Activities:</i> Opening and closing an email (Reading & Writing).	
	5	<b>Places and Things:</b> Grammar: There is / there are, articles. Vocabulary & Speaking: Talk about rooms & furniture. Listening: Directions. Reading & Writing: Imperatives.	
	6	<b>24 Hours:</b> Grammar: Likes & Dislikes. Vocabulary & Speaking: Speak about hobbies and interests. Reading: Match the photos with descriptions. Writing: Write complete sentence using prompt. <i>Activities:</i> Observe & answer (Listening).	
II		<b>Practice:</b> Listening & Speaking Presentations - Talking about how you learn – Understanding key information in a presentation – Writing sentences about you.	
	<b>Confidence</b>		
	1	<b>Clothes and Shopping:</b> Grammar: Modal verbs/Adverbs of Frequency/Adjectives and Adverbs. Vocabulary & Speaking: Shopping. Reading & Writing: Product Review. <i>Activities:</i> Observe & answer (Listening).	6
	2	<b>Travel &amp; Transport:</b> Grammar: Past simple questions. Vocabulary & Speaking: Talk about holidays. Listening: At the train station. <i>Activities:</i> Email - A perfect holiday (Reading & Writing).	
	3	<b>Health &amp; Fitness:</b> Grammar: Past simple irregular verbs; Listening: Listen & Answer; Reading & Writing: Time sequencers; <i>Activities:</i> Talk about a healthy lifestyle (Vocabulary & Speaking)	
	4	<b>Music:</b> Grammar: Present perfect simple; Vocabulary & Speaking: Survey about music; Listening: Listen two people talk about music; <i>Activities:</i> Use adjectives and create sentences (Reading)	
	5	<b>Let's go shopping:</b> Vocabulary & Speaking: Town Survey; Listening: Listen and answer; Reading & Writing: Read and match; <i>Activities:</i> Countable & Uncountable (Grammar)	
		<b>Practice:</b> Writing a personal statement.	

III	Creativity		
	1	<b>Cooking &amp; Eating:</b> Grammar: Some & Any, Quantifiers. Vocabulary & Speaking about Food & Drink. <i>Activities</i> Kitchen conversation (Listening). Reading an article & answering.	6
	2	<b>Survival:</b> Grammar: Comparison of adjectives. <i>Activities</i> Describing people (Speaking and Vocabulary). Listening to an audio & Answering. Reading & Writing: Read and Answer.	
	3	<b>Working Together:</b> Grammar: Verb + Noun phrases. <i>Activities</i> Technology (Vocabulary & Speaking). Listening: Listen & Answer. Reading & Writing: Notice.	
	4	<b>Music:</b> Grammar: Present perfect simple. <i>Activities</i> Survey about music (Vocabulary & Speaking). Listen to two people talking about music (Listening). Reading: Use adjectives and create sentences.	
	5	<b>Culture and Arts:</b> Grammar: Present perfect.Vocabulary & Speaking activity: Speak on the phone. <i>Activities</i> : Listen and answer. Reading & Writing activity: Review.	
	<b>Practice:</b> Writing comparison sentences & paragraphs.		
IV	Problem-Solving		
	1	<b>Do's and Don'ts:</b> Grammar, Modal Verbs. <i>Activities</i> Roleplay (Speaking). Holidays in January (Listening). Reading an article & answering.	6
	2	<b>Body:</b> Grammar: First conditional. Vocabulary & Speaking about Personality & Appearance. <i>Activities</i> Conversations about personality (Listening), Reading & Writing: Read and Answer about your skills.	
	3	<b>Speed:</b> Grammar: Present simple passive. Vocabulary & Speaking about relationships. Listening: Listen & Answer. Reading and Error spotting.	
	4	<b>Work:</b> Grammar: Adverbs of manner. Vocabulary & Speaking about work advice. Listening: Observe & Answer; Reading: Read & check your ideas.	
		<b>Practice:</b> Writing argumentative and descriptive essays.	
V	Critical Thinking		
	1	<b>Influence:</b> Grammar: would / past habits. Listening: Sentence Correction. <i>Activities</i> Your inspiration (Speaking). Picture description (Reading).Rewrite the sentences (Writing).	6
	2	<b>Money:</b> Grammar: Second conditional. <i>Activities</i> : Radio programme (Listening). Talk about games (Speaking). Reading & Writing: Fill in the blanks.	
	3	<b>Things that changed the world:</b> Grammar: articles. <i>Activities</i> :Talk about chewing gum (Speaking & Listening). Reading & Writing: Read and write a book review.	
		<b>Practice:</b> Writing Emails, reports and proposals.	

### Components for Internal Assessment and Distribution of Marks for CIA and ESE (Theory)

Max Marks	Marks for		Components for CIA						
100	CIA	ESE	CIA		Model		Attendance	Active Engagement	Total
	25	75	Actual	Weightage	Actual	Weightage	5	5	25
			50	5	75	10			

### Question Paper Pattern

Component	Duration in Hours	Section A			Section B			Section C			Total
		Type of Question	No. of Questions	Marks	Type of Question	No. of Questions	Marks	Type of Question	No. of Questions	Marks	
CIA	2	MCQ	8	8x1=8	Either or	3	3x6=18	Either or	3	3x8=24	50
Model Exam / ESE	3	MCQ	10	10x1=10	Either or	5	5x5=25	Either or	5	5x8=40	75

### Components for Internal Assessment and Distribution of Marks for CIA (Lab)

Max Marks	Marks for		Components for CIA						
	CIA	ESE	Test		Model		Experiments / Programs	Observation	Total
	40	60	Actual	Weightage	Actual	Weightage	Marks	5	40
100			50	10	60	15	10		

### Examination Pattern

Component	Duration in Hours	Marks			Total Marks
		Practical Exam	Record	Weightage	
Test	2	50	-	10	50
Model	3	60	-	15	60
Experiments	-	-	-	10	10
Observation	-	-	-	05	05
Total Marks - CIA				40	40
ESE	3	50	10	-	60

**Components for Internal Assessment and  
Distribution of Marks for CIA (Foundation Course -Theory)**

Max Marks	Marks for		Components for CIA				
50	CIA	ESE	CIA		Model		Total
	50	-	Actual	Weightage	Actual	Weightage	50
			50	25	50	25	

**Question Paper Pattern**

Duration in Hours	Mode of Exam	Type of Questions	No. of Questions	Marks
2	Offline	Open Choice	5 (Out of 8)	5 x 10=50

**Components for and Distribution of Marks for ESE (Theory)  
Ability Enhancement Compulsory Courses (AECC)  
&  
Question Paper Pattern**

Duration in Hours	Mode of Exam	Type of Questions	No. of Questions	Marks
2	Online	MCQ	50	50x1=50



# Semester 2

Semester 2									
Course Code	Part	Course Category	Course Name	Hours/ Week	Examination				Credits
					Duration in Hours	Max Marks			
						CIA	ESE	Total	
25TAM21L	I	Language – I	Tamil– II	4	3	25	75	100	3
25HIN21L	I		Hindi– II						
25MAL21L	I		Malayalam– II						
25FRE21L	I		French– II						
25ENG22L	II	Language – II	English– II	4	3	25	75	100	3
25BCC23C	III	Core – III	Financial Accounting– II	6	3	25	75	100	4
25BCC24P	III	Core Lab - II	Programming with C++ Lab	4	3	40	60	100	2
25BCC25P	III	Core Lab – III	Fintech & Digital Finance Innovation Lab	4	3	40	60	100	3
25BCC26A	III	Allied – II	Business Law	4	3	25	75	100	3
25HUM2FC/	IV	FC – II	Human Rights/	2	2	50	-	50	2
25DIM2FC			Disaster Management						
25IDT2AE	IV	AECC – II	Innovation & Design Thinking	2	2	-	50	50	2
25IPR2AE			Intellectual Property Rights						
25END2AE			Entrepreneurship Development						
Total				30				700	22



**Part – I: Language – I: தமிழ் – II**

Course Code	Course Name	Category	Hours / Week	Credits
25TAM21L	Tamil – II	Language - I	4	3

**Course Objectives**

The Course intends to cover

- தமிழ் இலக்கியம் கற்பதன் மூலம் நாகரிகம் மற்றும் பண்பாட்டைப் புரிந்துகொள்ளுதல்.
- தனிப்பட்ட வளர்ச்சி, படைப்பாற்றல் திறனை வளர்த்தல்.
- வாழ்வியல் அறங்களைக் கற்றல் மற்றும் வாழ்வைச் செழுமையாக்க உதவும் நன்னெறிகளை அறிதல்.

**Course Learning Outcomes**

On the successful completion of the course, students will be able to

CLO	CLO Statements	Knowledge Level
CLO1	அற இலக்கியங்கள் வழி வாழ்வியல் ஒழுக்கங்களைப் பின்பற்றுதல்	K1 - K3
CLO2	பக்தி இலக்கியங்கள் வழி பக்தி நெறிகளை உணர்தல்.	K1 - K3
CLO3	உரைநடை இலக்கிய படைப்பாளர்களின் சிந்தனைகளைக் கற்று பின்பற்றுதல்	K1 - K3
CLO4	தமிழ் இலக்கிய வரலாற்றில் அற இலக்கியம் மற்றும் உரைநடையின் தாக்கம் குறித்து அறிதல்	K1- K3
CLO5	இலக்கணங்களைக் கற்று பிழையின்றி எழுதுதல்.	K1 - K3
<b>K1 - Remember; K2 - Understand; K3 – Apply</b>		

Unit	Content	No. of Hours
I	<p>(அறம்)</p> <ol style="list-style-type: none"> <li>1. திருக்குறள்(மூன்று அதிகாரங்கள்) <ul style="list-style-type: none"> <li>• புகழ்</li> <li>• வினை செயல்வகை</li> <li>• நெஞ்சொடு கிளத்தல்</li> </ul> </li> <li>2. திரிகடுகம்(10, 16, 19, 26, 42 பாடல்கள் மட்டும்)</li> <li>3. பழமொழி நானூறு( 2,7,21,54,69,119,130,184,267,375 பாடல்கள் மட்டும்)</li> </ol>	14
II	<p>(பக்தி)</p> <ol style="list-style-type: none"> <li>1. தாயுமானவர் பாடல்கள்(பராபரக் கண்ணி முதல் 10 பாடல்கள்)</li> <li>2. உமர்கயாம் பாடல்கள் (தனிப்பாடல்கள்) - கவிமணி தேசிகவிநாயகம் பிள்ளை</li> <li>3. வள்ளலார் பாடல்கள்(திருவருட்பா – வள்ளலார் விண்ணப்பம்)</li> <li>4. இயேசுகாவியம் - மலைப்பொழிவு - கண்ணதாசன்</li> <li>5. சித்தர் பாடல் - சிவவாக்கியார் பாடல்</li> </ol>	14
III	<p>(கலை மற்றும் பண்பாடு )</p> <ol style="list-style-type: none"> <li>1. அறம் எனப்படுவது - அமுதன்</li> <li>2. ஏட்டில் எழுதா இலக்கியம் - ஒளவை துரைச்சாமி</li> <li>3. கீழடி - தொல்லியல் துறை, வெளியீடு</li> <li>4. மனம் எனும் சொர்க்கவாசல்- டாக்டர் எம்.எஸ்.உதயமூர்த்தி</li> <li>5. ஆளுமைத் திறன் - அறிவுக்கதிர். அரசுப்பணி சிறப்பிதழ்</li> </ol>	12
IV	<p>(இலக்கிய வரலாறு)</p> <ol style="list-style-type: none"> <li>1. பதினெண் கீழ்க்கணக்கு நூல்கள்</li> <li>2. உரைநடையின் தோற்றமும் வளர்ச்சியும்</li> </ol>	10

Unit	Content	No. of Hours
V	<b>(இலக்கணம்)</b> 1. சொல்லின் வகைகள் 2. வேற்றுமைத் தொகைகள் 3. பகுபத உறுப்புகள்	10
<b>Total Hours</b>		<b>60</b>

### Reference Books

1	கவிஞர் கண்ணதாசன், (2006, 6-ஆம் பதிப்பு), இயேசு காவியம், கலைக்காவிரி பதிப்பகம்.
2	நடராசன் தி.சு. (2013, 16-ஆம் பதிப்பு), உரைகளும் உரையாசிரியர்களும், நியூ செஞ்சுரி புக் ஹவுஸ்.
3	முனைவர் சேதுராமன் சி.(2010, முதல் பதிப்பு), அபிராமி அந்தாதி, நியூ செஞ்சுரி புக் ஹவுஸ்.
4	முனைவர் பஞ்சாங்கம் கா. (2017, 4-ஆம் பதிப்பு), தமிழ் இலக்கிய வரலாறு, காவியா பதிப்பகம்.
5	வரதராசன் மு. (2021, 34-வது பதிப்பு), தமிழ் இலக்கிய வரலாறு, சாகித்திய அகாதமி பதிப்பு.
6	செல்வநாயகம் வி.(2003, முதல் பதிப்பு), தமிழ் உரைநடை வரலாறு, அடையாளம் பதிப்பகம்.
7	பேரா. முனைவர் பாக்கியமேரி, (2022, 6-ம் பதிப்பு), வகைமை நோக்கில் தமிழ் இலக்கிய வரலாறு, நியூசெஞ்சுரி புக் ஹவுஸ்(பி). லிட்.
8	டாக்டர் உதயமூர்த்தி எம். எஸ்.(2016, முதல் பதிப்பு), எண்ணங்கள், வெளியீடு கங்கை புத்தக நிலையம்.
9	புலவர்.பொன்மணிமாறன், (2011, முதல் பதிப்பு) அடோன் தமிழ் இலக்கணத் தொகுப்பு, அருண் பப்ளிஷிங்.
10	குமரன் கோ (2010, முதல் பதிப்பு), தமிழ் இலக்கணம் எளிய அறிமுகம் , சந்தியா பதிப்பகம்.

**Part – I: Language – I - Hindi - II**

Course Code	Course Name	Category	Hours / Week	Credits
25HIN21L	Hindi - II	Language - I	4	3

**Course Objectives**

The Course intends to cover :

- A basic understanding of contemporary poetry can be gained and the nature of modern poetry can be realized.
- Realizing the nature of drama and its nature and improving the knowledge of reading and understanding the nature of contemporary plays.
- Understands the benefits of correspondence and can enhance the correspondence you need.
- Translation is especially useful for translating from Hindi to English

**Course Learning Outcomes**

On the successful completion of the course, students will be able to

CLO	CLO Statements	Knowledge Level
CLO1	Get a basic understanding of renewal poetry and the essence of the poem	K1
CLO2	It is possible to understand the genre of Drama	K2
CLO3	Translating skill improved specially from English to Hindi	K2, K3
CLO4	Knowledge is gained by using phrases and idioms	K3
CLO5	Learners can express opinion in small sentences	K4
<b>K1 - Remember; K2 - Understand; K3 – Apply; K4 - Analyse</b>		

Unit	Content	No. of Hours
I	<b>Modern Poetry :</b> Panchvati By Mythli Sharan Gupt	14
II	<b>One Act Play:</b> Ekaniki Piyush 1. Owrangjeb ki aakirirath– Ramkumar varma 2. Ek din - Lakshminarayan Misra                      3. Vapasi - Vishnuprabhakar 4. Badsurath rajkumari – Krishnachandra    5. Aakket – Harijeeth	14
III	<b>Letter Writing :</b> (Leave Letter, Job Application, Ordering Books, Letter to Publisher, Personal Letter)	12
IV	<b>Conversation:</b> (Doctor & Patient, Teacher & Student, Storekeeper & Buyer, Two Friends, Booking Clerk & Passenger at Railway Station, Auto rickshaw driver and Passenger)Ref : Bolchal Ki Hindi Aur Sanchar by Dr. Madhu Dhavan Vani Prakashan, New Delhi.	10
V	<b>Translation:</b> Hindi-English only Lessons – 1-15 only Anuvadh Abyas -III	10
<b>Total Hours</b>		<b>60</b>

**Text Book**

1.	Luca Giachino, Carla Baracco, Romain Chrétien(DELTA), (2022), Nouvelle Génération A1, Didier FLE
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**Reference Books**

1.	Kavya Parasar, Dr.Bolanath,(2018) Jawahar Pusthakalay, Sadar Bazaar,Mathura-U.P.281001.
2.	Sone ki Varsha (2020) Dakshin Bharat Hindi Prachar Sabha, Chennai – 600 017

**Part – I: Language – I - French – II**

Course Code	Course Name	Category	Hours / Week	Credits
25FRE21L	French - II	Language - I	4	3

**Course Objectives**

The course intends to

- Understand and use familiar everyday expressions and basic phrases aimed at the satisfaction of concrete needs.
- Recognize key aspects of Francophone cultures such as greetings, etiquette, daily life, and basic geography of French-speaking countries.
- Write short, simple texts such as postcards, emails, or short descriptions about themselves and their immediate environment.
- Construct simple sentences using correct word order and basic vocabulary.
- Develop sensitivity to cross-cultural differences in communication and social practices.
- Read and understand short, simple texts such as personal messages, advertisements, menus, and schedules.

**Course Learning Outcomes**

On the successful completion of the course, students will be able to

CLO	CLO Statements	Knowledge Level
CLO1	Improve all the four French language skills (speaking, listening, reading, and writing) (Effective communicators)	K1
CLO2	Comprehend French and other Francophone nations' cultures and civilizations.	K2
CLO3	Comprehend the fundamentals of language structure, vocabulary, grammar, and phonetics (language skill).	K3
CLO4	The French DELF-A1 Certification is appreciated.	K3
CLO5	Developing Communication Skills	K4
<b>K1 - Remember; K2 - Understand; K3 – Apply; K4-Analyse</b>		

Unit	Content	No. of Hours
I	Portraits(pg 50-60) Grammaire: pg(140-144)	14
II	Communication(pg 61-65) Grammaire: pg(145-146)	14
III	Temps Libre(pg 66-68) Grammaire: pg(147)	12
IV	Mots Et Expressions((pg 69-76) Grammaire: pg(148-151)	10
V	Communication(pg 77-81) Grammaire: pg(152-155)	10
	Total Hours	60
Text Book		
1.	Luca Giachino, Carla Baracco, Romain Chrétien(DELF), (2022), Nouvelle Génération A1, Didier FLE.	
Reference Book		
1.	Nathalie Hirschsprung, Tony Tricot, (2017) Cosmopolite, Hachette.	

## Part – II: Language-II English - II

Course Code	Course Name	Category	Hours /Week	Credits
25ENG22L	English-II	Language - II	4	3

### Course Objectives

The course intends to cover

- The literary elements in poetry.
- The critical contemplation and writing in styles of prose texts.
- The modernist techniques and ethics in the narratives of short stories.
- The interpersonal skills essential in the work environment.

### Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO	CLO Statements	Knowledge Level
CLO1	Identify the common techniques underlying free verse and traditional forms of poetry for crafting poems.	K1
CLO2	Understand humour in prose texts psychologically to master the oratory skills.	K2
CLO3	Employ empathy and morale in diplomatic Day-to-day circumstances.	K3
CLO4	Strengthen the writing skills for documentation.	K3
CLO5	Demonstrate flexibility and mobility in the sequel LSRW Skills.	K3
<b>K1 - Remember; K2 - Understand; K3 - Apply</b>		

Unit	Content	No. of Hours
I	<b>Poetry: Motherhood</b> 1. My Grand Mother's House – Kamala Das 2. Of mother, among others things – A.K Ramanujam 3. Night of the Scorpion – Nissim Ezekiel	12
II	<b>Prose: Humour</b> 1. With The Photographer – Stephen Leacock 2. Travel by Train – J.B.Priestley 3. On Forgetting – Robert Lynd	12
III	<b>Short Stories: Integrity</b> 1. The taxi driver – K.S. Duggal 2. A Retrieved Reformation- O Henry 3. Kabuliwala - Rabindranath Tagore	12
IV	<b>Language Competency : Vocabulary</b> 1. Homonyms, Homophones, Homographs Portmanteau words 2. Verbs and Tenses, Subject Verb Agreement 3. Error Correction Vocabulary : Synonyms, Antonyms, Word Formation	12
V	<b>English for Communication</b> 1. Listening with courtesy and adding ideas and giving opinions during the meeting and making concluding remarks 2. Participating in a meeting: face to face and online 3. Reading news and weather reports 4. Preparing first drafts of short assignments .	12
<b>Total Hours</b>		<b>60</b>

**Text Books**

1.	Ezekiel Nissim, 1989 .Collected Poems 1952-1988. Oxford University Press.
2.	Hewings, M. (2000). Advanced English Grammar. Cambridge. University Press.

**Reference Books**

1.	Bakshi, S.P. & Sharma, R. (2019). Descriptive English. Arihant Publications (India) Ltd.
2.	Cameron S & Dempsey L. (2019). The Reading Book: A Complete Guide to Teaching Reading. S & L. Publishing.
3.	Sherman B. (2014) Skimming and Scanning Techniques. Liberty University Press.

**Web Resources (Swayam / NPTEL)**

1.	<a href="https://nptel.ac.in/courses/109103020">https://nptel.ac.in/courses/109103020</a>
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Course Code	Course Name	Category	Hours/Week	Credits
25BCC23C	Financial Accounting- II	Core – III	6	4

### Course Objectives

The course intends to Cover.

- Methods of depreciation and accounting of royalty.
- Accounting treatment of branch, hire purchase and installment system.
- Partnership accounts relating to admission, retirement, death, dissolution and insolvency of a partner.

### Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO	CLO Statements	Knowledge Level
CLO1	Understand the concept of depreciation and accounting treatment of royalty.	K1 – K2
CLO2	Apply the knowledge in preparing Hire purchase, Installment and Branch accounts.	K3
CLO3	Understand the accounting treatment for admission of a partner in a partnership firm.	K2
CLO4	Understand the accounting treatment at the time of retirement and death of a partner.	K3
CLO5	Compute the settlement of accounts at the time of dissolution of a partnership firm.	K3
K1 – Remember; K2 - Understand; K3 – Apply		

### CLO – PLO Mapping

CLOs/PLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	3	3	3	3	3
CLO2	3	3	3	3	2
CLO3	3	2	2	3	2
CLO4	3	3	3	3	2
CLO5	3	3	2	2	1
3-Substantial(high)	2-Moderate (medium)		1-Slight (low)		



**Core – III: Financial Accounting – II**

Unit	Content	No. of Hours
I	<b>Depreciation &amp; Royalty Accounts:</b> <b>Depreciation:</b> Meaning, Characteristics, Causes, Methods: (Straight line method, Diminishing method, Annuity method, Insurance policy method, Revaluation method. <b>Royalty:</b> Meaning – Technical terms – Accounting treatment- Specimen Journal Entries	18
II	<b>Branch Accounts, Hire Purchase &amp; Installment System:</b> <b>Branch Accounts:</b> Meaning, Technical Terms, Types of Branches: Dependent Branches – (Debtors system, Stock and Debtors system - Independent Branches: Foreign Branches. <b>Hire Purchase System:</b> Definition, Technical Terms. Calculation of Interest - Default and Repossession - Hire Purchase Trading Account. <b>Installment Purchase System:</b> Definition, Technical Terms, Difference between Hire Purchase System and Installment System.	18
III	<b>Partnership Fundamentals &amp; Admission of a partner:</b> <b>Partnership Fundamentals:</b> Definition of partnership – Partnership deed – Interest on Capital – Interest on drawings – Profit & loss appropriation account - Capital accounts of a partner: (Fixed capital method, Fluctuating capital method.) <b>Admission of a partner: Meaning, Technical Terms, Calculation of Sacrificing Ratio</b> - Adjustment for revaluation of assets and liabilities – Adjustment for reserves and other accumulated Profits & losses – Adjustment for Capitals: (Calculations of New Profit Ratio and Sacrificing Ratios) – New Balance sheet.	18
IV	<b>Retirement &amp; Death of a Partner:</b> <b>Retirement of a Partner:</b> Gaining Ratio - Treatment of goodwill on retirement- Adjustment of Capital after retirement – Memorandum Revaluation a/c. <b>Death of a Partner:</b> Provisions - Mode of Payment – Accounting treatment.	18
V	<b>Dissolution of a firm:</b> <b>Dissolution:</b> Meaning and modes of dissolution – Settlement of accounts – Accounting treatment – Realization account – Treatment of goodwill – Preparation of balance sheet. <b>Insolvency of a Partner:</b> Insolvent of single and more than two partners – All partners insolvent – Application of Garner Vs Murray rule – Piecemeal distribution: Surplus capital method and Maximum loss method.	18
<b>Total Hours</b>		<b>90</b>
<b>Theory 20% &amp; Problem 80%</b>		
<b>Text Books</b>		
1.	Jain.S.P., and Narang.K.L., (2022), Advanced Accountancy (21 <sup>st</sup> ed.), Kalyani Publishers, New Delhi.	
2.	Reddy and Murthy.A, (2015), Financial Accounting (7 <sup>th</sup> ed.), Margham Publications, Chennai.	
3.	Radhaswamy L and Gupta.R.L., (2015), Advanced Accounting (Vol: II), Sultan Chand & Sons, New Delhi.	

Reference Books	
1.	Tulsian P C & Tushar Tulsian, et al, (2023), Advanced Accounting (3 <sup>rd</sup> ed.), Sultan Chand & Sons Publications, New Delhi.
2.	Horngren Charles.T, Sundern Gary.L, Elliott John.A, Philbrick Danna.R, (2017), Introduction to Financial Accounting (11 <sup>th</sup> ed.), Pearson Education.
3.	Maheshwari.S.N., (2010), Financial and Management Accounting, Vikas Publishing House, Noida.
Web Resources (Swayam /NPTEL)	
1.	<a href="https://onlinecourses.swayam2.ac.in/nou24_cm02">https://onlinecourses.swayam2.ac.in/nou24_cm02</a>
2.	<a href="https://onlinecourses.swayam2.ac.in/imb24_mg08">https://onlinecourses.swayam2.ac.in/imb24_mg08</a>
3.	<a href="https://onlinecourses.swayam2.ac.in/cec24_mg05">https://onlinecourses.swayam2.ac.in/cec24_mg05</a>

Course Code	Course Name	Category	Hours/Week	Credits
25BCC24P	Programming with C++ Lab	Core Lab – II	4	2

### Core Lab – II: Programming with C++ Lab

S. No.	Programs	
1.	Illustrate the concept of classes and objects	
2.	Implement a program to calculate factorial of a given number	
3.	Program to check whether a number is prime or not	
4.	Illustrate the concept of console I/O operations	
5.	Develop a program to print odd numbers using Looping Structure	
6.	Given that an EMPLOYEE class contain the following members: Emp number, Emp name, Basic, DA, IT, Net pay and print data members	
7.	Program to calculate simple & compound interest	
8.	Construct a program for Function Overloading	
9.	Illustrate the concept of multi-level inheritance.	
10.	Implement the concept of Arrays	
11.	Program to print the length of a Box using Friend Function	
12.	Implement a program for bank transaction using Constructor & Destructor	
13.	Construct a program for implementation of files	
Total Hours		60
Text Book		
1.	Balagurusamy.E, (2013), Object-Oriented Programming with C++, 7 <sup>th</sup> Edition.	
Reference Books		
1.	Ashok N Kamthane, (2003), Object-Oriented Programming with ANSI and TurboC++	
2.	Maria Litvin & GrayLitvin, (2002), C++ for you, Vikas publication.	
Web Resources (Swayam / NPTEL)		
1.	<a href="https://nptel.ac.in/courses/106101208">https://nptel.ac.in/courses/106101208</a>	
2.	<a href="https://onlinecourses.nptel.ac.in/noc24_cs44/preview">https://onlinecourses.nptel.ac.in/noc24_cs44/preview</a>	
3.	<a href="https://onlinecourses.swayam2.ac.in/aic20_sp06/preview">https://onlinecourses.swayam2.ac.in/aic20_sp06/preview</a>	

Course Code	Course Name	Category	Hours/Week	Credits
25BCC25P	Fintech & Digital Finance Innovation Lab	Core Lab – III	4	3

### Core Lab– III: Fintech and Digital Finance Innovations Lab

Unit	Content	No. of Hours
1	Interface Navigation & Tooling Basics (Gate-0): Open the starter kit; navigate Power BI (Model/Data/Report), DB Browser for SQLite, and the Postman collection (no live calls needed). Load sample CSVs into Power BI, inspect schemas, and run the 10-min readiness micro-task (import → basic clean → export). Deliverables: readiness checklist ≥70%, starter PBIX opened, dataset profiling notes.	5
2	Payments Lifecycle & Actors (UPI/Cards/Wallets): Map columns from Orders, Gateway Payments, Internal Payments, and Refunds to authorize → capture → settlement → refund stages. Produce a one-page flow showing 5 common failure scenarios and the identifying fields (order_id, payment, status, failure code, ts).	5
3	Keys, IDs & Data Model (Star Schema for Ops): Identify primary/foreign keys; define relationships between Orders, Payments, Refunds. Validate row counts across sources; detect & fix duplicates/missing keys. Deliverables: schema.sql / model diagram, parity screenshots.	5
4	Power Query Fundamentals (Types, Splits, Standardization): Clean headers; set data types; split created_at into date/time; trim/uppercase key fields; build reusable Clean_queries* for Orders and Payments. Deliverables: Cleaned_Orders.csv, Cleaned_Payments.csv + PQ steps doc.	5
5	Reconciliation Setup (Left/Anti Joins): Build match table (Orders↔Payments) via left-join; surface PG-only and Internal-only using anti-joins; compute basic parity checks (counts/amounts). Deliverables: MatchSummary.csv, Unmatched_PGOnly.csv. Gate-1 acceptance: ≥80% parity vs golden outputs.	5
6	Exception Taxonomy & T+1 Recon Pack: Define reason codes (timeout, duplicate capture, insufficient funds, etc.); generate Exceptions.csv with code and hint; bundle a T+1 Recon Pack (counts, sums, exceptions, README).	5
7	API Events Normalization (Offline-First): Using curated JSON/JSONL traces, map request/response fields; build Events table with event_id, order_id, type, status, failure_code, ts, idempotency_key. Create a failure-code dictionary. Deliverables: api_events.csv + mapping.md.	5
8	Webhooks, Retries & Order Timeline (Gate-2): Simulate webhook deliveries and retries; de-dup by event_id; construct a chronological order-centric timeline (create→capture→refund) and flag gaps. Deliverables: events_timeline.csv + dedupe logic note. Gate-2 acceptance: correct dedupe + coherent timeline.	5
9	SQL for MIS (Daily KPIs + Refund Analytics): In SQLite (v≥3.35), produce daily SuccessRate and RefundRate, AOV, and refund SLA metrics with GROUP BY/HAVING/CASE; export kpi_daily.csv. Add top-N failure reasons by share.	5

Unit	Content	No. of Hours
10	Windows, Cohorts & Anomaly Flags: Use ROW_NUMBER /LAG/LEAD/moving-avg to compute rolling success rate (7-day); build first-paid-month cohorts; create an anomaly_candidates view (DoD spikes, duplicate captures). Deliverables: views.sql, cohort.csv.	5
11	Dashboard Core + Exceptions UX & Export QA: In Power BI, wire model + date table; implement exactly 5 core measures — SuccessRate, RefundRate, AOV, MatchRate_T1, Exceptions Count. Add slicers, drill to failure codes, and an Exceptions bookmark. QA: exported exceptions_export.csv must match the visual row-for-row. Deliverables: PBIX v2 + QA screenshot.	5
12	Compliance, Runbooks, Capstone Build & Showcase: Implement Consent Log (latest-consent per user), 3 AML rules, and a Redaction SOP (zero-PII check). Assemble capstone: ≥30 days data, recon parity ≥95%, 5 KPIs, escalation flow + webhook-outage playbook. Package PBIX/CSV/SQL/SOP and deliver a 3–5 min demo + viva. Deliverables: final kit zip + recording link.	5
Total Hours		60
Text Books		
1.	Susanne Chishti, (2025), The FINTECH Book, Wiley Publishers, New Delhi.	
2.	Brett King (2018), Bank 4.0: Banking Everywhere, Never at a Bank, Wiley Publishers, New Delhi.	
Reference Books		
1.	Vivek Dubey, Awadhesh Singh , Ashish Jain, Sudeesh Pillai, Geetha Raghuraj, Saumya Ranjan Pradhan,(2025), The Journey of FinTech: Fintellectual Minds Exploring FinTech Through Gen AI Lens, Notion Press, Chennai.	
2.	Chandrahaus Chavan & Atul Patankar (2024), Introduction to FinTech (1 <sup>st</sup> ed.), Pearson, Bengaluru.	
Web Resources (Swayam / NPTEL)		
1.	<a href="https://nptel.ac.in/courses/110106072">https://nptel.ac.in/courses/110106072</a>	

Course Code	Course Name	Category	Hours/Week	Credits
25BCC26A	Business Law	Allied – II	4	3

### Course Objectives

The course intends to Cover

- Basics of Commercial law and terms of a valid contract.
- Knowledge of performance contracts.
- Requirements of bailment and pledge.
- Duties of a seller and rights of unpaid seller.
- Understand the terms of negotiable instruments and types.

### Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO	CLO Statements	Knowledge Level
CLO1	Demonstrate awareness about basic legal framework governing business.	K1 - K2
CLO2	Summarize the rules related to the contracts and issues related to termination and breach of contracts.	K1 – K2
CLO3	Identify the rules related to indemnity and guarantee, bailment and pledge	K3
CLO4	Describe the various laws to safeguard the rights and duties of a buyer and seller.	K1 - K2
CLO5	Enhance knowledge about negotiable instruments and parties involved in it	K1
<b>K1- Remember; K2- Understand; K3- Apply</b>		

### CLO – PLO Mapping

CLOs/PLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	3	3	3	3	3
CLO2	3	3	3	3	3
CLO3	3	3	3	3	3
CLO4	3	3	3	3	2
CLO5	3	3	3	3	2
<b>3-Substantial(high)</b>		<b>2-Moderate (medium)</b>		<b>1-Slight (low)</b>	

**Allied – II: Business Law**

Unit	Content	No. of Hours
I	<b>Introduction:</b> Mercantile Law: Meaning – Definition – Nature – Objectives – Sources of Mercantile Law. Definition of Contract - Essentials of Valid Contract - Classification of Contract - Offer and Acceptance - Consideration - Capacity of Contract - Free Consent - Legality of Object - Contingent Contracts – Void Contract	12
II	<b>Performance Contract:</b> Meaning of Performance - Offer to Perform - Devolution of Joint liabilities & Rights - Time and Place of Performance - Reciprocal Promises - Assignment of Contracts - Remedies for Breach of contract - Termination and Discharge of Contract - Quasi Contract	11
III	<b>Contract of Indemnity and Guarantee:</b> Contract of Indemnity and Contract of Guarantee - Extent of Surety’s Liability - Kinds of Guarantee - Rights of Surety - Discharge of Surety - Bailment and Pledge - Bailment - Concept - Essentials and Kind - Classification of Bailments, Duties and Rights of Bailor and Bailee - Law of Pledge - Meaning - Essentials of Valid Pledge - Pledge and Lien - Rights of Pawner and Pawnee.	13
IV	<b>Elements of Law relating to Sale of Goods:</b> Definition of Contract of Sale - Formation - Essentials of Contract of Sale - Conditions and Warranties - Transfer of Property - Contracts involving Sea Routes - Sale by Non-owners - Rights and Duties of Buyer - Rights of an Unpaid Seller – Consumer Protection Act 2019.	12
V	<b>Elements of Law relating to Negotiable Instruments:</b> Definition of a Negotiable Instrument; Instruments Negotiable by Law and by Custom; Types of Negotiable Instruments; Parties to a Negotiable Instrument- Duties, Rights, Liabilities and Discharge; Material Alteration; Crossing of Cheques; Payment and Collection of Cheques and Demand Drafts; Presumption of Law as to Negotiable Instruments. Case Studies.	12
<b>Total Hours</b>		<b>60</b>
<b>Text Books</b>		
1.	Gulshan,S.S., (2007), Mercantile Law, (3 <sup>rd</sup> ed.), Excel India Publishers, New Delhi.	
2.	Kapoor,N.D., (2022), Elements of Mercantile Law, (38 <sup>th</sup> ed), Sultan Chand & sons, New Delhi.	
3.	Shukla,M.C., (2021), Mercantile Law, S.Chand & Company, New Delhi.	
<b>Reference Books</b>		
1.	Kuchhal,M.C., (2006), Mercantile Law, (6 <sup>th</sup> ed.), Vikas Publishing House Pvt. Ltd., Noida.	
2.	Gogna,P.P.S., (2016), Mercantile Law, (7 <sup>th</sup> ed.) S.Chand & sons Company, New Delhi.	
<b>Web Resources (Swayam/NPTEL)</b>		
1.	<a href="https://onlinecourses.swayam2.ac.in/nou24_cm11/preview">https://onlinecourses.swayam2.ac.in/nou24_cm11/preview</a>	
2.	<a href="https://onlinecourses.swayam2.ac.in/cec24_cm02/preview">https://onlinecourses.swayam2.ac.in/cec24_cm02/preview</a>	
3.	<a href="https://onlinecourses.nptel.ac.in/noc24_mg11/preview">https://onlinecourses.nptel.ac.in/noc24_mg11/preview</a>	
4.	<a href="https://onlinecourses.swayam2.ac.in/nce24_sc06/preview">https://onlinecourses.swayam2.ac.in/nce24_sc06/preview</a>	

Course Code	Course Name	Category	Hours / Week	Credits
25HUM2FC	Human Rights	Foundation Course	2	2

Unit	Content
I	<p><b>Concept of Human Values, Value Education Towards Personal Development</b>  Aim of education and value education; Evolution of value oriented education; Concept of Human values; types of values; Components of value education.</p> <p><b>Personal Development :</b>  Self-analysis and introspection; sensitization towards gender equality, physically challenged, intellectually challenged. Respect to - age, experience, maturity, family members, neighbours, co-workers. Character Formation  Towards Positive Personality:  Truthfulness, Constructively, Sacrifice, Sincerity, Self Control, Altruism, Tolerance, Scientific Vision.</p>
II	<p><b>Value Education Towards National and Global Development</b>  <b>National and International Values:</b>  Constitutional or national values - Democracy, socialism, secularism, equality, justice, liberty, freedom and fraternity.  Social Values - Pity and probity, self-control, universal brotherhood.  Professional Values - Knowledge thirst, sincerity in profession, regularity, punctuality and faith.  Religious Values - Tolerance, wisdom, character.  Aesthetic values - Love and appreciation of literature and fine arts and respect for the same.  National Integration and international understanding.</p>
III	<p><b>UNIT – III: Impact of Global Development on Ethics and Values</b>  Conflict of cross-cultural influences, mass media, cross-border education, materialistic values, professional challenges and compromise. Modern Challenges of Adolescent Emotions and behavior; Sex and spirituality: Comparison and competition; positive and negative thoughts. Adolescent Emotions, arrogance, anger, sexual instability, selfishness, defiance.</p>
IV	<p><b>UNIT - IV: Therapeutic Measures</b>  Control of the mind through  a. Simplified physical exercise  b. Meditation – Objectives, types, effect on body, mind and soul  c. Yoga – Objectives, Types, Asanas  d. Activities:  (i) Moralisation of Desires  (ii) Neutralisation of Anger  (iii) Eradication of Worries  (iv) Benefits of Blessings</p>



Unit	Content
V	<p><b>UNIT - V: Human Rights</b></p> <p>1. Concept of Human Rights – Indian and International Perspectives</p> <p>a. Evolution of Human Rights</p> <p>b. Definitions under Indian and International documents</p> <p>2. Broad classification of Human Rights and Relevant Constitutional Provisions.</p> <p style="padding-left: 40px;">a. Right to Life, Liberty and Dignity</p> <p style="padding-left: 40px;">b. Right to Equality</p> <p style="padding-left: 40px;">c. Right against Exploitation</p> <p style="padding-left: 40px;">d. Cultural and Educational Rights</p> <p style="padding-left: 40px;">e. Economic Rights</p> <p style="padding-left: 40px;">f. Political Rights</p> <p style="padding-left: 40px;">g. Social Rights</p> <p>3. Human Rights of Women and Children</p> <p>a. Social Practice and Constitutional Safeguards</p> <p style="padding-left: 40px;">(i) Female Feticide and Infanticide</p> <p style="padding-left: 40px;">(ii) Physical assault and harassment</p> <p style="padding-left: 40px;">(iii) Domestic violence</p> <p style="padding-left: 40px;">(iv) Conditions of Working Women</p> <p>4. Institutions for Implementation</p> <p style="padding-left: 40px;">a. Human Rights Commission</p> <p style="padding-left: 40px;">b. Judiciary</p> <p>5. Violations and Redressal</p> <p style="padding-left: 40px;">a. Violation by State</p> <p style="padding-left: 40px;">b. Violation by Individuals</p> <p style="padding-left: 40px;">c. Nuclear Weapons and terrorism</p> <p style="padding-left: 40px;">d. Safeguards.</p>
<b>Total Hours</b>	
<b>30</b>	

Course Code	Course Name	Category	Hours / Week	Credits
25DIM2FC	Disaster Management	FC - II	2	2

Unit	Content	
I	<b>Unit I: Introduction to Disasters</b> 1.1. Definition of Concepts 1.2. Difference between hazards and vulnerability 1.3. Types of Disasters 1.4. Natural Disasters 1.5. Human - Made Disasters	
II	<b>Unit II: Disasters Management</b> 2.1. Disaster Management 2.2. Disaster Management Cycle 2.3. Key Phases of Disaster Management 2.4. Disaster and Development 2.5. Disaster Impacts on Differential Groups	
III	<b>Unit III: Vulnerability Assessment and Reduction</b> 3.1. Vulnerability 3.2. Vulnerability Assessment 3.3. Early Warning System 3.4. Factors Contributing to Vulnerability 3.5. Vulnerability Reduction 3.6. Impact of Development Projects such as Dams, Embankments, Changes in Land-use etc. 3.7. Climate Change Adaptation	
IV	<b>Unit IV: Disaster Risk Reduction</b> 4.1. Disaster Risk Reduction (DRR), 4.2. Knowledge Management in Disaster Risk Reduction 4.3. The Knowledge Management Cycle 4.4. Role of Information and Knowledge in Disaster Risk Reduction 4.5. Indigenous Knowledge and Disaster Risk Reduction 4.6. Indigenous Knowledge and Early Warning Indicators 4.7. Indigenous Knowledge and Coping Strategies 4.8. Sendai Framework for Disaster Risk Reduction 4.9. Intergovernmental Panel on Climate Change (IPCC) 4.10. IPCC Scenario in the Context of India	
V	<b>Unit V: Institutional Framework for Disaster Management</b> 5.1. National Policy on Disaster Management 2009 5.2. The National Disaster Management Authority (NDMA) 5.3. State Disaster Management Authority (SDMA) 5.4. District Disaster Management Authorities (DDMAs) 5.5. Community-Based Disaster Management (CBDMD) 5.6. NGOs and Disaster Management 5.7. Other Related Policies, Plans, Programmes and Legislation	
Total Hours		30

<b>Text Books</b>	
1	Sharma S.C(2020), Disaster Management (1 <sup>st</sup> ed.), Khanna Book Publishing Co. (P) Ltd, New Delhi.
2	Srivastava A.K (2021), Text Book of Disaster Management, Scientific Publishers, Jodhpur.
<b>Reference Books</b>	
1	Pradeep K Goyal, Anil K Gupta, Disaster Management, All India Council for Technical Education Nelson Mandela Marg, Vasant Kunj, New Delhi, 110070
2	Subramanian, (2018), Disaster Management, Vikas Publishing House, Noida.
<b>Web Resources(Swayam/NPTEL)</b>	
1	<a href="https://onlinecourses.swayam2.ac.in/cec19_hs20/preview">https://onlinecourses.swayam2.ac.in/cec19_hs20/preview</a>
2	<a href="https://onlinecourses.swayam2.ac.in/cec25_hs135/preview">https://onlinecourses.swayam2.ac.in/cec25_hs135/preview</a>

Course Code	Course Name	Category	Hours / Week	Credits
25IDT2AE	Innovation & Design Thinking	AECC - II	2	2

### Course Objectives

The Course intends to cover

- The principles and practices of innovation and design thinking.
- Creative problem-solving skills, and impactful solutions across diverse contexts.
- The user-centered research techniques, and practical tools to generate, prototype.

### Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO	CLO Statements	Knowledge Level
CLO1	Understand the design thinking methodology for solving real-world problems.	K2
CLO2	Generate, prototype, and test innovative ideas.	K3
CLO3	Frame human-centered solutions and present them effectively.	K3
CLO4	Enhance their confidence in collaborative approaches to problem solving.	K3
CLO5	Integrate innovation strategies into business, social, and creative contexts to drive sustainable impact.	K4
<b>K2</b> - Understand; <b>K3</b> – Apply ; <b>K4</b> - Evaluate		

## Ability Enhancement Compulsory Courses (AECC)-II: Innovation & Design Thinking

Unit	Content	No. of Hours
I	<b>Principles of Design Thinking:</b> Usability, Human-centeredness, Empathy, Iteration. <b>Types of Innovation:</b> Product, Process, Business Model, Social Innovation.	6
II	<b>Empathy &amp; Defining The Problem:</b> Understanding users - observation - ethnographic research - interviews - Empathy maps and personas - Identifying user pain points - Problem framing vs. problem solving.	6
III	<b>Ideation &amp; Creativity Tools:</b> Divergent vs. Convergent Thinking - Brainstorming and mind mapping techniques – SCAMPER. Idea selection and prioritization frameworks.	6
IV	<b>Prototyping &amp; Experimentation:</b> Low-fidelity vs. High-fidelity prototyping - Storyboarding, sketching, mock-ups, and role-playing - Rapid prototyping with simple materials.	6
V	<b>Testing &amp; Feedback:</b> Testing prototypes with users - Iteration and learning from feedback. <b>Innovation Strategy &amp; Implementation :</b> Scaling ideas into innovations - Measuring innovation impact - Barriers - Design Thinking for social change and sustainability.	6
Total Hours		30
Text Books		
1	Kelley, T., & Kelley, D. (2013). Creative confidence: Unleashing the Creative Potential within us all. Crown Business.	
2	Dan Saffer, Designing for Interaction, New Riders Publications, 2010.	
Reference Books		
1	Plattner, H., Meinel, C., & Leifer, L. (Eds.). (2018). Design Thinking Research: Making Distinctions: Collaboration versus Cooperation. Springer.	
2	Liedtka, J., & Ogilvie, T. (2011). Designing for Growth: A Design Thinking Tool kit for Managers. Columbia University Press.	
3	Martin, R. (2009). The Design of Business: Why Design Thinking is the Next Competitive Advantage. Harvard Business Press.	
Web Resources (Swayam / NPTEL)		
1	<a href="https://onlinecourses.nptel.ac.in/noc22_mg32/preview">https://onlinecourses.nptel.ac.in/noc22_mg32/preview</a>	
2	<a href="https://onlinecourses.swayam2.ac.in/imb23_mg65/preview">https://onlinecourses.swayam2.ac.in/imb23_mg65/preview</a>	
3	<a href="https://onlinecourses.nptel.ac.in/noc20_hs08/preview">https://onlinecourses.nptel.ac.in/noc20_hs08/preview</a>	

Course Code	Course Name	Category	Hours/Week	Credits
25IPR2AE	Intellectual Property Rights	AECC - II	2	2

### Course Objectives

- This course intends to cover
- Identify the objectives, forms, duration, and scope of protection for different types of intellectual property.
- Understand the global IP framework and India's compliance challenges.
- Recognize the role of IP as a policy tool for national, economic, social, and cultural growth.
- Gain knowledge of substantive laws and procedural mechanisms of IP in India. Analyze recent national and global trends in intellectual property rights.

### Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO	CLO Statements	Knowledge Level
CLO1	Understand the core principles of intellectual property protection.	K1, K2
CLO2	Identify the key concepts and principles of trademarks.	K2
CLO3	Comprehend the legal implications and rights under copyright law.	K3
CLO4	Understand the legal consequences of patents and trade secrets.	K2
CLO5	Comprehend IP rights for plant varieties and farmers, along with their legal and social aspects.	K4
<b>K1</b> - Remember; <b>K2</b> - Understand; <b>K3</b> – Apply; <b>K4</b> – Analyze		

**Ability Enhancement Compulsory Courses(AECC)-II :  
Intellectual Property Rights**

Unit	Content	No. of Hours
I	<b>Introduction to Intellectual Property:</b> Introduction, types of intellectual property, international organizations, agencies and treaties, importance of intellectual property rights.	6
II	<b>Trade Marks:</b> Purpose and function of trademarks, acquisition of trade mark rights, protectable matter, selecting, and evaluating trade mark, trade mark registration processes.	6
III	<b>Law of Copy Rights:</b> Fundamental of copy right law, originality of material, rights of reproduction, rights to perform the work publicly, copy right ownership issues, copy right registration, notice of copy right, international copy right law.	6
IV	<b>Law of Patents, Trade Secrets:</b> Foundation of patent law, patent searching process, ownership rights and transfer. Trade Secrets: Trade secret law, determination of trade secret status, liability for misappropriations of trade secrets, protection for submission, trade secret litigation.	6
V	<b>Protection of Plant Varieties and Farmers' Rights:</b> Introduction -Meaning and Definition - Registrable Varieties of Plants - Procedure for Registration - Plant Varieties Protection.	6
<b>Total Hours</b>		<b>30</b>
<b>Text Books</b>		
1	V K Ahuja - Law Relating To Intellectual Property Rights - Lexis Nexis; Third edition , 2017.	
2	Elizabeth Verkey - Intellectual Property Law and Practice – Eastern Book Company – 2018.	
3	S R Myneni - Law of Intellectual Property - Asia Law House – 2021.	
<b>Reference Books</b>		
1	B.L. Wadehra - Law Relating To Intellectual Property – Universal Law Publishing House, New Delhi , 2011.	
2	Avtar Singh - Intellectual Property Law - Eastern Book Company – 2015.	
<b>Web Resources (Swayam/NPTEL)</b>		
1	<a href="https://onlinecourses.nptel.ac.in/noc22_hs59/preview">https://onlinecourses.nptel.ac.in/noc22_hs59/preview</a>	

Course Code	Course Name	Category	Hours / Week	Credits
25END2AE	Entrepreneurship Development	AECC – II	2	2

### Course Objectives

This course intends to cover

- Basics of starting and managing entrepreneurial ventures.
- Tools for planning, funding, and entrepreneurial growth.

### Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO	CLO Statements	Knowledge Level
CLO1	Understand the concept of entrepreneurship.	K2
CLO2	Gain knowledge on entrepreneurial motivation	K2
CLO3	Apply business idea evaluation	K3
CLO4	Create systematic Business plan	K3
CLO5	Analyse business finance and support	K4
<b>K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse</b>		



## Ability Enhancement Compulsory Course – II: Entrepreneurship Development

Unit	Content	No. of Hours
I	<b>Entrepreneurship:</b> Meaning of Entrepreneurship - Characteristics, Functions and Types of entrepreneurs - Intrapreneur vs. Entrepreneur - Need for Entrepreneurship in economic development - Contribution to GDP, Employment, Innovation.	5
II	<b>Entrepreneurial Motivation:</b> Meaning - Need for Achievement Theory - Risk-taking Behaviour - Innovation and Entrepreneur – Economic & non-economic factors affecting entrepreneurial growth.	5
III	<b>Business Ideas:</b> Sources of Business Ideas & Opportunity Identification – Idea generation techniques (Brainstorming, Design Thinking). Business incubation - Technical Assistance for small business – Preparation of Feasibility Reports, Legal Formalities and Documentation	7
IV	<b>Business Plan:</b> Meaning and importance of Business Plan – Structure and components – Market Study.	7
V	<b>Entrepreneurial finance:</b> Sources of finance (Bank, Angel investors, Venture Capital, Crowdfunding, Mudra Loans) - Institutional support to entrepreneurs (DIC, KVIC, EDII and MSME).	6
<b>Total Hours</b>		<b>30</b>
<b>Text Books</b>		
1	C.B. Gupta and N.P. Srinivasan (2020), Entrepreneurship Development, Sultan Chand and Sons.	
2	Dr. Vasant Desai and Dr. Kulveer Kaur (2021), Entrepreneurship Development and Management, Himalaya Publications.	
<b>Reference Books</b>		
1	Dr. Jayashree Suresh (2021), Entrepreneurial Publications, Margham Publications	
2	S S Khanka (2020), Entrepreneurial Development, Sultan Chand and Sons, New Delhi.	
<b>Web Resources (Swayam/NPTEL)</b>		
1	<a href="https://onlinecourses.nptel.ac.in/noc25_mg95/preview">https://onlinecourses.nptel.ac.in/noc25_mg95/preview</a>	

### Components for Internal Assessment and Distribution of Marks for CIA and ESE (Theory)

Max Marks	Marks for		Components for CIA						
100	CIA	ESE	CIA		Model		Attendance	Active Engagement	Total
	25	75	Actual	Weightage	Actual	Weightage	5	5	25
			50	5	75	10			

### Question Paper Pattern

Component	Duration in Hours	Section A			Section B			Section C			Total
		Type of Question	No. of Questions	Marks	Type of Question	No. of Questions	Marks	Type of Question	No. of Questions	Marks	
CIA	2	MCQ	8	8x1=8	Either or	3	3x6=18	Either or	3	3x8=24	50
Model Exam / ESE	3	MCQ	10	10x1=10	Either or	5	5x5=25	Either or	5	5x8=40	75

### Components for Internal Assessment and Distribution of Marks for CIA (Lab)

Max Marks	Marks for		Components for CIA						
	CIA	ESE	Test		Model		Experiments / Programs	Observation	Total
	40	60	Actual	Weightage	Actual	Weightage	Marks	5	40
			50	10	60	15	10		

### Examination Pattern

Component	Duration in Hours	Marks			Total Marks
		Practical Exam	Record	Weightage	
Test	2	50	-	10	50
Model	3	60	-	15	60
Experiments	-	-	-	10	10
Observation	-	-	-	05	05
Total Marks - CIA				40	40
ESE	3	50	10	-	60

**Components for Internal Assessment and  
Distribution of Marks for CIA (Foundation Course -Theory)**

Max Marks	Marks for		Components for CIA				
50	CIA	ESE	CIA		Model		Total
	50	-	Actual	Weightage	Actual	Weightage	50
			50	25	50	25	

**Question Paper Pattern**

Duration in Hours	Mode of Exam	Type of Questions	No. of Questions	Marks
2	Offline	Open Choice	5 (Out of 8)	5 x 10=50

**Components for and Distribution of Marks for ESE (Theory)  
Ability Enhancement Compulsory Courses (AECC)  
&  
Question Paper Pattern**

Duration in Hours	Mode of Exam	Type of Questions	No. of Questions	Marks
2	Online	MCQ	50	50x1=50

