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.

Semester - I

B. Com CA

Curriculum

Semester – 1									
Course Code	**Part**	**Course Category**	**Course Name**	**Hrs./ Week**	**Examination**				**Credits**
					Duration in hrs.	**Max Marks**			
						CIA	**ESE**	**Total**	
25TAM11L	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	**நாட்டுப்பற்று** 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	**சமூகம்** 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	**சிறுகதை** 1. காஞ்சனை - புதுமைப்பித்தன் 2. சுமைதாங்கி - ஜெயகாந்தன் 3. சோற்றுக் கணக்கு - ஜெயமோகன் 4. ஆறு யானைகள் - எஸ்.ராமகிருஷ்ணன் 5. மரத்தைக்கர்ப்பம்சுமந்தவள் - ஆண்டாள்பிரியதர்சினி	12
IV	**இலக்கியவரலாறு** 1. மரபுக்கவிதையின்தோற்றமும்வளர்ச்சியும் 2. புதுக்கவிதையின்தோற்றமும்வளர்ச்சியும் 3. ஹைக்கூகவிதையின்தோற்றமும்வளர்ச்சியும் 4. சிறுகதையின்தோற்றமும்வளர்ச்சியும்	10

Unit	Content	No. of Hours
V	இலக்கணம் 1. எழுத்துகள் (முதல்எழுத்துகள், சார்பெழுத்துகள்) 2. எழுத்துக்களின்பிறப்பு 3. மாத்திரைகள் 4. பயிற்சிக்குரியன - மொழிபெயர்ப்பு (ஆங்கிலத்திலிருந்துதமிழுக்குமொழிபெயர்த்தல்)	10
	Total Hours	**60**

Reference Books

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

- Improves grammatical knowledge.
- Will continue to read and learn about articles and think about them.
- It is possible to read and understand short stories and understand the thoughts and life of the people of this state.
- 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	**Prose: Nuthan Gadya Sangrah** 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	**Non Detailed Text Short Stories: Kahani Kunj** Pareksha - Premchand Mamtha - Jayashankar Prasad Apnaparaya - Jaynendrakumar Admikabachcha - Yespal Bolaramkajeev - Harishankar Parsayi Vapasi - MannuBhandari	14
III	**Grammar: Shabdha Vichar Only** (Noun, Pronoun, Adjective, Verb, Tense, Case, Endings) Theoretical & Applied.	12
IV	**Translation: English –Hindi Only.** Anuvadh Abhyas – III (1 - 15 Lessons Only)	10
V	**Comprehension**: 1 Passage From Anuvadh Abhyas – III (16 - 30)	10
	Total Hours	**60**

Text Books	
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

- Improves grammatical knowledge
- Will continue to read and learn about articles and think about them
- It is possible to read and understand short stories and understand the thoughts and life of the people of this state
- Translation knowledge and the ability to read and analyze a message are also available
- 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
K1-Remember; **K2**-Understand; **K3** –Apply;**K4-**Analyse		

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
	Total Hours	**60**

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

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 Etape1(Lecons1- 3)	14
II	Etape2(Lecons1- 3)	14
III	Etape3 -Leçons1–2	12
IV	Etape3–Leçon3 Etape4–Leçon1	10
V	Etape4 –Leçons2–3	10
Total Hours		**60**

	Text Book
1	Céline Himber,Corina Brillant, Sophie Erlich, (2008), Adomania1–Methodede francais, Publisher-Hachette Fle

	Reference Book
1.	Yves Loiseau, Régine, (2014), Latitudes1, Merieux Publisher: French and European Publications Inc.

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	**Poetry**: Nature 1. I Wandered Lonelyasa Cloud – William Wordsworth 2. The Sparrow – Paul Laurence Dunbar 3. Stopping by woods on a snowy Evening – Robert Frost	12
II	**Prose**: Friendship 1. The Man in Black – Oliver Goldsmith 2. Of Friendship – Francis Bacon 3. The Blessing of Friends – Sir John Lubbock	12
III	**Short Stories:** Morality 1. The Necklace – Guyde Maupassant 2. The Lottery - Shirley Jackson 3. The Monkey's Paw - W.W.Jacobs	12
IV	**Language Competency** 1. Vocabulary: Synonyms, Antonyms,Word Formation 2. Parts of Speech 3. Error correction	12
V	**English for Communication** 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
	Total Hours	**60**

Text Books

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.

Reference Books

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.

Web Resources (Swayam/NPTEL)

1.	https://nptel.ac.in/courses/109105205

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
K1- Remember; **K2**- Understand; **K3**- Apply; **K4** – Analyze			

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 - I: Financial Accounting – I

Unit	Content	No. of Hours
I	**Fundamentals of Book Keeping:** Introduction – Book Keeping – Accounting – Definition – Accounting Concepts and Conventions – Accounting Terms - Double Entry System – Accounting Equation – Journal – Ledger – Subsidiary books – Trial balance.	18
II	**Final accounts of a Sole trader:** 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 **Rectification of Errors**: Meaning – Types of Errors.	18
III	**Bills of Exchange:** Definition – Specimens – Discounting of Bills – Endorsement of Bill – Collection – Noting – Renewal – Retirement of Bill under rebate – Insolvency of Acceptor – Accommodation Bills. **Average Due Date and Account Current:** Meaning – Methods.	18
IV	**Bank Reconciliation Statement:** Meaning, Objectives, Advantages and disadvantages- Preparation of BRS. **Non-Profit Organization:** Receipts and Payments, Income and Expenditure account and Balance sheet.	18
V	**Accounting from Incomplete Records:** Meaning and Features – Limitations – Difference between Incomplete Records and Double Entry System – Methods of Calculation of Profit – Statement of Affairs Method – Conversion method.	18
	Total Hours	**90**
	Problem 80% & Theory 20%	

Text Books

1.	Jain.S.P., and Narang.K.L., (2022), Advanced Accountancy (21st ed), Kalyani Publishers.
2.	Reddy and Murthy.A, (2015), Financial Accounting (7th, ed.), Margham Publications.
3.	Radhaswamy L and Gupta.R.L., (2015), Advanced Accounting (Vol: II), Sultan Chand & Sons Publications.

Reference Books

1.	Dr. Tulsian P C &Tushar Tulsian, et al, (2023), Advanced Accounting (3rd), 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.

Web Resources (Swayam/NPTEL)

1.	https://archive.nptel.ac.in/courses/110/101/110101131/
2.	https://archive.nptel.ac.in/courses/110/106/110106147/
3.	https://onlinecourses.swayam2.ac.in/cec24_mg05/preview

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
K1 - Remember; **K2** - Understand; **K3** – Apply; **K4** – Analyze			

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
3 - Substantial (high)		**2** - Moderate(medium)		**1** - Slight (low)

Core - II: Programming with C++

Unit	Content	No. of Hours
I	**Introduction to C++:** Tokens, Keywords, Identifiers, Variables, Operators, Manipulators, Data types -Expressions and Control Structures in C++; Simple C++ Programs.	12
II	**Functions in C++:** Main Function - Function Prototyping -Parameters Passing in Functions - Values Return by Functions – Inline Functions - Friend and Virtual Functions	12
III	**Classes and Objects:** Constructors and Destructors; Operator Overloading And Type Conversions - Type of Constructors – Function Definition – Function overloading – Function Overriding.	12
IV	**Inheritance:** Single Inheritance- Multilevel Inheritance - Multiple Inheritance - Hierarchical Inheritance - Hybrid Inheritance – Pointer Virtual Functions and Polymorphism; Managing Console I/O operations.	12
V	**Working with Files:** 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
	Total Hours	**60**

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.	BjarneStroustrap, (2000), The C++ Programming, Pearson Education,
4.	Herbert Schilt., (1999), C++ -The Complete Reference:, (3rd,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.	https://onlinecourses.nptel.ac.in/noc24_cs30/preview
2.	https://onlinecourses.swayam2.ac.in/nou24_cs06/preview
3.	https://onlinecourses.nptel.ac.in/noc24_cs02/preview
4.	https://onlinecourses.nptel.ac.in/noc24_cs44/
5.	https://onlinecourses.swayam2.ac.in/aic20_sp01/preview

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
K1- Remember; **K2**- Understand; **K3**- Apply; **K4** – Analyze		

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
3 - Substantial (high)		**2** - Moderate (medium)		**1** - Slight (low)	

Core Lab - I: Advanced Excel and Financial Modelling Lab

Unit	Content	No of Hours
I	**Introduction to Excel**: 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	**Advanced Excel:** 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. **Generative AI Tools in Excel**: 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	**Introduction to Finance**: 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	**Excel for Financial Analysis**: Financial Functions (PV, FV, NPV, IRR) – Loan and Investment Calculations – Depreciation Schedules – Sensitivity Analysis (Goal Seek, Data Tables)	10
V	**Basic Financial Modelling**: Purpose and Structure of Financial Models – Building a Basic Financial Model in Excel – Assumptions and Inputs – Forecasting Techniques – Scenario Analysis and Sensitivity Testing.	10
	Total Hours	**60**

Text Books

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.

Reference Books

1.	Winston, W. L. (2019), Microsoft Excel Data Analysis and Business Modeling (6th, ed.), Microsoft Press.
2.	Mayes, T. R., & Shank, T. M. (2020), Financial Analysis with Microsoft Excel (9th, ed.), Cengage Learning.
3.	Day, A. (2012). Mastering Financial Modelling in Microsoft Excel: A Practitioner's Guide to Applied Corporate Finance (3rd, ed.), FT Press.

Web Resources (Swayam/NPTEL)

1.	https://onlinecourses.nptel.ac.in/noc22_mg35/preview

S.No	List of Programs
1.	**Interface Navigation and Basic Functions** **Exercise:** 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.	**Formulas and Functions** **Exercise:** 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.	**Relative and Absolute Cell Referencing** **Exercise:** 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.	**Conditional Formatting and Data Validation** **Exercise:** 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.	**Charts and Graphs Creation** **Exercise:** 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.	**Advanced Functions: VLOOKUP, HLOOKUP, INDEX** **Exercise:** 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.	**Data Manipulation: Sorting, Filtering, Pivot** **Exercise:** 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.	**Power Query Data Transformation** **Exercise:** Open Excel and navigate to the Power Query editor. Familiarize with the Power Query interface: ribbon, query pane, and data preview area. Importing Data: Import data from various sources such as an Excel file, CSV file, and a web page. Combine multiple data sources into a single query. **Data Cleaning and Transformation:** Remove unnecessary columns and rows. Filter data based on specific criteria (e.g., date ranges, text values). Split columns by delimiter and merge columns. **Data Aggregation:** 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. **Data Merging and Appending**: 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.	**Excel Macros and VBA Basics** **Exercise:** 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.	**Financial Analysis and Functions** **Exercise:** 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.	**Basic Financial Modelling** **Exercise:** 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.
	Total Hours **60**

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
K1- Remember; **K2**- Understand; **K3**- Apply		

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
3-Substantial(high)		**2**-Moderate (medium)		**1**-Slight (low)	

Allied – I: Principles of Management

Unit	Content	No. of Hours
I	**Introduction to Management:** Meaning- Definitions – Nature and Scope Levels of Management -Importance - Functions of Management Management Vs Administration – Management is Science or Art – Managerial Roles. **Evolution of Management Thoughts:** F. W. Taylor, Henry Fayol, Peter F. Drucker, Elton Mayo.	12
II	**Planning:** Meaning – Definitions – Nature – Scope and Functions – Importance and Elements – Types – Planning Process - Tools and Techniques. **Management by Objective (MBO). Decision Making:** Meaning – Characteristics – Types – Steps – Forecasting.	12
III	**Organizing:** Meaning - Definitions - Nature and Scope – Characteristics – Importance – Types - Formal and Informal Organization – Organization Chart. **Organization Structure:** Meaning and Types – Departmentalization – Delegation of Authority – Centralization and Decentralization – Span of Management.	12
IV	**Staffing:** Meaning - Nature and importance - Process – Manpower Planning **Recruitment**: Sources of Recruitment – Selection Process – Interview and it types. **Training**: Need – Types – Performance Appraisal - Meaning and Methods – Promotion and Transfer.	12
V	**Directing and Controlling:** Meaning, Importance and Theories – Communication – Types – Barriers to Communications. **Leadership:** Nature – Styles of Leadership - Qualities of a Good Leader. **Co-ordination:** Meaning - Techniques of Co-ordination. **Controlling:** Characteristics, Importance, Control Process, Requisites of Effective Control and Controlling Techniques.	12
	Total Hours	60

Text Books

1. Gupta.C.B., (2013), Business Management, (2nd, ed.), Sultan Chand & Sons Publications.
2. DinkarPagare. (2018), Principles of Management, (2nd,ed.), Sultan Chand & Sons Publications.
3. Tripathi.P.C.,Reddy.P.N., AshishBajpai, Mark V Cannice, (2022), Principles of Management, (11th, ed.), Tata McGraw Hill, Noida.
4. Prasad.L.M., (2019), Principles of Management, (7th,ed.), S.Chand& Sons Co. Ltd., NewDelhi,

Reference Books

1. Harold Koontz., Heinz Weihrich.,(2020), Essentials of Management, (11th ,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. https://onlinecourses.swayam2.ac.in/aic22_ge19/preview
2. https://onlinecourses.nptel.ac.in/noc21_mg88/preview
3. https://onlinecourses.nptel.ac.in/noc22_mg42/preview
4. https://archive.nptel.ac.in/courses/122/108/122108038/

Department of Commerce with Computer Applications

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

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

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

Unit	Content

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

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

VII	**Human Population and the Environment**
	- Population growth, variation among nations.
	- Population explosion-Family welfare Programme.
	- Environment and human health.
	- Human Rights.
	- Value Education.
	- HIV/AIDS.
	- Women and Child Welfare.
	- Role of information Technology in Environment and human health.
	- Case Studies.
	Biosafety and Biosecurity
	The basic principles of biosafety.
	- Biological hazards and assess risk in laboratory settings.
	- Biosafety protocols to minimize risks associated with biological agents.
	- Role of biosafety in the protection of public health, environment, and nationalsecurity.
	The theoretical knowledge as well as practical applications to prepare learners for real-world biosafety challenges.
	1. Introduction to Biosafety
	  - Definition and importance of biosafety.
	  - Historical perspective on biosafety incidents.
	  - Biosafety vs. biosecurity: Key differences.
	2. Biological Hazards and Risk Assessment.

Unit	Content

	- Risk assessment methodology: Identifying hazards, evaluating risks, and control measures.
	3. Biological Waste Management
	  - Types of biological waste: Solid, liquid, sharps, etc.
	  - Waste disposal techniques: Autoclaving, incineration, chemical disinfection.
	  - Environmental impact and regulations surrounding waste management.
	4. Standard Operating Procedures (SOPs) and Safety Practices
	  - Developing and implementing SOPs for laboratory safety.
	      - Practices for handling, storing, and disposing of biological materials.

VIII	**Field Work (Practical).** - Visit to a local area to document environmental assets-river/forest/grassland/ hill/mountain. - Visit to a local polluted site-Urban/Rural/Industrial/Agricultural. - Study of common plants, insects, birds. - Study of simple ecosystems-pond, river, hill slopes, etc.
	Total Hours – 30

Web Resources

1.	https://www.ugc.gov.in/oldpdf/modelcurriculum/env.pdf
2.	Biosafety in Microbiological and Biomedical Laboratories (CDC, NIH). (BMBL) 6th 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.). https://www.iberdrola.com/innovation/what-is-biosafety

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

		Creativity	
III	1	**Cooking & Eating:** Grammar: Some & Any, Quantifiers. Vocabulary & Speaking about Food & Drink. *Activities* Kitchen conversation (Listening). Reading an article & answering.	6
	2	**Survival:** Grammar: Comparison of adjectives. *Activities* Describing people (Speaking and Vocabulary). Listening to an audio & Answering. Reading & Writing: Read and Answer.	
	3	**Working Together:** Grammar: Verb + Noun phrases. *Activities* Technology (Vocabulary & Speaking). Listening: Listen & Answer. Reading & Writing: Notice.	
	4	**Music:** Grammar: Present perfect simple. *Activities* Survey about music (Vocabulary & Speaking). Listen to two people talking about music (Listening). Reading: Use adjectives and create sentences.	
	5	**Culture and Arts:** Grammar: Present perfect.Vocabulary & Speaking activity: Speak on the phone. *Activities:* Listen and answer. Reading & Writing activity: Review.	
		Practice: Writing comparison sentences & paragraphs.	
IV		Problem-Solving	
	1	**Do's and Don'ts:** Grammar, Modal Verbs. *Activities* Roleplay (Speaking). Holidays in January (Listening). Reading an article & answering.	6
	2	**Body:** Grammar: First conditional. Vocabulary & Speaking about Personality & Appearance. *Activities* Conversations about personality (Listening), Reading & Writing: Read and Answer about your skills.	
	3	**Speed:** Grammar: Present simple passive. Vocabulary & Speaking about relationships. Listening: Listen & Answer. Reading and Error spotting.	
	4	**Work:** Grammar: Adverbs of manner. Vocabulary & Speaking about work advice. Listening: Observe & Answer; Reading: Read & check your ideas.	
		Practice: Writing argumentative and descriptive essays.	
V		Critical Thinking	
	1	**Influence:** Grammar: would / past habits. Listening: Sentence Correction. *Activities* Your inspiration (Speaking). Picture description (Reading).Rewrite the sentences (Writing).	6
	2	**Money:** Grammar: Second conditional. *Activities:* Radio programme (Listening). Talk about games (Speaking). Reading & Writing: Fill in the blanks.	
	3	**Things that changed the world:** Grammar: articles. *Activities* :Talk about chewing gum (Speaking & Listening). Reading & Writing: Read and write a book review.	
		Practice: Writing Emails, reports and proposals.	
		Total Hours	**30**

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

Max Marks	Marks for		Components for CIA						
	CIA	ESE	CIA		Model		Attendance	Active Engagement	Total
100	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
100	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				
	CIA	ESE	CIA		Model		
			Actual	Weightage	Actual	Weightage	Total
50	**50**	**-**	50	**25**	50	**25**	**50**

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