

**PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR
UNIVERSITY, SOLAPUR**



NAAC Accredited-2022

'B++' Grade (CGPA2.96)

B.Com. in Information Technology

NEP 2020

**Curriculum for B.Com. in Information Technology
with effect from 2025-26**



**PUNYASHLOKA HIL YADEVI HOLKAR SOLAPUR UNIVERSITY,
SOLAPUR**

FACULTY OF COMMERCE INFORMATION TECHNOLOGY

Commerce Information Technology as a Major



Syllabus for B.Com. IT

Part II Semester III As per NEP w.e.f. June 2025

Level 4.5 Semester III	Category	Title of Subject	Course Credit	Weekly Hours	Total lectures	Exam Marks		
						UA	CA	Total
	Mandatory Major	Object Oriented Programming using C++ (Paper I) Theory	2	2	30	30	20	50
		Object Oriented Programming using C++ (Paper –I) Practical	2	2	30	30	20	50
	Mandatory Major	Tally Prime (Paper I) Theory	2	2	30	30	20	50
		Tally Prime (Paper I) Practical	2	2	30	30	20	50
	Minor	Advance Accountancy and Auditing -I	4	4	60	60	40	100
	Vocational Skill Course (VSC)	Computer Peripherals And Hardware Maintenance	2	2	30	30	20	50
	Open Elective	Cyber security	2	2	30	30	20	50
	Ability Enhancement Course (AEC)	Reading Texts in Indian English – I: ENG-301	2	2	30	30	20	50
	Field Project (Commerce Information Technology)	Field Project	2	2	30	30	20	50
Co-Curricular Courses	Sports	2	2	30	30	20	50	
TotalNumberof Credits			22		330	220	550	



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FACULTY OF COMMERCE INFORMATION TECHNOLOGY

Commerce Information Technology as a Major



Syllabus for B.Com. IT

Part II Semester IV As per NEP w.e.f. June 2025

Level 4.5 Semester IV	Category	Title of Subject	Course Credit	Weekly Hours	Total lectures	Exam Marks		
						UA	CA	Total
	Mandatory Major	Object Oriented Programming using C++ (Paper II) Theory	2	2	30	30	20	50
		Object Oriented Programming using C++ (Paper II) Practical	2	2	30	30	20	50
	Mandatory Major	Java Theory	2	2	30	30	20	50
		Java Practical	2	2	30	30	20	50
	Minor	Advance Accountancy and Auditing -II	4	4	60	60	40	100
	Vocational Skill Course (VSC)	Introduction of POWER BI	2	2	30	30	20	50
	Open Elective	Fundamental of Entrepreneurship - II	2	2	30	30	20	50
	Ability Enhancement Course (AEC)	Reading Texts in Indian English – I: ENG-401	2	2	30	30	20	50
	CEP1 (Commerce Information Technology)	Community Engagement Program	2	2	30	30	20	50
Co-Curricular Courses 4	Sports	2	2	30	30	20	50	
Total Number of Credits			22		330	220	550	



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Part III Semester V As per NEP w.e.f. June 2025

	Category	Title of Subject	Course Credit	Weekly Hours	Total lectures	Exam Marks		
						UA	CA	Total
Level 4.5 Semester V								
	Major Mandatory	Advanced Java Theory	2	2	30	30	20	50
		Advanced Java Practical	2	2	30	30	20	50
	Major Mandatory	Software Management (Theory)	4	4	60	60	40	100
	Major Mandatory	Advance Excel	2	2	30	30	20	50
	Minor	Advance Accountancy and Taxation - I	4	4	60	60	40	100
	Vocational Skill Course	E Commerce	2	2	30	30	20	50
	Open Elective	Cyber Security	4	4	60	60	40	100
	Field Project / CEP (Commerce Information Technology)	Field Project / CEP	2	2	30	30	20	50
	Total Number of Credits			22		330	220	550



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Commerce Information Technology as a Major



Syllabus for B.Com. IT

Part III Semester VI As per NEP w.e.f. June 2025

	Category	Title of Subject	Course Credit	Weekly Hours	Total lectures	Exam Marks		
						UA	CA	Total
Level 4.5 Semester VI								
	Mandatory Major	Introduction of Python Theory	2	2	30	30	20	50
		Introduction of Python Practical	2	2	30	30	20	50
	Mandatory Major	Introduction of Machine Learning (Theory)	2	2	30	30	20	50
		Introduction of Machine Learning (Practical)	2	2	30	30	20	50
	Mandatory Major	Cloud Management Theory	2	2	30	30	20	50
	Minor	Advance Accountancy and Taxation - II	4	4	60	60	40	100
	Open Elective	Advance Networking Theory	4	4	60	60	40	100
	On Job Training (OJT)	On Job Training (OJT)	4	4	60	60	40	100
	Total Number of Credits			22		330	220	550



**PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY,
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PROGRAMME: B.COM. INFORMATION TECHNOLOGY

B.COM. IT - II SEMESTER – III (NEP 2020)



VERTICAL: MAJOR MANDATORY

COURSE CODE:

COURSE NAME: OBJECT ORIENTED PROGRAMMING USING C++ Theory

Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks
02 Credits	02 Hours	30 Hours	50 (UA 60 + CA 40)

Preamble: The goal of the course is to make students familiar with the Object Oriented Programming Using C++ being used by the corporate world and to expose the students to applicability of various software and its needs.

Course Objectives:

- 1) Learn to create reusable and scalable code using object-oriented design principles.
- 2) Gain proficiency in C++ programming, including classes, objects, functions, and operator overloading.
- 3) Utilize arrays, linked lists, stacks, queues, and other data structures in an OOP paradigm.
- 4) Learn techniques for reading, writing, and manipulating files in C++.
- 5) Develop software applications using OOP principles to solve practical problems.

Unit -1: Introduction to C++	Lectures 15	Weightage: 9-15 Marks
1.1 Basic Concepts of OOP, Benefits & Features of OOP, Structure of C++ Program, Data types, Keywords and Operators, this pointer 1.2 Control Structure – Conditional and Looping statement. 1.3 Class Declaration, Declaration and Definition of a Class 1.4 Constructor & Destructor, Function Declaration and Definition (Inside class and outside the class using scope Resolution Operator), Calling Functions, Inline Functions, Friend Function. 1.5 Concept of Inheritance: Base Class & Derived Class, Types of Inheritance (Single, Multiple, Hierarchical, Multilevel, Hybrid Inheritance) 1.6 Concept of Polymorphism: Static Polymorphism and Dynamic Polymorphism 1.7 Function overloading and overriding 1.8 Virtual Functions and Pure Virtual Function		
Unit -2: Operator Overloading, array	Lectures 15	Weightage: 9-15 Marks
2.1 Overloading unary, binary operators – Overloading Friend functions – type conversion 2.2 Types of Inheritance – Single, Multilevel, Multiple, Hierarchical, Hybrid, Multi path inheritance 2.3 Virtual base Classes – Abstract Classes. 2.4 Pointers – Declaration – Pointer to Class, Object – this pointer – Pointers to derived classes and Base classes 2.5 Arrays – Characteristics – array of classes – Memory models – new and delete operators – dynamic object – Binding, Polymorphism and Virtual Functions 2.6 Files – File stream classes – file modes – Sequential Read / Write operations – Binary and ASCII 2.7 Files – Random Access Operation – Templates – Exception Handling - String – Declaring and Initializing string objects – String Attributes – Miscellaneous functions		

Course Outcomes:

- 1) Students will be able to develop structured, reusable, and modular programs using C++.
- 2) Students will implement linked lists, stacks, queues, trees, and sorting techniques using C++.
- 3) Students will learn how to work with file processing for reading, writing, and managing data.
- 4) Equip students with the skills necessary for software development, competitive programming, and further studies in computer science.

Reading Suggestion :

1. Programming in C++ by Ashok N Kamthane – Covers fundamental concepts of OOP and C++ programming.
2. Object-Oriented Programming with C++ by Joyce Farrell – A comprehensive guide to OOP principles and their implementation in C++.
3. The Complete Reference C++ by Herbert Schildt – A detailed book covering advanced C++ programming techniques.
4. Object-Oriented Programming Through C++ by Balagurusamy – Explains OOP concepts with practical examples.
5. C++ Primer by Stanley B. Lippman, Josée Lajoie, and Barbara E. Moo – A widely respected book for mastering C++.



**PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY,
SOLAPUR**
PROGRAMME: B.COM. INFORMATION TECHNOLOGY
B.COM. IT - III SEMESTER – III (NEP 2020)



VERTICAL: MAJOR MANDATORY			
COURSE CODE:			
COURSE NAME: OBJECT ORIENTED PROGRAMMING USING C++ Practical			
Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks
02 Credits	02 Hours	30 Hours	50 (UA 30 + CA 20)

Course Objectives:

1. Enable students to write, debug, and optimize programs
2. Equip students with practical knowledge in RDBMS and C++
3. Foster logical thinking and algorithmic problem-solving techniques.

Unit -1 : Practical I	Lectures 15	Weightage: 9 - 15 Marks
1.1 Use of operators in C++. 1.2 Illustrate Control Structures. 1.3 Create a class and creating an object. 1.4 Create constructors – default, parameterized		
Unit -2: Practical II	Lectures 15	Weightage: 9 - 15 Marks
2.1 Demonstrate declaration and definition of function. 2.2 Illustrate different Access Specifiers. 2.3 Illustrate inline function. 2.4 Define Member function-outside the class using Scope Resolution Operator. 2.5 Illustrate friend function. 2.6 Illustrate Inheritance – single, multiple and multilevel. 2.7 Perform static and dynamic polymorphism. 2.8 Demonstrate virtual & pure virtual function.		

Reading Suggestion :

1. Programming in C++ by Ashok N Kamthane – Covers fundamental concepts of OOP and C++ programming.
2. Object-Oriented Programming with C++ by Joyce Farrell – A comprehensive guide to OOP principles and their implementation in C++.
3. The Complete Reference C++ by Herbert Schildt – A detailed book covering advanced C++ programming techniques.
4. Object-Oriented Programming Through C++ by Balagurusamy – Explains OOP concepts with practical examples.
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**PROGRAMME: B.COM. INFORMATION TECHNOLOGY
B.COM. IT - II SEMESTER – III (NEP 2020)**



**VERTICAL: MAJOR MANDATORY
COURSE CODE:
COURSE NAME: TALLY PRIME THEORY**

Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks
02 Credits	02 Hours	30 Hours	50 (UA 30 + CA 20)

Preamble: The goal of the course is to make students familiar with the Tally Prime being used by the corporate world and to expose the students to applicability of various version and its needs.

Course Objectives:

1. To provide a strong foundation in financial accounting principles.
2. To teach students how to use Tally. ERP 9 for accounting and financial management
3. To enable students to handle inventory efficiently using Tally.
4. To ensure students can perform GST compliance activities accurately.
5. To prioritize data security and efficient document management

Unit -1: Introduction to Tally	Lectures 15	Weightage: 9-15 Marks
1.1 Introduction - Basics of Tally - Features & Usage of Tally - Getting functions with Tally - Creation / setting up of Company in Tally 1.2 Company Features – Configuration - Date Management- More than one year company creation, Change Period - Tally vault - Security controls - Tally Audit - Backup and restore 1.3 Split company data - Import and export of data - Printing Reports and Cheques - Create a Company Logo. Difference between Tally Accounting Vs Manual Accounting. 1.4 Gateway of Tally Introduction - Chart of Groups – Managing Groups - Multiple Groups – Ledgers - Multiple Ledgers – Managing Ledgers. Advance Accounting in Tally - Bill-wise details - Cost centers and Cost Categories - Multiple currencies - Interest calculations - Budget and controls Bank Reconciliation.		
Unit -2: Inventory Management using Tally	Lectures 15	Weightage: 9-15 Marks
2.1 Stock Groups - Multiple Stock Groups - Stock Categories - Multiple Stock Categories - Units of Measure - Stock Items. Advance Inventory in Tally 2.2 Order Processing - Recorder Levels - Batch-wise details - Bill of Materials Batch-Wise Details - Different Actual and Billed Quantities 2.3 Price Lists - Zero-Valued Entries - Additional cost details - POS 2.4 Accounting Vouchers – Introduction - Types of Vouchers - Chart of Vouchers - Accounting Vouchers - Inventory Vouchers – Invoicing.		

Course Outcomes –

1. Apply basic accounting concepts and conventions to maintain accurate financial records.
2. Create and maintain company accounts, ledgers, and groups efficiently.
3. Handle day-to-day business transactions such as payments, receipts, journal entries, and contra entries.
4. Manage inventory, stock items, and units of measurement to track business resources.
5. Prepare trial balance, profit & loss account, balance sheet, and other financial statements for decision-making.
6. Configure GST in Tally Prime and generate basic GST reports and returns.

Reading Suggestions:

1. Learn Tally Prime: With All New Features ,4/E – Comprehensive guide covering all major features and latest updates in Tally Prime.
2. Learn Tally Prime With GST Book by Gaurav Agrawal – Focuses on GST with Tally, very useful for compliance and real-world application.
3. Puja Tally Prime With GST Course Latest Book – Good beginner to intermediate book with practical examples (Hindi/English).
4. The Simplest Book for Learning TallyPrime – Easy-to-follow training guide, great for students starting out.



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PROGRAMME: B.COM. INFORMATION TECHNOLOGY

B.COM. - II SEMESTER – III (NEP 2020)

VERTICAL: MAJOR MANDATORY

COURSE CODE:

COURSE NAME: TALLY PRIME PRACTICAL

Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks
02 Credits	02 Hours	30 Hours	50 (UA 30 + CA 20)

Preamble: The course *Tally* is designed to equip undergraduate students with practical knowledge of computerized accounting using Tally software. It introduces the fundamentals of accounting concepts and demonstrates their application through Tally for maintaining financial records of business organizations. The course covers company creation, ledger management, inventory control, taxation, and generation of financial statements. Emphasis is placed on hands-on practice to enable students to efficiently record transactions, manage accounts, and prepare accurate financial reports. This course prepares students for accounting, finance, and business-oriented roles by enhancing their employability and professional competence.

Course Objectives:

1. To provide a strong foundation in financial accounting principles.
2. To teach students how to use Tally. ERP 9 for accounting and financial management
3. To enable students to handle inventory efficiently using Tally.
4. To ensure students can perform GST compliance activities accurately.
5. To prioritize data security and efficient document management.

Unit -1: Introduction to Tally & Company Management	Lectures 15	Weightage: 9-15 Marks
1.1 Company Creation: Creating, altering, shutting, and selecting companies. 1.2 Company Features & Configuration: Setting up basic features (F11) and configurations (F12) 1.3 Security Control: Setting up Tally Vault and User Security. 1.4 Backup & Restore: Managing data safety. 1.5 Chart of Accounts: Creating, altering, and displaying ledgers and groups. 1.6 Ledger Creation: Creating single/multiple ledgers (Bank, Debtors, Creditors, and Expenses). 1.7 Opening Balances: Entering opening balances for ledgers.		
Unit -2: Voucher Entry & Inventory Management	Lectures 15	Weightage: 9-15 Marks
2.1 Accounting Vouchers: Recording day-to-day transactions (Contra, Receipt, Payment, and Journal). 2.2 Inventory Vouchers: Recording Sales and Purchase invoices. 2.3 Invoicing: Generating invoices in voucher mode and invoice mode. 2.4 Debit/Credit Notes: Handling sales returns and purchase returns. 2.5 Inventory Info: Creating Stock Groups, Stock Categories, and Stock Items. 2.6 Units of Measurement: Creating Simple and Compound units. 2.7 Godown Management: Creating and managing warehouse locations.		

 पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ ॥ विद्याया संपन्नता ॥ NAAC Accredited-2022 "B++" Grade (CGPA-2.86)	PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY, SOLAPUR		
PROGRAMME: B.COM. INFORMATION TECHNOLOGY			
B.COM. - II SEMESTER – III (NEP 2020)			
VERTICAL: MINOR			
COURSE CODE:			
COURSE NAME: ADVANCE ACCOUNTANCY AND AUDITING -I			
Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks
04 Credits	04 Hours	60 Hours	100 (UA 60 + CA 40)

Preamble:

This course provides a thorough understanding of the key concepts in corporate accounting, focusing on the preparation of financial statements in accordance with accounting standards like IND AS 1. Students will gain practical knowledge of legal documentation, business acquisitions, and profit prior to incorporation, enabling them to proficiently manage and analyse the financial operations of a company. The course equips students with both theoretical insights and practical skills necessary for understanding and handling corporate financial matters. This course also aims to provide students with a comprehensive understanding of auditing principles, techniques, and practices in various business environments. It covers essential topics such as audit classification, planning, and procedures for auditing financial elements like income, expenses, assets, and liabilities. Students will learn about the role and responsibilities of auditors under the Companies Act 2013, along with the legal framework guiding audits

Course Objectives:

1. To teach the preparation and analysis of company financial statements, in accordance with accounting standards like IND AS 1
2. To explore the concepts of acquisition of business and profit prior to incorporation and their impact on financial statements.
3. To introduce students to the principles, objectives, and techniques of auditing in a business environment.
4. To familiarize students with the classification of audits and the procedures involved in auditing various financial elements.
5. To develop an understanding of the role, responsibilities, and legal framework for auditors under the Companies Act 2013.

Unit -1 : Company financial statements	Lectures 15	Weightage: 9 - 15 Marks
Preparation of financial statements Types of financial statements Provision for preparation of Financial Statements Applicability of schedule number III, Companies Act, 2013 General instructions for preparation of balance sheet and statement of profit and loss of a company IND AS 1 presentation of financial statement practical problems		
Unit -2 : Acquisition of business and profit prior to incorporation	Lectures 15	Weightage: 9 - 15 Marks
Acquisition of business Profit prior to incorporation - meaning Practical problems		
Unit -3 : Introduction to Auditing Introduction	Lectures 15	Weightage: 9 - 15 Marks
meaning, objectives, basic principles and techniques, classification of audit, audit planning, internal control and internal check, internal audit, audit procedure, vouching, verification of assets and liabilities		
Unit -4 : Audit of Limited Companies	Lectures 15	Weightage: 9 - 15 Marks
• Audit of Limited Companies (with Provisions of Companies Act, 2013 and companies rules 2014 and 2015): • Company Auditor: Appointment (Sec.139); 25%15 • Removal and resignation of auditor (Sec. 140); Eligibility, qualifications and disqualifications of auditor (Sec.141); • Remuneration of auditors (Sec.142). • Powers & Duties of auditors and Auditing Standards • (Sec.143, 145, 146, 147). • Auditor not to render certain services (Sec.144). • Liabilities of an Auditor. • Internal Audit (Sec.138) • Divisible profits and Dividend (Only Theory) • Declaration and payment of dividend • Sec123-Declaration of Dividend • Sec 124 -Unpaid Dividend • Sec 125- Investor Education and Protection Fund • Sec 126- Right to dividend, Right shares and Bonus Share to be held in abeyance pending registration of transfer of shares • Sec 127- Punishment for Failure to distribute Dividends		

Course Outcomes:

1. Students will be proficient in preparing financial statements for a company in accordance with applicable accounting standards and legal requirements.

2. Students will gain a clear understanding of profit prior to incorporation and how to account for it.
3. Students will be able to explain the fundamental principles, objectives, and classification of audits, and apply basic auditing techniques.
4. Students will demonstrate the ability to plan and execute audits of financial statements, including the verification of assets and liabilities.
5. Students will gain the ability to apply auditing procedures in compliance with statutory requirements, particularly under the Companies Act 2013.
6. Students will be proficient in auditing various financial items such as income, expenses, assets, liabilities, and reserves in line with industry practices.

Suggested Readings:

1. “Corporate Accounting”, T.S. Grewal, S. Chand & Company
2. “Advanced Corporate Accounting”, R.L. Gupta & M. Radhaswamy, Sultan Chand & Sons
3. “Corporate Accounting”, Dr. S.N. Maheshwari, Vikas Publishing House
4. “Financial Accounting for Management”, S.K. Bhattacharyya, Prentice Hall India
5. “Financial Reporting under IFRS”, S. David, Oxford University Press
6. “Corporate Accounting: Theory & Practice”, C.S. Kothari, Vikas Publishing House
7. “Advanced Accounting”, M.C. Shukla, T.S. Grewal, S. Chand & Company
8. “Company Accounts & Auditing”, P.C. Tulsian, S. Chand & Company
9. “Principles of Auditing”, R.K. Gupta & M. Sharma, McGraw-Hill Education
10. “Auditing and Assurance Services”, Alvin A. Arens, Randal J. Elder, Mark S. Beasley, Pearson Education
11. “Modern Auditing”, S.K. Basu, Pearson Education
12. “Auditing: Principles and Practice”, B.N. Tandon, S. Chand & Company
13. “Auditing and Assurance Services: An Integrated Approach”, Michael C. Knapp, Prentice Hall
14. “Auditing: A Practical Approach”, K. K. Tiwari, Vikas Publishing House
15. “Auditing”, Jagadish Prakash, Taxmann Publications
16. “Fundamentals of Auditing”, Kamal Gupta, McGraw-Hill Education
17. “Audit of Banks”, M.K. Soni, Sultan Chand & Sons



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PROGRAMME: B.COM. INFORMATION TECHNOLOGY

B.COM. - II SEMESTER – III (NEP 2020)

VERTICAL: VOCATIONAL SKILL COURSE

COURSE CODE:

COURSE NAME: COMPUTER PERIPHERALS AND HARDWARE MAINTENANCE

Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks
02 Credits	02 Hours	30 Hours	50 (UA 30 + CA 20)

Preamble: The course Computer Peripherals and Hardware Maintenance is designed to provide undergraduate students with a comprehensive understanding of computer hardware components, peripheral devices, and their maintenance. The course introduces the internal architecture of computers, various input/output and storage devices, and the functioning of system components.

Course Objectives:

- 1) To explain the basic concepts of Peripheral devices
- 2) To understand the construction and working of Input & Output devices
- 3) To Know the Troubleshooting and preventive maintenance of PC .

Unit - 1: Introduction To Peripheral Devices	Lectures 15	Weightage: 9-15 Marks
1.1 General block diagram of a peripheral device 1.2 Different types of peripheral devices used in modern computers and their purpose. 1.3 Input Devices - Block diagram of keyboard, different types of keyboards, operation and working principle of mouse and different mouse 1.4 Output Devices – Construction of CRT Monitor. Impact and non-impact printers, operation of LaserJet printer with a block diagram, operation of inkjet printer with a block.		
Unit - 2: Computer Peripherals And Trouble Shooting	Lectures 15	Weightage: 9-15 Marks
2.1 Disk Formatting and Partition. 2.2 Working with CMOS utility 2.3 PC Tools and Their Uses 2.4 Disk Manager and Its Uses 2.5 Working with virus Removing Software 2.6 PC LAN Installation and Testing 2.7 Windows NT Installation		

Course Outcome :

1. Recognize and describe internal and external computer components such as CPU, motherboard, RAM, storage devices, and expansion cards.
2. Explain the functionality, installation, and configuration of input/output devices like printers, scanners, keyboards, mice, and monitors.

3. Apply preventive and corrective maintenance techniques to ensure optimal performance of computer systems.
4. Diagnose and resolve common hardware failures and peripheral malfunctions in desktops.
5. Practice safe handling of electronic components, including anti-static precautions and proper installation/removal procedures.
6. Demonstrate hands-on skills in assembling, disassembling, upgrading, and configuring computer hardware and peripherals.
7. Integrate hardware knowledge to support IT infrastructure management and basic technical support roles.

Reading Suggestion:

1. Computer Peripheral & Hardware Maintenance — *Ashish A. Ukidve, Vijay T. Patil, Prasad A. Kulkarni*
2. Computer Hardware: Installation, Interfacing, Troubleshooting and Maintenance — *K. L. James*
3. Computer Hardware & Network Maintenance (Guide Text) – *Rohit Manglik*

 पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ ॥ विद्यया संयमता ॥ NAAC Accredited-2022 'B++' Grade (CGPA-2.86)	PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY, SOLAPUR		
PROGRAMME: B.COM. INFORMATION TECHNOLOGY			
B.COM. - II SEMESTER – III (NEP 2020)			
VERTICAL: OPEN ELECTIVE			
COURSE CODE:			
COURSE NAME: FUNDAMENTAL OF ENTREPRENEURSHIP - I			
Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks
02 Credits	02 Hours	30 Hours	50 (UA 30 + CA 20)

Preamble: The goal of the course is to give students a grasp of the fundamentals of entrepreneurship, the qualities that make an entrepreneur successful, how to launch a new business. Students will have the ability to manage risks, design business plans, and comprehend how the corporate sector operates.

Course Objectives:

1. To Understand the concept of entrepreneurship and key traits of successful entrepreneurs.
2. To explore the various types of entrepreneurs and the ethical and social responsibilities they face.
3. To examine the key factors that influence entrepreneurship, the role of entrepreneurship in economic development,
4. To guide students through the process of identifying business opportunities, developing a business idea, and planning a new venture.
5. To study the problems of MSME and to familiarize students with the step-by-step process of forming an MSME
6. To teach students the essentials of preparing a project report and guide them in preparing a comprehensive project report for an MSME

Unit -1 : Introduction to Entrepreneur	Lectures 15	Weightage: 9 - 15 Marks
Entrepreneur: Meaning and Definition and Types Key Traits of Successful Entrepreneurs Ethics and Social responsibility of Entrepreneur Challenges Faced by Entrepreneurs		
Unit -2 : Introduction to Entrepreneurship	Lectures 15	Weightage: 9 - 15 Marks
Entrepreneurship: Meaning and Definition Factors affecting entrepreneurship Role of Entrepreneurs in Economic Development Theories of Entrepreneurship a) Innovation Theory by Schumpeter b) Risk bearing theory of Knight c) Theory of High Achievement by McClelland		

Course Outcome:

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

1. Understand entrepreneurship and new dimensions of entrepreneurship.
2. Scan and evaluate the entrepreneurial opportunities at local and global level.
3. Capitalize the current market needs with innovate entrepreneurial solutions.

Suggested Readings

1. Fundamentals of Entrepreneurship Development and Project Management – Lipika K. Guliani & R. K. Gupta – Himalaya Publishing House
2. The Dynamics of Entrepreneurial Development and Management – Vasant Desai. – Himalaya Publishing House
3. Fundamentals of Entrepreneurship – G. S. Sudha – R. B. D. Publishing House
4. Entrepreneurial Development – S. S. Khanka – S. Chand & Co, New Delhi
5. Entrepreneurship Development – E. Gordon & K. Natarajan – Himalaya Publishing House
6. : “Entrepreneurial Development”- Gupta C.B. & Srinivas, Sultan D, Chand & Sons, New Delhi



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FACULTY OF COMMERCE INFORMATION TECHNOLOGY

Commerce Information Technology as a Major



Syllabus for B.Com. IT

Part II Semester IV As per NEP w.e.f. June 2025

	Category	Title of Subject	Course Credit	Weekly Hours	Total lectures	Exam Marks		
						UA	CA	Total
Level 4.5 Semester IV								
	Mandatory Major	Object Oriented Programming using C++ (Paper II) Theory	2	2	30	30	20	50
		Object Oriented Programming using C++ (Paper II) Practical	2	2	30	30	20	50
	Mandatory Major	Java Theory	2	2	30	30	20	50
		Java Practical	2	2	30	30	20	50
	Minor	Advance Accountancy and Auditing -II	4	4	60	60	40	100
	Vocational Skill Course (VSC)	Introduction of POWER BI	2	2	30	30	20	50
	Open Elective	Fundamental of Entrepreneurship - II	2	2	30	30	20	50
	Ability Enhancement Course (AEC)	Reading Texts in Indian English – I: ENG-401	2	2	30	30	20	50
	CEP1 (Commerce Information Technology)	Community Engagement Program	2	2	30	30	20	50
	Co-Curricular Courses 4	Sports	2	2	30	30	20	50
	Total Number of Credits			22		330	220	550

 पुन्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ ॥ विद्यया संपन्नता ॥ NAAC Accredited-2022 'B++' Grade (UGPA-2.86)	PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY, SOLAPUR			
PROGRAMME: B.COM. INFORMATION TECHNOLOGY				
B.COM. - II SEMESTER – IV (NEP 2020)				
VERTICAL: MAJOR MANDATORY				
COURSE CODE:				
COURSE NAME: DATA STRUCTURE USING C++ Theory				
Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks	
02 Credits	02 Hours	30 Hours	50 (UA 30 + CA 20)	

Preamble: The goal of the course is to make students familiar with the Data Structure Using C++ being used by the corporate world and to expose the students to applicability of various software and its needs.

Course Objectives:

- 1) Learn to create reusable and scalable code using object-oriented design principles.
- 2) Gain proficiency in C++ programming, including classes, objects, functions, and operator overloading.
- 3) Utilize arrays, linked lists, stacks, queues, and other data structures in an OOP paradigm.
- 4) Learn techniques for reading, writing, and manipulating files in C++.
- 5) Develop software applications using OOP principles to solve practical problems.

Unit - 1: An Introduction to Data Structures	Lectures 15	Weightage: 9-15 Marks
1.1 Introduction, Definition and Types of Data Structure. Abstract Data Type (ADT). 1.2 Array: Single and two-dimensional arrays and operations 1.3 Stack: Introduction to Stack, Operations of stack- Create, isempty, isfull, push, pop, display. Implementation of stack using an array (Static Implementation), Applications of Stack-Conversion of infix expression to postfix expression, Conversion of infix expression to prefix expression, Matching parenthesis in an expression (Checking expression is valid or invalid), Evaluation of postfix expression, Stack in recursion, Implementation of all applications of stack. Queue: Introduction to Queue, Operations of the queue- Create, isempty, isfull, insert, remove, display, Types of Queue- Linear Queue, Circular Queue, Deque (Double Ended Queue), Priority queue. Implementation of all types of queue using the array (Static Implementation), Difference between stack and queue, Applications of Queue. Searching and Sorting: Bubble sort, Selection sort, Merge sort, Radix sort, Quick sort, Linear search, Binary search, Complexity of these algorithms		
Unit - 2: Linked List and Tree	Lectures 15	Weightage: 9-15 Marks
2.1 Introduction to Linked Lists, Difference between Array and Linked list. Types of linked list- 1) Linear linked list- Singly (Single) linear linked list and Doubly (Double) linear linked list. 2) Circular linked list- Singly (Single) circular linked list and Doubly (Double) 15 / 44 circular linked list, Implementation of all types of linked list with operations- creation, insertion, deletion, traversing, searching, display, count, reverse, Implementation of stack using linked list (Dynamic stack), Implementation of queue using linked list (Dynamic queue), Applications of linked list. 2.2 Tree: Introduction to Tree, Introduction to Binary Trees, Types of Binary tree- Strictly Binary tree, Complete		

Binary tree, Extended (2-Tree) Binary tree, Binary expression tree, Binary Search tree, Heap Tree- Min heap tree, Max heap tree, AVL tree, Representation of Binary tree using- Array, Linked list, Operations of Binary search tree-Creating and inserting node, Searching node, Counting total nodes, Counting and displaying leaf nodes, Tree Traversal methods Preorder, Inorder, Postorder, Deletion of Nodes, Implementation of binary search tree, Applications of tree.

Course Outcomes:

1. Understand basic data structures such as arrays, linked lists, stacks, and queues.
2. . To be familiar with fundamental data structures and with how these data structures can best be implemented, become accustomed to the description of algorithms in both functional and procedural styles.
3. To know the complexity of basic operations like insert, delete, and search on these data structures.
4. Ability to choose a data structure to model any data used in computer applications suitably.
5. To solve problems involving graphs and trees.

Reading suggestion:

1. Tanenbaum: Data structures using C and C++.
2. Data Structures and Algorithm Analysis in C++by Weiss, Weiss Mark Allen
3. Data Structures Through C++ by Yashavant Kanetkar

 पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ ॥ विद्याया संनमता ॥ NAAC Accredited-2022 (B++ Grade (UGPA-2.86))	PUNYASHLOKAHILYADEVIIHOLKARSOLAPURUNIVERSITY, SOLAPUR			
PROGRAMME: B.COM. INFORMATION TECHNOLOGY				
B.COM. - II SEMESTER – IV (NEP 2020)				
VERTICAL: MAJOR MANDATORY				
COURSE CODE:				
COURSE NAME: DATA STRUCTURE USING C++ PRACTICAL				
Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks	
02 Credits	02 Hours	30 Hours	50 (UA 30 + CA 20)	

Course Objectives:

- 1) Learn to create reusable and scalable code using object-oriented design principles.
- 2) Gain proficiency in C++ programming, including classes, objects, functions, and operator overloading.
- 3) Utilize arrays, linked lists, stacks, queues, and other data structures in an OOP paradigm.
- 4) Learn techniques for reading, writing, and manipulating files in C++.
- 5) Develop software applications using OOP principles to solve practical problems.

Unit -1 : Practical I	Lectures 15	Weightage: 9 - 15 Marks
1.1 Write a program to implement stack by using array. (Static Implementation of stack) 1.2 Write a program, which reverses the string by using stack. 1.3 Write a program to check the validity of an expression using stack. 1.4 Write a program to evaluate the expression using stack. 1.5 Write a program to implement linear queue by using array. (Static Implementation of queue) 1.6 Write a program to implement circular queue. 1.7 Write a program to implement singly linear linked list with its basic operations. 1.8 Write a program to implement singly circular linked list with its basic operations. 1.9 Write a program to implement stack by using linked list. (Dynamic implementation) 1.10 Write a program to implement binary search tree with tree traversal methods.		



**PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY,
SOLAPUR**



PROGRAMME: B.COM. INFORMATION TECHNOLOGY

B.COM. - II SEMESTER – IV (NEP 2020)

VERTICAL: MAJOR MANDATORY

COURSE CODE:

COURSE NAME: JAVA THEORY

Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks
02 Credits	02 Hours	30 Hours	50 (UA 30 + CA 20)

Preamble:

The course Java Theory is designed to provide undergraduate students with a strong foundation in object-oriented programming concepts using the Java language. It introduces the principles of Java programming, including data types, control structures, classes and objects, inheritance, polymorphism, exception handling, and file handling. The course also covers core Java libraries, multithreading, and basic concepts of graphical user interfaces and networking. Emphasis is placed on understanding program design, problem-solving techniques, and the logical structure of Java applications. This course prepares students for advanced programming studies and the development of robust, platform-independent software applications.

Course Objectives

1. To introduce the fundamentals of Java programming and its platform-independent features.
2. To understand object-oriented programming concepts such as classes, objects, inheritance, polymorphism, and encapsulation using Java.
3. To develop logical and analytical skills for designing and implementing Java programs.
4. To explain the use of Java control structures, arrays, strings, and packages.
5. To understand exception handling, multithreading, and file handling mechanisms in Java.
6. To provide knowledge of core Java libraries and basic concepts of GUI and networking.
7. To prepare students for advanced studies and practical applications of Java programming.

Unit I: Introduction to Java and Basic Syntax	Lectures 15	Weightage: 9-15 Marks
1) History and features of Java (e.g., Platform Independence, OOPs) 2) Java Virtual Machine (JVM), JDK, and JRE 3) Writing and executing a simple Java program 4) Data types (primitive and non-primitive), variables, and constants 5) Operators and expressions (arithmetic, relational, logical, etc.) 6) Basic input/output using the Scanner class and System.out		
Unit 2: Control Flow Statements and Arrays	Lectures 15	Weightage: 9-15 Marks
1) Conditional statements (if, if-else, switch-case) 2) Looping constructs (for, while, do-while, enhanced for loop) 3) Jump statements (break, continue, return)		

- | |
|---|
| <ol style="list-style-type: none">4) Arrays: one-dimensional and multi-dimensional array declaration, initialization, and usage5) Introduction to the String class and basic string operations |
|---|

Course Outcomes

- 1: Explain the fundamentals of Java programming and its platform-independent features.
- 2: Apply object-oriented programming concepts such as classes, objects, inheritance, polymorphism, and encapsulation in Java.
- 3: Analyze and design Java programs using control structures, arrays, strings, and packages.
- 4: Demonstrate the use of exception handling, multithreading, and file handling in Java applications.
- 5: Describe the role of core Java libraries and basic concepts of GUI programming and networking.
- 6: Develop logical problem-solving skills for building reliable and maintainable Java applications.

Reading suggestion:

1. Java: The Complete Reference – *Herbert Schildt*
2. Introduction to Java Programming – *Y. Daniel Liang*
3. Understanding Object-Oriented Programming with Java – *T. Budd*
4. Programming in Java – *Sachin Malhotra & Saurabh Choudhary*



**PUNYASHLOKAHILYADEVIVHOLKARSOLAPURUNIVERSITY,
SOLAPUR**



PROGRAMME: B.COM. INFORMATION TECHNOLOGY

B.COM. - II SEMESTER – IV (NEP 2020)

VERTICAL: MAJOR MANDATORY

COURSE CODE:

COURSE NAME: JAVA PRACTICAL

Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks
02 Credits	02 Hours	30 Hours	50 (UA 30 + CA 20)

Course Objectives

1. To introduce the fundamentals of Java programming and its platform-independent features.
2. To understand object-oriented programming concepts such as classes, objects, inheritance, polymorphism, and encapsulation using Java.
3. To develop logical and analytical skills for designing and implementing Java programs.
4. To explain the use of Java control structures, arrays, strings, and packages.
5. To understand exception handling, multithreading, and file handling mechanisms in Java.
6. To provide knowledge of core Java libraries and basic concepts of GUI and networking.
7. To prepare students for advanced studies and practical applications of Java programming

Unit I: Introduction to Java and Basic Syntax	Lectures 15	Weightage: 9-15 Marks
1) Addition of Two Numbers 2) Find Maximum of Three Numbers 3) Check Even or Odd Number 4) Factorial of a Number 5) Print Pattern in Java 6) Add Two Binary Numbers in Java 7) Add Two Complex Numbers in Java 8) Multiply Two Numbers in Java 9) Check Leap Year in Java 10) Check Vowel or Consonant in Java 11) Calculate Compound Interest in Java 12) Java Program to Calculate Simple Interest 13) Java Program to Find Quotient and Remainder 14) Java Program to Calculate Power of a Number 15) Java Program to Convert char to String and String to Char 16) Java Program to Find Duplicate Characters in a String 17) Java Program to Check Palindrome String using For, and While loop 18) Java Program to Sort Strings in Alphabetical Order 19) Java Program to Reverse Words in a String 20) Java program to find occurrence of a character in a String 21) Java program to count vowels and consonants in a String		

- 22) Java Program to find number of elements in an array
- 23) Java Program to Calculate average of numbers using Array
- 24) Java Program to Add the elements of an Array
- 25) Java Program to reverse an array
- 26) Java Program to sort an array in ascending order

 पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ ॥ विद्यया संयन्त्रता ॥ NAAC Accredited-2022 (B++ Grade UGPA-2.86)	PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY, SOLAPUR			
PROGRAMME: B.COM. INFORMATION TECHNOLOGY				
B.COM. - II SEMESTER – IV (NEP 2020)				
VERTICAL: MINOR				
COURSE CODE:				
COURSE NAME: ADVANCE ACCOUNTANCY AND AUDITING -II				
Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks	
04 Credits	04 Hours	60 Hours	100 (UA 60 + CA 40)	

Preamble:

students will gain knowledge on issue and forfeiture of shares ,company liquidation, types of liquidation, and the preparation of the liquidator's final statement of accounts. Through practical problem solving, the course equips students with the necessary skills to navigate and apply these advanced accounting concepts in real-world business scenarios. The course also emphasizes specialized audits, including those for limited companies, government bodies, non-profits, and banks, particularly focusing on bank audits and the auditing of NPAs. By the end of the course, students will be equipped to effectively perform audits and prepare relevant audit reports.

Course Objectives:

1. To explain the different types of share capital, methods of issuing shares, and the accounting for share transactions.
2. To provide an understanding of company liquidation, types of liquidation, and the order of payments during the liquidation process.
3. To equip students with the knowledge of auditing various types of incomes, expenses, and assets, including company-specific items like share capital, provisions, and current liabilities.
4. To provide an in-depth understanding of bank audits, including their unique procedures and considerations related to revenue, advances, and NPAs.

Unit -1 : Issue & Forfeiture of Share	Lectures 15	Weightage: 9 - 15 Marks
Share and Share Capital Meaning of Share Meaning of Stock Types of Shares Types of Share Capital Issue of Shares Methods of Issue of Shares : Share Issued at Par Shares Issued at Premium Shares Issued at Discount Forfeiture of Share Re-issue for Forfeited Shares Journal Entries Practical Problems		
Unit -2 : Company liquidation	Lectures 15	Weightage: 9 - 15 Marks

Company liquidation Meaning Types of liquidation Liquidator Order of payment Calculation of liquidation Preparation of liquidator's final statement of accounts Particle problems		
Unit -3 : Audit of sale of products and services	Lectures 15	Weightage: 9 - 15 Marks
Audit of interest income, rental income, dividend income, Audit of purchases, employee benefit expenses, depreciation, interest expenses, expenditure of power and fuel, rent, repairs to buildings, repairs to machinery, insurance, taxes, travelling expenses, miscellaneous expenses etc. Audit of share capital, reserve and surplus, long term borrowings, trade payables, provisions, short term borrowings, and current liabilities. Audit of land building, plant, equipment, furniture and fixtures, vouchers, office equipment, Goodwill, brand, trademarks, computer software, audit of loans and advances, trade receivables, inventories, cash and cash equivalents, other current assets, contingent liabilities.		
Unit - 4 :Special features of Audit of different types of entities	Lectures 15	Weightage: 9 - 15 Marks
Appointment of auditor, audit procedure and audit report in respect of different categories of entities like government local bodies, non-profit organizations, trusts, and society partnership firms, educational institutions, hospitals, corporate society. Bank audit Understanding of accounting system in banks audit, approach of audit of revenue items, special consideration in bank audit with emphasis on advances and NPAS		

Course Outcomes:

1. Students will acquire the ability to account for the issue, reissue, and forfeiture of shares, including related journal entries.
2. Students will be capable of preparing liquidator's final statement of accounts and solving practical problems related to liquidation.
3. Students will be proficient in auditing various financial items such as income, expenses, assets, liabilities, and reserves in line with industry practices.
4. Students will be capable of conducting audits for different types of entities, including government bodies, non-profits, and banks, and preparing relevant audit reports.

Suggested Readings:

1. "Corporate Accounting", T.S. Grewal, S. Chand & Company
2. "Advanced Corporate Accounting", R.L. Gupta & M. Radhaswamy,
3. Sultan Chand & Sons "Corporate Accounting", Dr. S.N. Maheshwari,
4. Vikas Publishing House "Financial Accounting for Management",
5. S.K. Bhattacharyya, Prentice Hall India "Financial Reporting under IFRS",
6. S. David, Oxford University Press "Corporate Accounting: Theory & Practice",
7. C.S. Kothari, Vikas Publishing House "Advanced Accounting",
8. M.C. Shukla, T.S. Grewal, S. Chand & Company "Company Accounts & Auditing",
9. P.C. Tulsian, S. Chand & Company
10. "Principles of Auditing", R.K. Gupta & M. Sharma, McGraw-Hill Education

11. "Auditing and Assurance Services", Alvin A. Arens, Randal J. Elder, Mark S. Beasley, Pearson Education
12. "Modern Auditing", S.K. Basu, Pearson Education
13. "Auditing: Principles and Practice", B.N. Tandon, S. Chand & Company
14. "Auditing and Assurance Services: An Integrated Approach", Michael C. Knapp, Prentice Hall
14. "Auditing: A Practical Approach", K. K. Tiwari, Vikas Publishing House
15. "Auditing", Jagadish Prakash, Taxmann Publications
16. "Fundamentals of Auditing", Kamal Gupta, McGraw-Hill Education
17. "Audit of Banks", M.K. Soni, Sultan Chand & Sons

 पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ ॥ विद्यया संपन्नता ॥ NAAC Accredited-2022 (B++ Grade (UGPA-2.86)	PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY, SOLAPUR			
PROGRAMME: B.COM. INFORMATION TECHNOLOGY				
B.COM. - II SEMESTER – IV (NEP 2020)				
VERTICAL: VOCATIONAL SKILL COURSE				
COURSE CODE:				
COURSE NAME: INTRODUCTION OF POWER BI				
Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks	
02 Credits	02 Hours	30 Hours	50 (UA 30 + CA 20)	

Preamble:

The course Power BI is designed to introduce undergraduate students to data visualization and business intelligence concepts using Microsoft Power BI. The course focuses on transforming raw data into meaningful insights through data modeling, interactive dashboards, and visual reports. Students will learn to connect, clean, analyze, and visualize data from various sources using Power BI tools. Emphasis is placed on hands-on understanding of data-driven decision making, enabling students to interpret data effectively and communicate insights through compelling visualizations. This course prepares students for careers in data analytics, business intelligence, and related domains.

Course Objectives

1. To introduce the fundamentals of business intelligence and data visualization concepts.
2. To provide knowledge of Power BI components, architecture, and interface.
3. To enable students to connect, transform, and model data from various data sources using Power BI.
4. To develop skills in creating interactive reports, dashboards, and visualizations.
5. To understand the use of DAX functions for data analysis and calculations.

Unit I: Introduction to Power BI & Data Ingestion	Lectures 10	Weightage: 7-10 Marks
1) Overview: Role of Power BI in Data Analytics, Components (Desktop, Service, Mobile), Installation. 2) Connecting to Data: Importing data from Excel, CSV, SQL Server, Web, and Folders. 3) Data Transformation (Power Query): Cleaning, shaping, transforming, combining, and merging data.		
Unit 2: Data Modeling & Visualization	Lectures 10	Weightage: 7-10 Marks
1) Data Modeling: Creating relationships, managing cardinality, and optimizing data models. 2) DAX Expressions (Basic): Calculated columns, measures, and basic functions (SUM, AVG, IF). 3) Visualizations: Creating reports with bar/column/pie charts, maps, gauge, KPIs, and matrix visuals.		

4) Report Interactivity: Using slicers, filters (visual, page, report level), drill-down, and bookmarks.		
Unit 2: Power BI Service & Final Project	Lectures 10	Weightage: 7-10 Marks
1) Power BI Service: Publishing reports, sharing dashboards, and configuring workspaces. 2) Security & Sharing: Implementing Row Level Security (RLS) and exporting reports. 3) Project/Case Study: Building an end-to-end interactive dashboard using sample data.		

Course outcome

1. Explain the fundamentals of business intelligence and data visualization concepts.
2. Identify and use various components and features of Power BI effectively.
3. Connect, clean, transform, and model data from multiple data sources using Power BI.
4. Create interactive reports, dashboards, and visualizations to represent data insights.
5. Apply DAX functions to perform data analysis and calculations.
6. Interpret and communicate analytical results to support data-driven decision making.

Reading Suggestion :

1. Microsoft Power BI Complete Reference – *Devin Knight, Brian Knight, Mitchell Pearson & Manuel Quintana*
2. Mastering Microsoft Power BI: Expert Techniques for Effective Data Analytics and BI – *Brett Powell*
3. Power BI Cookbook: Creating Business Intelligence Solutions of Analytical Data Models, Reports, and Dashboards – *Brett Powell*
4. Power BI Step-by-Step – *Grant Gamble*

 पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ ॥ विद्यया संयुजता ॥ NAAC Accredited-2022 (B++ Grade UGPA-2.86)	PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY, SOLAPUR			
PROGRAMME: B.COM. INFORMATION TECHNOLOGY				
B.COM. - II SEMESTER – IV (NEP 2020)				
VERTICAL: OPEN ELECTIVE				
COURSE CODE:				
COURSE NAME: FUNDAMENTAL OF ENTREPRENEURSHIP – II				
Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks	
02 Credits	02 Hours	30 Hours	50 (UA 30 + CA 20)	

Preamble: The goal of the course is to give students a grasp of the fundamentals of entrepreneurship, the qualities that make an entrepreneur successful, how to launch a new business. Students will have the ability to manage risks, design business plans, and comprehend how the corporate sector operates.

Course Objectives:

1. To guide students through the process of identifying business opportunities, developing a business idea, and planning a new venture.
2. To study the problems of MSME and to familiarize students with the step-by-step process of forming an MSME
3. To teach students the essentials of preparing a project report and guide them in preparing a comprehensive project report for an MSME

Unit -1 : Starting New Venture	Lectures 15	Weightage: 9 - 15 Marks
Types of Business Ventures • The Business Idea and Opportunity • Business Planning Process • Sources of Financing a) Bootstrapping and Self-financing b) Angel Investors and Venture Capitalists c) Government Grants, Loans, and Schemes d) Crowdfunding and Peer-to-Peer Lending		
Unit -2 : Entrepreneurship and Micro, Small and Medium Enterprises(MSME) and Project Report	Lectures 15	Weightage: 9 - 15 Marks
Micro, Small and Medium Enterprises (MSME): Meaning & Importance, Problems and Remedies • Steps Involved in the Formation of MSME • Udyam Aadhar Concept & Importance • Report Writing: Contents of Project Report, Preparation of Project Report- Hotel Business		

Course Outcome

1. Apply the entrepreneurial process to identify business opportunities and create business plans.

2. Identify various sources of financing and evaluate the pros and cons of different funding options.
3. Equipped with the knowledge of the procedures and steps involved in setting up an MSME.
4. prepare a well-structured, detailed, and professional project report.

Suggested Readings:

1. Kurato, D. F., & Hodgetts, R. M. (2007). Entrepreneurship: A Contemporary Approach (8th ed.). Thomson South-Western.
2. Sharma, S., & Raina, M. (2020). Entrepreneurship and Small Business Management. PHI Learning Pvt. Ltd.
3. Timmons, J. A., & Spinelli, S. (2014). New Venture Creation: Entrepreneurship for the 21st Century (10th ed.). McGraw-Hill.
4. MSME Ministry, Government of India. (2020). Annual Report on MSME Sector. Ministry of Micro, Small and Medium Enterprises.
5. Ghosh, B. N. (2008). Small Business Management: An Entrepreneurial Approach. New Age International.
6. Udyam Registration Portal. (2020). Udyam Registration Guidelines. Ministry of MSME, Government of India.
7. Verma, S., & Shekhawat, M. (2016). Business Plan Development and Project Report Writing. New Delhi: Excel Books.
8. Sharma, M. (2011). Project Management and Entrepreneurship. Global India Publications.



PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY, SOLAPUR

FACULTY OF COMMERCE INFORMATION TECHNOLOGY

Commerce Information Technology as a Major



Syllabus for B.Com. IT

Part III Semester V As per NEP w.e.f. June 2025

Level 4.5 Semester V	Category	Title of Subject	Course Credit	Weekly Hours	Total lectures	Exam Marks		
						UA	CA	Total
	Major Mandatory	Advanced Java Theory	2	2	30	30	20	50
		Advanced Java Practical	2	2	30	30	20	50
	Major Mandatory	Software Management (Theory)	4	4	60	60	40	100
	Major Mandatory	Advance Excel	2	2	30	30	20	50
	Minor	Advance Accountancy and Taxation - I	4	4	60	60	40	100
	Vocational Skill Course	E Commerce	2	2	30	30	20	50
	Open Elective	Cyber Security	4	4	60	60	40	100
Field Project / CEP (Commerce Information Technology)	Field Project / CEP	2	2	30	30	20	50	
Total Number of Credits				22		330	220	550



**PUNYASHLOKAHILYADEVIVHOLKARSOLAPURUNIVERSITY,
SOLAPUR**

PROGRAMME: B.COM. INFORMATION TECHNOLOGY

B.COM. IT - III SEMESTER – V (NEP 2020)



VERTICAL: MAJOR MANDATORY

COURSE CODE:

COURSE NAME: ADVANCE JAVA THEORY

Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks
02 Credits	02 Hours	30 Hours	50 (UA 60 + CA 40)

Preamble: Advanced Java (Java EE/Jakarta EE) expands upon core Java principles to build robust, secure, and scalable enterprise, web, and database-driven applications. It encompasses critical technologies including JDBC for connectivity, Servlets and JSP for server-side web development, and frameworks like Spring and Hibernate for complex backend systems.

Course Objectives:

1. To understand advanced concepts of Java for developing enterprise-level applications.
2. To learn server-side programming using Servlets and JavaServer Pages (JSP).
3. To develop database-driven applications using JDBC.

Unit -1: Collection Framework	Lectures 15	Weightage: 9-15 Marks
1.1 Type casting, types of type casting 1.2 Wrapper classes: use of Wrapper classes, Number classes(Long,Integer,Byte,Short,Float and double) and importance methods of Number class, Character class and importance methods of character class, auto boxing and unboxing, 1.3 Collection Framework:-Use of Collection framework, Hierarchy of Collection Framework, Collection objects-Set,List, Map, Queue 1.4 Collection classes-Stack, ArrayList, vector, Linked List, priority queue, HashSet, LinkedHashSet, SortedSet, TreeSet, Hashtable and HashMap 1.5 Multithreading: Single tasking, Multi-tasking, use of thread, creating and running thread, terminating thread, thread class methods, multiple threading, Thread communication, thread priorities,Application of thread and thread life cycle. 1.6 Networking: Introduction to Networking, TCP/IP protocol, UDP protocol, socket programming, InetAddress Class, URL Connection class, communication between client 15 29 / 50 and server, two way communication between client and server.		
Unit -2: Swing	Lectures 15	Weightage: 9-15 Marks
2.1 Hierarchy of Swing classes JButton, JLabelJava, JTextField, JTextArea, JPasswordField, JCheckBox, JRadioButton,JComboBox, , JList, JOptionPaneJava JScrollBar, JMenuItem & JMenuJava, Image 2.2 Event handling:- Java Event Handling, Java Event classes and Listener interfaces. LayoutManager- BorderLayout FlowLayout, GridLayout, CardLayout , BoxLayout 2.3 JDBC: Introduction, JDBC Driver, DB Connectivity Steps ,Connectivity with Oracle or MySql		

DriverManager, ConnectionStatement, ResultSet, PreparedStatement, ResultSetMetaData, CallableStatement
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Course Outcomes:

1. Understand and Apply Type Casting & Wrapper Classes.
2. Implement various collection classes such as ArrayList, LinkedList, HashSet, TreeSet, and HashMap for effective data management
3. Implement Multithreading Concepts for Concurrent Execution
4. Develop Network-Based Applications Using Java Networking \
5. Design GUI Applications Using Swing and Database Connectivity

Reading Suggestion :

1. "Programming with Java" by E Balaguruswamy
2. Horstmann, "Computing Concepts with Java 2 Essentials", John Wiley.
3. Decker & Hirshfield, "Programming Java", Vikas Publication
4. "Java-2 the complete Reference" by Patrick Naughton and HerbertzSchidt

 पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ NAAC Accredited-2022 'B++' Grade (CGPA-2.96)	PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY, SOLAPUR PROGRAMME: B.COM. INFORMATION TECHNOLOGY B.COM. IT - III SEMESTER – V (NEP 2020)			
VERTICAL: MAJOR MANDATORY COURSE CODE: COURSE NAME: ADVANCE JAVA PRACTICAL				
Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.		Total marks
02 Credits	02 Hours	30 Hours		50 (UA 30 + CA 20)

Course Objectives:

1. To understand advanced concepts of Java for developing enterprise-level applications.
2. To learn server-side programming using Servlets and JavaServer Pages (JSP).
3. To develop database-driven applications using JDBC.

Unit -1 : Practical I	Lectures 15	Weightage: 9 - 15 Marks
1.1 Write a Java program to demonstrate implicit and explicit type casting. 1.2 Develop a Java program to illustrate the use of wrapper classes. 1.3 Write a program to implement a Java program to compare ArrayList, LinkedList, Vector, and Stack 1.4 Create a Java application to demonstrate the differences between HashSet, LinkedHashSet, TreeSet, and SortedSet. 1.5 Write a program to implement a Java program using both Thread class and Runnable interface. 1.6 Write a Java program where two threads communicate with each other using the wait() and notify() methods. 1.7 Write a Java application demonstrating thread priorities. 1.8 Write a program for two-way chat application using Java TCP sockets. 1.9 Write a Java program to demonstrate UDP communication. 1.10 Develop a student registration form using Swing components such as JTextField, JPasswordField, JCheckBox, JRadioButton, JComboBox, and handle different events. 1.11 Create a Java application with a menu bar containing options like "File," "Edit," and "Help." Use different layout managers (BorderLayout, FlowLayout, GridLayout, etc.) for different sections. 1.12 Write a JDBC program to connect to a MySQL or Oracle database, create a table, insert, update, delete, and retrieve records using Statement and PreparedStatement.		

 पुण्यश्लोक अहिल्यादेवी होळकार सोलापूर विद्यापीठ ॥ विद्यया संयन्त्रा ॥ NAAC Accredited-2022 'B++' Grade (CGPA-2.96)	PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY, SOLAPUR PROGRAMME: B.COM. INFORMATION TECHNOLOGY B.COM. IT - III SEMESTER – V (NEP 2020)		
VERTICAL: MAJOR MANDATORY COURSE CODE: COURSE NAME: SOFTWARE ENGINEERING THEORY			
Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks
04 Credits	04 Hours	60 Hours	100 (UA 60 + CA 40)

Preamble: Software Engineering is a disciplined and systematic approach to the design, development, testing, deployment, and maintenance of software systems. As software plays a critical role across industries and society, this course aims to equip undergraduate students with foundational principles, methodologies, and tools required to build reliable, scalable, and maintainable software solutions. The syllabus emphasizes both theoretical concepts and practical skills, covering the complete software development life cycle, modern development practices, teamwork, and ethical responsibilities. By the end of the program, students will be prepared to analyze real-world problems, apply appropriate engineering techniques, and adapt to evolving technologies in the software industry.

Course Objectives:

1. Provide students with a clear understanding of fundamental software engineering principles, processes, and methodologies.
2. Introduce the concepts of software requirements analysis, specification, and management.
3. Develop the ability to design software systems using appropriate architectural and design models.
4. Familiarize students with software development life cycle (SDLC) models and modern development practices.
5. Equip students with knowledge of software testing, quality assurance, and maintenance techniques.
6. Encourage the application of software engineering tools for project planning, development, and version control.
7. Develop teamwork, communication, and documentation skills essential for professional software development.
8. Instill awareness of ethical, legal, and professional responsibilities in software engineering practice.

Unit -1: Software Engineering and SDLC	Lectures 15	Weightage: 9-15 Marks
1.1 Definition, Characteristics of software, 1.2 Qualities of software 1.3 System Development life cycle, 1.4 classical model, Spiral model, Waterfall model, Prototyping		
Unit -2: Requirement Analysis	Lectures 15	Weightage: 9-15 Marks
2.1 Requirement Analysis Requirement Anticipation, 2.2 Requirement investigation, requirement specifications, feasibility study Questionnaire, 2.3 Record reviews, Observation Study of physical system, identifying the data used, identifying the controls 2.4 User transaction Requirements, User design requirements, Organization dependent requirements		
Unit -3: Analysis and Design Tools	Lectures 15	Weightage: 9-15 Marks
2.1 Flow charting, Decision tables & Decision Trees, Structure charting Techniques(HIPO) 2.2 System Design Entity relation Analysis, Normalization, Input output design, Data flow Diagram (Physical, Logical), structured chart, Structured English 2.3 Data Dictionary: Advantages of data Flow Analysis, Features of Data Dictionary, Process Specification Methods		
Unit -4: Software Testing	Lectures 15	Weightage: 9-15 Marks
2.1 Implementation and maintenance 2.2 Need of Testing, 2.3 White Box, 2.4 Black Box testing 2.5 Changeover, 2.6 Pilot, Parallel		

Course Outcomes –

1. Explain fundamental concepts, principles, and terminologies of software engineering.
2. Analyze and document software requirements using appropriate techniques and tools.
3. Design software systems using suitable architectural and design models.
4. Apply software development life cycle models and modern development methodologies in real-world scenarios.
5. Implement basic testing strategies to ensure software quality and reliability.
6. Use software engineering tools for project planning, version control, and documentation.
7. Work effectively in teams while adhering to professional, ethical, and societal responsibilities.

Reading Suggestions:

- 1) Analysis and Design of Information Systems by James Senn.
- 2) System analysis and design by Elias Awad
- 3) Software Engineering by Pressman
- 4) System Analysis and Design by Parthsarty / Khalkar
- 5) Practical guide to structure System Design by Miller/Page/jones.

 पुन्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ ॥ विद्यया संपन्नता ॥ NAAC Accredited-2022 'B++' Grade (CGPA-2.96)	PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY, SOLAPUR		
PROGRAMME: B.COM. INFORMATION TECHNOLOGY			
B.COM. IT - III SEMESTER – V (NEP 2020)			
VERTICAL: MAJOR MANDATORY			
COURSE CODE:			
COURSE NAME: ADVANCE EXCEL (Practical)			
Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks
02 Credits	02 Hours	30 Hours	50 (UA 30 + CA 20)

Preamble: This course is designed to develop advanced-level spreadsheet skills required in modern business environments. It focuses on data analysis, financial calculations, logical functions, data visualization, and automation tools in Microsoft Excel. Students will learn to manage large datasets, generate reports, perform business analytics, and support decision-making using advanced Excel tools. The course emphasizes practical learning to enhance employability in fields such as accounting, finance, marketing, HR, and data analysis.

Course Objectives:

1. To enhance students' proficiency in advanced Excel tools and functions.
2. To develop analytical skills for business data interpretation.
3. To enable students to create professional reports and dashboards.
4. To introduce automation tools like Pivot Tables and basic Macros.
5. To prepare students for industry-oriented data handling and reporting tasks

Unit -1: Advanced Formulas and Functions	Lectures 15	Weightage: 9-15 Marks
1.1 Logical Functions: IF, Nested IF, IFS 1.2 Lookup Functions: VLOOKUP, HLOOKUP, XLOOKUP, INDEX & MATCH 1.3 Text Functions: LEFT, RIGHT, MID, LEN, TRIM, CONCAT 1.4 Date & Time Functions 1.5 Financial Functions (PMT, NPV, IRR – basic concepts) 1.6 Error Handling: IFERROR		
Unit -2: Reporting, Dashboard & Introduction to Automation	Lectures 15	Weightage: 9-15 Marks
2.1 Creating Professional Charts & Graphs, Combo Charts 2.2 Interactive Dashboards (Using Pivot & Charts) 2.3 Introduction to Macros, Recording and Running Basic Macros 2.4 Protection & Workbook Security 2.5 Importing Data from External Sources		

Course Outcomes

1. Apply advanced Excel formulas and functions for solving business problems.
2. Analyze and manage large datasets using Pivot Tables and data tools.
3. Create professional business reports and interactive dashboards.
4. Perform basic automation using macros and improve work efficiency.

Recommended Text Books

1. **Walkenbach, John** – *Microsoft Excel 2019 Bible* – Wiley India.
2. **Wayne L. Winston** – *Microsoft Excel Data Analysis and Business Modeling* – PHI Learning / Microsoft Press.
3. **Michael Alexander & Richard Kusleika** – *Excel 2019 Formulas* – Wiley Publications.
4. **Bill Jelen** – *Excel Gurus Gone Wild* – Holy Macro! Books.
5. **Jordan Goldmeier** – *Advanced Excel Essentials* – Apress.
6. **Dash & Dash** – *Business Data Analysis Using Excel* – PHI Learning.

 पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ ॥ विद्यया संपन्नता ॥ NAAC Accredited-2022 'B++' Grade (CGPA-2.96)	PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY, SOLAPUR			
PROGRAMME: B.COM. INFORMATION TECHNOLOGY				
B.COM. IT - III SEMESTER – V (NEP 2020)				
VERTICAL: MINOR				
COURSE CODE:				
COURSE NAME: ADVANCE ACCOUNTANCY AND TAXATION -I				
Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks	
04 Credits	04 Hours	60 Hours	100 (UA 60 + CA 40)	

Preamble:

This course enables the students to understand the conceptual and practical knowledge of the Advanced Accountancy and to learn the techniques of preparing the financial statements. It also helps students to understand advanced accounting issues and practices.

Course Objectives:

- 1) To help the students to acquire the conceptual and practical knowledge of the Advanced Accountancy and to learn the techniques of preparing the financial statements.
- 2) The objective of this course is to expose students to advanced accounting issues and practices.
- 3) To develop proficiency in ratio analysis and its application in financial statement analysis.

Unit I Ratio analysis	Lectures 15	Weightage: 9-15 Marks
Meaning, objective, Classification of Accounting Ratios, Advantages & Limitations. Computation, Analysis and Interpretation of important ratios for measuring – Liquidity, Solvency, Capital Structure, Profitability and Managerial Effectiveness.		
Unit-II Hire Purchase and Instalment System	Lectures 15	Weightage: 9-15 Marks
Meaning – Terms and Features of Hire Purchase System Difference between Hire Purchase System and Installment Payment System Difference between sales and Hire Purchase.		

Recording of transaction in the books of Hire purchaser and vendor under Cash Price Method and Under Interest Suspense Method (i.e. Instalment system)		
Allocation of Interest – Partial and Complete Repossession (Excluding Hire Purchase Trading Account)		
Unit-III Insurance Claim	Lectures 15	Weightage: 9-15 Marks
Loss of Stock Method: Meaning – Total Loss – Partial Loss – Salvage – Average Clause – Unusual Line of Goods – Defective Goods → Calculation of Claim for Loss of Stock Loss of Profit Method : Meaning – Important Terms - Indemnity Period – Rate of Gross Profit – Insurable Standing charges – Annual Turnover – Adjusted Annual Turnover - Standard Turnover – Adjusted Standard Turnover – Short Sales – Increased Cost of Workings – Average Clause → Calculation of Claim for Loss of Profit		
Unit-IV Final Accounts of Banking Companies	Lectures 15	Weightage: 9-15 Marks
Introduction Important accounting provisions of Banking Regulation Act, 1949 Preparation of Profit and Loss Account and Balance Sheet as per the Third Schedule of Section 29 of Banking Companies Act		

Course Outcomes:

1. Students will apply ratio analysis techniques to assess a company's financial health and performance.
2. Students will learn the claims process, notification, documentation & its settlement.
3. Students will understand banking regulations and formats.
4. It develop the skills in analyzing the financial position and performance of banks.
5. It helps in understanding credit purchases used in real business situations.

Suggested Readings:

1. Modern Accountancy by Mukherjee and Hanif, McGraw Hill India
2. Financial Accounting for Management by Dr. Dinesh Harsalekar, Multi-Tech. Publishing Co. Ltd. Mumbai.
3. Financial Accounting by P. C. Tulsian, S Chand & Co Ltd
4. Financial Accounting by Gupta and Radhaswamy M, Sultan Chand and Sons
5. Corporate Accounting by S. N. Maheshwari – Vikas Publication
6. Advanced Accounting by S.N. Maheshwari – (Volume I and II) Vikas Publication
7. Advanced Accounting by Ashok Sehgal and Deepak Sehgal (Volume I and II) Taxmann Publication. Page 4 of 4
8. Advanced Accounts by M.C. Shukla, T. S. Grewal, S. C. Gupta - (Vol. I & II) S. Chand Publication
9. Company accounts by R .L .Gupta, Radhaswamy S. Chand Publication
10. Students Guide to Accounting Standards by D. S. Rawat, Taxmann Publication.
11. Cost Accounting; Jain S.P. and Narang K.L.; Kalyani, New Delhi.
12. Principles of Management Accounting – Manmohan & Goyal (pdf Free Download <https://finupdates.in/management-accounting-books-pdf/>)
13. Fundamentals of Management Accounting by R.P Rustagi; Taxmann.
14. Relevant study material issued by I.C.A.I
15. Relevant study material issued by ICWAI
16. <https://www.icai.org/post/central-council-library>
17. <https://www.embibe.com/exams/icmai-study-material/>

 पुन्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ NAAC Accredited-2022 'B++' Grade (CGPA-2.96)	PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY, SOLAPUR			
PROGRAMME: B.COM. INFORMATION TECHNOLOGY				
B.COM. IT - III SEMESTER – V (NEP 2020)				
VERTICAL: VOCATIONAL SKILL COURSE				
COURSE CODE:				
COURSE NAME: E- COMMERCE theory				
Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks	
02 Credits	02 Hours	30 Hours	50 (UA 30 + CA 20)	

Preamble: This course introduces students to the concepts, models, technologies, and applications of electronic commerce in the modern digital economy. It focuses on online business models, digital payment systems, security issues, legal frameworks, and emerging trends in e-commerce. The course aims to equip students with practical and conceptual knowledge required to understand and participate in digital business environments.

Course Objectives:

1. To understand the fundamentals and scope of E-Commerce.
2. To analyze various E-Business models and revenue strategies.
3. To understand electronic payment systems and online transaction security.
4. To study legal and ethical issues in E-Commerce.
5. To explore emerging trends and future scope of digital commerce.

Unit - 1: Introduction to E-Commerce	Lectures 15	Weightage: 9-15 Marks
1.1 Meaning and Concept of E-Commerce 1.2 Features and Scope of E-Commerce 1.3 Traditional Commerce vs E-Commerce 1.4 Types of E-Commerce: B2B, B2C, C2C, C2B 1.5 Advantages and Limitations 1.6 E-Commerce Infrastructure		
Unit - 2: Security, Legal & Emerging Trends	Lectures 15	Weightage: 9-15 Marks
2.1 E-Commerce Security Issues 2.2 Cyber Crimes in E-Commerce 2.3 Encryption & Digital Signatures (Basic Concept) 2.4 Legal Aspects of E-Commerce in India 2.5 Consumer Protection in Online Transactions 2.6 GST in E-Commerce 2.7 Emerging Trends: 2.8 Mobile Commerce (M-Commerce) 2.9 Social Commerce		

Course Outcome :

1. Explain the basic concepts and types of E-Commerce models.
2. Analyze digital payment systems and online transaction processes.
3. Identify security challenges and legal issues in E-Commerce.
4. Evaluate emerging trends and future opportunities in digital commerce.

Reading Suggestion:

1. **Kenneth C. Laudon & Carol Guercio Traver** – *E-Commerce 2020: Business, Technology and Society* – Pearson.
2. **Elias M. Awad** – *Electronic Commerce: From Vision to Fulfillment* – Pearson Education.
3. **P. T. Joseph** – *E-Commerce: An Indian Perspective* – PHI Learning.

 पुन्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ ॥ विद्यया संपन्नता ॥ NAAC Accredited-2022 'B++' Grade (CGPA-2.96)	PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY, SOLAPUR PROGRAMME: B.COM. INFORMATION TECHNOLOGY B.COM. IT - III SEMESTER – V (NEP 2020)			
VERTICAL: OPEN ELECTIVE COURSE CODE: COURSE NAME: CYBER SECURITY theory				
Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks	
04 Credits	04 Hours	60 Hours	100 (UA 60 + CA 40)	

Preamble: This course provides comprehensive knowledge of cyber security concepts, threats, vulnerabilities, risk management, and legal frameworks. It focuses on protecting digital assets, securing networks, safeguarding data, and understanding cyber laws in India. The course prepares students to identify cyber threats and apply preventive and protective measures in business and organizational environments

Course Objectives:

1. To understand fundamental concepts of cyber security and cyber threats.
2. To identify various types of cyber attacks and vulnerabilities.
3. To study network security mechanisms and data protection techniques.
4. To understand cyber laws, digital evidence, and legal frameworks in India.
5. To develop awareness of ethical practices and cyber hygiene in organizations.

Unit -1 : Introduction to Cyber Security	Lectures 15	Weightage: 9 - 15 Marks
Concept of Cyber Security Need and Importance in Digital Era CIA Triad (Confidentiality, Integrity, Availability) Cyber Threats and Vulnerabilities Types of Cyber Attacks (Malware, Phishing, Ransomware, DoS) Social Engineering Attacks Cyber Security Framework		
Unit -2 : Network & Information Security	Lectures 15	Weightage: 9 - 15 Marks
Basics of Computer Networks Firewalls and Intrusion Detection Systems Encryption & Decryption (Symmetric & Asymmetric – Basic Concept) Public Key Infrastructure (PKI) Digital Signatures & Certificates VPN & Secure Communication Email and Web Security		
Unit -3 : Cyber Crimes & Cyber Laws	Lectures 15	Weightage: 9 - 15 Marks
Meaning and Types of Cyber Crimes Hacking, Identity Theft, Cyber Stalking, Data Breach Cyber Forensics (Basic Concepts)		

IT Act 2000 and IT Amendment Act 2008 (India) Digital Evidence Role of CERT-In Case Studies of Cyber Crimes		
Unit -4 : Risk Management, Emerging Trends & Ethical Practices	Lectures 15	Weightage: 9 - 15 Marks
Risk Assessment and Risk Management Cyber Security Policies Data Privacy and Protection Cloud Security Mobile Security Ethical Hacking (Introduction) Cyber Hygiene Practices Emerging Trends: AI in Cyber Security, Blockchain Security		

Course Outcomes

1. Explain core concepts, threats, and security principles in cyber security.
2. Analyze network security mechanisms and apply data protection techniques.
3. Interpret cyber crimes and evaluate legal frameworks under Indian Cyber Law.
4. Assess security risks and recommend preventive and ethical security practices in organizations.

Reading Suggestions

1. **William Stallings** – *Cryptography and Network Security: Principles and Practice* – Pearson.
2. **Nina Godbole & Sunit Belapure** – *Cyber Security: Understanding Cyber Crimes, Computer Forensics and Legal Perspectives* – Wiley India.
3. **Charles P. Pfleeger & Shari Lawrence Pfleeger** – *Security in Computing* – Pearson.



**PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY,
SOLAPUR**

FACULTY OF COMMERCE INFORMATION TECHNOLOGY

Commerce Information Technology as a Major



Syllabus for B.Com. IT

Part III Semester VI As per NEP w.e.f. June 2025

	Category	Title of Subject	Course Credit	Weekly Hours	Total lectures	Exam Marks		
						UA	CA	Total
Level 4.5 Semester VI								
	Mandatory Major	Introduction of Python Theory	2	2	30	30	20	50
		Introduction of Python Practical	2	2	30	30	20	50
	Mandatory Major	Introduction of Machine Learning (Theory)	2	2	30	30	20	50
		Introduction of Machine Learning (Practical)	2	2	30	30	20	50
	Mandatory Major	Cloud Management Theory	2	2	30	30	20	50
	Minor	Advance Accountancy and Taxation - II	4	4	60	60	40	100
	Open Elective	Advance Networking Theory	4	4	60	60	40	100
	On Job Training (OJT)	On Job Training (OJT)	4	4	60	60	40	100
	Total Number of Credits			22		330	220	550

 पुन्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ ॥ विद्यया संपन्नता ॥ NAAC Accredited-2022 'B++' Grade (CGPA-2.96)	PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY, SOLAPUR			
PROGRAMME: B.COM. INFORMATION TECHNOLOGY				
B.COM. - III SEMESTER – VI (NEP 2020)				
VERTICAL: MAJOR MANDATORY				
COURSE CODE:				
COURSE NAME: INTRODUCTION OF PYTHON Theory				
Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks	
02 Credits	02 Hours	30 Hours	50 (UA 30 + CA 20)	

Preamble: This course introduces students to the fundamentals of Python programming. It focuses on basic syntax, data types, control structures, functions, and simple data handling techniques. The course aims to develop logical thinking and problem-solving skills using Python and prepares students for advanced programming and data-related applications in business environments.

Course Objectives:

1. To introduce basic concepts of programming using Python.
2. To develop logical and problem-solving skills.
3. To understand Python syntax, variables, and data types.
4. To apply control structures and functions in solving business problems.
5. To introduce basic file handling and simple applications of Python

Unit - 1: Introduction to Python & Basics	Lectures 15	Weightage: 9-15 Marks
1.1 Introduction to Programming 1.2 History and Features of Python 1.3 Installation and Python Environment 1.4 Python Syntax and Keywords 1.5 Variables and Data Types 1.6 Input and Output Functions 1.7 Operators in Python		
Unit - 2: Control Structures & Data Structures	Lectures 15	Weightage: 9-15 Marks
2.1 Conditional Statements (if, if-else, nested if) 2.2 Looping Statements (for, while) 2.3 Break and Continue 2.4 Lists and Tuples 2.5 Dictionaries and Sets 2.6 String Handling		

Course Outcomes:

1. Understand fundamental programming concepts and Python syntax.
2. Apply control structures and data structures to solve simple problems.
3. Develop Python programs using functions and basic file handling techniques.
4. Demonstrate logical thinking in solving introductory business-oriented programming tasks

Reading suggestion:

1. **E. Balagurusamy** – *Introduction to Computing and Problem Solving using Python* – McGraw Hill.
2. **Reema Thareja** – *Python Programming: Using Problem Solving Approach* – Oxford University Press.
3. **Charles Dierbach** – *Introduction to Computer Science Using Python* – Wiley.

 पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ ॥ विद्यया संपन्नता ॥ NAAC Accredited-2022 'B++' Grade (CGPA-2.96)	PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY, SOLAPUR			
PROGRAMME: B.COM. INFORMATION TECHNOLOGY				
B.COM. - III SEMESTER – VI (NEP 2020)				
VERTICAL: MAJOR MANDATORY				
COURSE CODE:				
COURSE NAME: INTRODUCTION OF PYTHON PRACTICAL				
Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks	
02 Credits	02 Hours	30 Hours	50 (UA 30 + CA 20)	

Course Objectives:

- 1) Introduce students to the Python programming environment and basic syntax.
- 2) Develop the ability to write, execute, and debug simple Python programs.
- 3) Familiarize students with fundamental programming constructs such as variables, data types, operators, and control statements.
- 4) Enhance problem-solving skills through hands-on Python programming exercises.
- 5) Enable students to use basic input/output operations effectively.
- 6) Prepare students for advanced programming concepts and real-world applications using Python.

Unit -1 : Practical I	Lectures 15	Weightage: 9 - 15 Marks
1.1 Write a program to implement stack by using array. (Static Implementation of stack) 1.2 Write a Python program to print “Hello, World!”. . 1.3 Program to demonstrate integer, float, string, and boolean data types. 1.4 Program to read user input and display formatted output. 1.5 Program demonstrating arithmetic, relational, logical, assignment, and bitwise operators. 1.6 Program to check whether a number is even or odd. 1.7 Program to generate Fibonacci series using loops. 1.8 Program to display prime numbers within a given range. 1.9 Program to perform list operations (append, insert, delete, sort). 1.10 Program to find the largest and smallest element in a list. 1.11 Program demonstrating tuple immutability. 1.12 Program to perform set operations (union, intersection, difference). • Program to store student details using a dictionary. 1.13 Program to count the frequency of words in a string. 1.14 Program to use built-in modules like math, random, and datetime.		

 पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ ॥ शिक्षण संयन्त्रा ॥ NAAC Accredited-2022 "B++" Grade (CGPA-2.96)	PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY, SOLAPUR PROGRAMME: B.COM. INFORMATION TECHNOLOGY B.COM. - III SEMESTER – VI (NEP 2020)			
VERTICAL: MAJOR MANDATORY				
COURSE CODE:				
COURSE NAME: INTRODUCTION TO MACHINE LEARNING THEORY				
Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks	
02 Credits	02 Hours	30 Hours	50 (UA 30 + CA 20)	

Preamble:

This course introduces the basic concepts, techniques, and applications of Machine Learning (ML). It provides a conceptual understanding of how machines learn from data and make predictions or decisions. The course focuses on fundamental learning types, basic algorithms, model evaluation, and applications in business and commerce. Mathematical complexity is minimized to suit commerce and IT students.

Course Objectives

1. To introduce the fundamental concepts and importance of Machine Learning.
2. To understand different types of learning techniques used in ML.
3. To study basic machine learning algorithms conceptually.
4. To explore applications of ML in business, banking, and e-commerce.
5. To create awareness about ethical issues and data privacy in ML systems.

Unit I Fundamentals of Machine Learning	Lectures 15	Weightage: 9-15 Marks
Introduction to Artificial Intelligence and Machine Learning Difference between AI, ML, and Data Science Need and Importance of Machine Learning Types of Machine Learning: Supervised Learning Unsupervised Learning Reinforcement Learning Machine Learning Process / Workflow Basic Terminology: Dataset, Features, Labels, Model, Training, Testing		
Unit 2: Basic Algorithms and Model Concepts	Lectures 15	Weightage: 9-15 Marks
Concept of Regression Concept of Classification Linear Regression (Basic Idea)		

Decision Tree (Basic Idea) K-Nearest Neighbor (Conceptual Understanding) Clustering and K-Means (Basic Concept) Overfitting and Underfitting Training vs Testing Data

Course Outcomes

1. Explain fundamental concepts and types of Machine Learning.
2. Describe basic ML algorithms and their working principles.
3. Identify real-world business applications of Machine Learning.
4. Evaluate ethical and privacy issues related to Machine Learning systems

Reading suggestion:

1. **Ethem Al pay din** – *Introduction to Machine Learning* – MIT Press.
2. **Tom M. Mitchell** – *Machine Learning* – McGraw Hill.
3. **Andreas C. Müller & Sarah Guido** – *Introduction to Machine Learning with Python* – O'Reilly Media.

 पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ ॥ विद्यया संपन्नता ॥ NAAC Accredited-2022 'B++' Grade (CGPA-2.96)	PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY, SOLAPUR			
PROGRAMME: B.COM. INFORMATION TECHNOLOGY				
B.COM. - III SEMESTER – VI (NEP 2020)				
VERTICAL: MAJOR MANDATORY				
COURSE CODE:				
COURSE NAME: MACHINE LEARNING PRACTICAL				
Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks	
02 Credits	02 Hours	30 Hours	50 (UA 30 + CA 20)	

Course Objectives

1. To introduce the fundamental concepts and importance of Machine Learning.
2. To understand different types of learning techniques used in ML.
3. To study basic machine learning algorithms conceptually.
4. To explore applications of ML in business, banking, and e-commerce.
5. To create awareness about ethical issues and data privacy in ML systems.

Unit I: Practical on Machine learning	Lectures 15	Weightage: 9-15 Marks
1) Installation and study of Python, NumPy, Pandas, Matplotlib, and Scikit-learn 2) Review of Python programming constructs required for ML 3) Loading datasets, handling missing values, normalization, and data splitting 4) Visualization using Matplotlib and Seaborn. 5) Implementation using Scikit-learn and performance evaluation. 6) Model training and prediction on real datasets. 7) Binary classification and accuracy analysis. 8) Classification and parameter tuning.		

 पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ ॥ विद्यया संपन्नता ॥ NAAC Accredited-2022 'B++' Grade (CGPA-2.96)	PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY, SOLAPUR			
PROGRAMME: B.COM. INFORMATION TECHNOLOGY				
B.COM. - III SEMESTER – VI (NEP 2020)				
VERTICAL: MAJOR MANDATORY				
COURSE CODE:				
COURSE NAME: CLOUD MANAGEMENT THEORY				
Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks	
02 Credits	02 Hours	30 Hours	50 (UA 30 + CA 20)	

Preamble:

This course introduces the fundamental concepts of cloud computing and cloud management. It focuses on cloud service models, deployment models, cloud infrastructure, virtualization, security, and cloud governance. The course provides conceptual knowledge of managing cloud-based services and understanding their applications in business organizations.

Objectives of the Course

1. To understand the basic concepts and architecture of cloud computing.
2. To study different cloud service and deployment models.
3. To learn cloud resource management and virtualization concepts.
4. To understand security, governance, and risk management in cloud environments.
5. To explore business applications of cloud technologies.

Unit I Fundamentals of Cloud Computing & Service Models	Lectures 15	Weightage: 9-15 Marks
Introduction to Cloud Computing Evolution and Need of Cloud Technology Characteristics of Cloud Computing Cloud Architecture (Front-end & Back-end) Service Models: Infrastructure as a Service (IaaS) Platform as a Service (PaaS) Software as a Service (SaaS) Deployment Models: Public Cloud Private Cloud Hybrid Cloud Community Cloud		

Virtualization (Concept and Types)		
Introduction to Major Cloud Providers (AWS, Microsoft Azure, Google Cloud – Overview)		
Unit 2: Cloud Management, Security & Business Applications	Lectures 15	Weightage: 9-15 Marks
Cloud Resource Management Cloud Storage and Data Management Cloud Security Challenges Data Privacy in Cloud Risk Management in Cloud Computing Cloud Governance and Compliance Service Level Agreement (SLA) Disaster Recovery and Backup in Cloud Business Applications of Cloud Computing Emerging Trends: Edge Computing, Serverless Computing		

Course Outcomes

1. Explain the concepts, architecture, and service models of cloud computing.
2. Differentiate between various cloud deployment models and virtualization techniques.
3. Analyze cloud management practices and security challenges.
4. Evaluate the role of cloud computing in modern business organizations.

Reading Suggestions

1. **Rajkumar Buyya, Christian Vecchiola & S. Thamarai Selvi** – *Mastering Cloud Computing* – McGraw Hill.
2. **Thomas Erl, Ricardo Puttini & Zaigham Mahmood** – *Cloud Computing: Concepts, Technology & Architecture* – Pearson.
3. **Barrie Sosinsky** – *Cloud Computing Bible* – Wiley India.

 पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ ॥ विद्यया संपन्नता ॥ NAAC Accredited-2022 'B++' Grade (CGPA-2.96)	PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY, SOLAPUR PROGRAMME: B.COM. INFORMATION TECHNOLOGY B.COM. - III SEMESTER – VI (NEP 2020)			
VERTICAL: Minor COURSE CODE: COURSE NAME: ADVANCE ACCOUNTANCY AND TAXATION - II				
Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks	
04 Credits	04 Hours	60 Hours	100 (UA 60 + CA 40)	

Preamble:

This course provides students with a foundational understanding of income tax, focusing on its structure, significance, and role in the economy. It covers essential topics such as the identification of various sources of income, the calculation of taxable income, and the application of exemptions, deductions, and allowances. Additionally, the course equips students with the knowledge necessary to compute income tax liabilities and understand the process of filing income tax returns. By the end of the course, students will be proficient in calculating taxes and managing tax compliance under applicable laws.

Course Objectives:

- 1) To provide students with a foundational understanding of income tax, its structure, and its significance in the economy.
- 2) To equip students with the knowledge of different sources of income and the process of calculating taxable income.
- 3) To familiarize students with exemptions, deductions, and allowances available under the tax system.
- 4) To enable students to compute income tax liabilities and understand the process of filing income tax returns..

Unit I Introduction and Basic Concepts	Lectures 15	Weightage: 9-15 Marks
Basic concepts and Definitions : Income, Agricultural Income, Person, Assessee, Assessment year, Previous year, Gross Total Income, Total Income. Residential status of an Assessee – Basic Conditions and Additional conditions, Scope of total income on the basis of residential status. Exempted income under section10 (relating to Individual Assessee)		
Unit-II Income from Salary and House property	Lectures 15	Weightage: 9-15 Marks
Income from Salary: Definition of Salary u/s 17(1), Basis of Charge, Allowances u/s 10(14), Perquisites, Tax treatment of Provident Fund (RPF, SPF and URPF), Deductions from Salary u/s 16. Problems on Income from Salary. Income from House Property: Basis of Charge, Gross Annual Value and Net Annual Value, Deductions from Net Annual Value. Problems on Income from House Property		

Unit-III Income from Business or Profession and Other Sources	Lectures 15	Weightage: 9-15 Marks
Income from Business or Profession: Business or Professional income u/s 28, Methods of accounting, Deductions expressly allowed and expressly disallowed. Problems on Income from Business or Profession. Income from Other Sources: (Only theory) (No independent problem on this topic, some items may be considered in Problems of Total Income) Basis of charge, Various types of income from other sources and deduction from income from other sources.		
Unit-IV Total Income, deductions and Goods and Service Tax	Lectures 15	Weightage: 9-15 Marks
Deductions from Total Income : Sections : 80-C, 80-D, 80-E, 80-G, 80-TTA, 80-TTB, 80-U. Total Income: Computation of Total Income of an Individual. Goods and Service Tax (Only theory) : Introduction, Meaning, Benefits, Concepts of CGST, SGST and IGST, Input Tax Credit, Reverse Charge mechanism, Blocked Credit.		

Note: Finance Act in Force at the time of commencement of academic year shall be Applicable. Respective academic year should be treated as assessment year.

Course Outcomes:

- 1) Students will be able to explain the basic concepts of income tax, its structure, and its role in the economy.
- 2) Students will be able to identify different sources of income and compute taxable income under various heads.
- 3) Students will be able to apply exemptions, deductions, and allowances to determine total income.
- 4) Students will be able to calculate tax liabilities and successfully file income tax returns.

Suggested readings:

- 1) Dr. Vinod K. Singhania and Monica Singhania: Students' Guide to Income Tax, University Edition and Taxmann Publications Pvt. Ltd., New Delhi.
- 2) Dr. Girish Ahuja and Ravi Gupta : Systematic Approach to Income Tax, Bharat Law House, Delhi.
- 3) Dinkar Pagare :Law and Practice of Income Tax, Sultan Chand and Sons, New Delhi.
- 4) B. B. Lal :Income Tax Law and Practice, Konark Publications, New Delhi.
- 5) Gaur &Narang : Income Tax.
- 6) Goods and Services Tax by S..S. Gupta, Taxmann Publications, New Delhi
- 7) ICAI Intermediate Study Material –

Journals:

1. Income Tax Reports. Company Law Institute of India Pvt. Ltd., Chennai.
2. Taxman. Taxman Allied Services Pvt. Ltd., New Delhi.
3. Current Tax Reporter : Current Tax Reporter ,Jodhpur.
4. Vyapari Mitra : Vyapari Mitra Publications Pvt Ltd., Pune.

 पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ ॥ विद्यया संपन्नता ॥ NAAC Accredited-2022 'B++' Grade (CGPA-2.96)	PUNYASHLOKAHILYADEVIHOLKARSOLAPURUNIVERSITY, SOLAPUR			
PROGRAMME: B.COM. INFORMATION TECHNOLOGY				
B.COM. - III SEMESTER – VI (NEP 2020)				
VERTICAL: OPEN ELECTIVE				
COURSE CODE:				
COURSE NAME: ADVANCE NETWORKING THEORY				
Course Credits	No. of Hrs. per Week	Total No. of Teaching Hrs.	Total marks	
04 Credits	04 Hours	60 Hours	100 (UA 60 + CA 40)	

Preamble: This course provides in-depth knowledge of advanced computer networking concepts, protocols, network architecture, routing mechanisms, and network security. It focuses on understanding how modern enterprise networks operate, including wireless networks, network management, and emerging technologies. The course prepares students to understand and manage business communication networks effectively.

Course Objectives:

1. To understand advanced networking concepts and protocols.
2. To study routing, switching, and network configuration concepts.
3. To learn network security mechanisms and threat management.
4. To explore wireless, mobile, and emerging networking technologies.
5. To understand network management and performance monitoring

Unit -1 : Advanced Network Fundamentals	Lectures 15	Weightage: 9 - 15 Marks
Review of OSI & TCP/IP Models Network Topologies and Devices (Router, Switch, Gateway) IP Addressing (IPv4 & Introduction to IPv6) Subnetting (Basic Concept) Routing Concepts Switching Techniques ARP, RARP, ICMP	Lectures 15	Weightage: 9 - 15 Marks
Unit -2 : Routing Protocols & Network Configuration	Lectures 15	Weightage: 9 - 15 Marks

Static and Dynamic Routing Routing Protocols Overview: RIP, OSPF, BGP (Conceptual) VLAN Concepts Network Address Translation (NAT) DHCP and DNS WAN Technologies (Leased Line, MPLS – Overview) Introduction to Software Defined Networking (SDN)		
Unit -3 : Network Security & Performance	Lectures 15	Weightage: 9 - 15 Marks
Network Security Principles Firewalls and Intrusion Detection Systems VPN Concepts Wireless Network Security (WPA, WPA2) Network Threats and Attacks Network Monitoring and Performance Management QoS (Quality of Service)		
Unit -4 :Wireless & Emerging Networking Technologies	Lectures 15	Weightage: 9 - 15 Marks
Wireless Networking Concepts (Wi-Fi, Bluetooth) Mobile Networks (3G, 4G, 5G – Overview) Cloud Networking IoT Networking Concepts Network Virtualization Data Center Networking Future Trends in Networking		

Course Outcome

1. Explain advanced networking concepts, models, and protocols
2. Analyze routing mechanisms and network configuration techniques.
3. Evaluate network security measures and threat management strategies.
4. Interpret emerging networking technologies and their business applications

Suggested Readings:

1. **Behrouz A. Forouzan** – *Data Communications and Networking* – McGraw Hill.
2. **Andrew S. Tanenbaum & David J. Wetherall** – *Computer Networks* – Pearson.
3. **James F. Kurose & Keith W. Ross** – *Computer Networking: A Top-Down Approach* – Pearson.



Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Community Engagement Programme (CEP) SYLLABUS FOR MAJOR MANDATORY SUBJECT COMMERCE INFORMATION TECHNOLOGY

Structure And Syllabus in Accordance with National
Education Policy - 2020 Having Choice Based Credit
System with Multiple Entry and Multiple Exit Options
(To be Implemented from Academic Year 2024-25

Onwards)

TOTAL CREDIT-02

MARKS - 50

TOTAL LECTURES - 30

(TEACHING -15 Hrs +FIELD WORK 15 Hrs)

SR No	Category	Activity	Hrs
1	Classroom	Classroom Discussion	09 Hrs
2		Assignment Map	02 Hrs
3		Group Presentation of Assignment	02 Hrs
4		Written Assignment	02 Hrs
		Sub Total	15 Hrs
1	Field Visit		15 Hrs
		Grand Total	30 Hrs

B.COMIT PART -II SEMESTER - IV AND V
AS PER MAHARASHTRA GOVERNMENT HIGHER EDUCATION
RESOLUTION DATES 20/04/2023
UGC -Guidelines for Fostering Social Responsibility & Community
Engagement in Higher Education Institutions in India 2.0

1. Preamble:

In line with the National Education Policy (NEP) 2020, the **Guidelines for Fostering Social Responsibility & Community Engagement in Higher Education Institutions in India 2.0** aim to transform higher education by integrating social responsibility into the academic curriculum. The B.Com IT program aligns commerce information technology education with societal needs, enabling students to understand the complexities of business while fostering a sense of responsibility toward society. These guidelines emphasize experiential learning, holistic development, and active community participation, nurturing future leaders who can drive social and economic progress.

To achieve the objectives of the socio-economic development of New India, HEIs can play an important role through active community engagement. This approach will also contribute to improve the quality of both teaching and research in HEIs in India. India is a signatory to the global commitment for achieving Sustainable Development Goals (SDGs) by 2030. Achieving these 17 SDG goals requires generating locally appropriate solutions. Community engagement should not be limited to a few social science disciplines alone. It should be practiced across all disciplines and faculties of HEIs. These can take the forms of enumerations, surveys, awareness camps and campaigns, training, learning manuals/films, maps, study reports, public hearings, policy briefs, cleanliness and hygiene teachings, legal aid clinics, etc. For example, students of commerce information technology can create websites of e-commerce platforms for local businesses. Students can also develop cloud-based accounting setup. Therefore, students are being encouraged to foster social responsibility and community engagement in their teaching and research.

The University Grants Commission (UGC) has urged Higher Education Institution (HEIs) to facilitate the implementation of two-credit course on Community Engagement and Social Responsibility effectively. The Commission has urged HEIs to take appropriate action as per the guidelines stated by the UGC in their respective institutions. The Community Engagement

and Social Responsibility course aim to provide community engagement to all undergraduate (UG) and postgraduate (PG) students so that their appreciation of rural field realities will be holistic, respectful and inspiring.

The 2 credit course will include one credit for classroom and tutorials and one credit for field engagement. Students will spend at least 50 per cent of the course time in the field during the 30 hour course.

2 Objectives:

1. To develop socially responsible commerce information technology graduates with ethical and sustainable business practices.
2. To bridge the gap between academic knowledge and real-world challenges through community engagement.
3. To enhance students' understanding of social, economic, and environmental issues affecting communities.
4. To cultivate leadership qualities, critical thinking, and problem-solving skills.
5. To promote lifelong learning, adaptability, and social entrepreneurship.

2. Course Outcomes:

Upon successful completion of the B.Com.InformationTechnology program integrated with the Guidelines for Social Responsibility & Community Engagement, students will be able to:

1. Apply accounting, taxation, and financial management principles using IT tools to solve real-world problems in community settings.
2. Analyze socio-economic issues and develop practical solutions for local businesses and social enterprises.
3. Demonstrate leadership and teamwork while executing community-based projects.
4. Design and implement community development programs focused on financial inclusion, digital literacy, and skill development.
5. Reflect on ethical values and social responsibility while making business decisions.
6. Engage effectively with community members, NGOs, and social enterprises.

3. Introduction of the Community Engagement Program (CEP)

6. The Community Engagement Program (CEP) under NEP 2020 is a visionary initiative designed to strengthen the connection between educational institutions and society. It encourages students to actively engage in community service, fostering holistic development while addressing real-world challenges. The CEP aims to create socially

responsible citizens who are empathetic, solution-oriented, and committed to nation-building.

Purpose and Vision of CEP:

The primary objective of the CEP is to integrate classroom learning with practical experiences, enabling students to apply their academic knowledge to solve community problems. This experiential learning approach helps students develop critical life skills, leadership qualities, and a sense of civic responsibility.

4. Key Features of the CEP:

1. **Holistic Development:** The program focuses on nurturing socially conscious individuals who understand the significance of community service.
2. **Experiential Learning:** Students gain hands-on experience by working on projects that address local needs and challenges.
3. **Skill Enhancement:** The CEP emphasizes developing problem-solving, leadership, teamwork, and communication skills.
4. **Community Empowerment:** It promotes sustainable development by involving students in projects that benefit society.
5. **Inclusivity and Participation:** The program encourages collaboration among students, teachers, and community members.
6. **Scope of CEP in Higher Education:**
7. The CEP can be integrated across various disciplines, encouraging students to contribute to areas such as education, healthcare, rural development, environmental sustainability, financial literacy, and social welfare. By working closely with communities, students gain a deep understanding of societal issues and develop innovative solutions.
8. **Significance of CEP in NEP 2020:**
9. The CEP aligns with the National Education Policy 2020 by promoting holistic, value-based education that goes beyond academics. It aims to develop socially responsible citizens equipped to contribute to India's socio-economic growth. The program fosters a spirit of service, nurturing students who are not only academically competent but also committed to the greater good.

1. Core Curriculum Integration (Multidisciplinary Approach):

- **Foundational and Core Courses**

- Financial Accounting,
- Information Technology
- Business Organization,
- Community Engagement Module:
 - Financial Literacy and Digital Banking Workshops in Rural Areas
 - Community Surveys on Information Technology-related Issues

- *Skill Development and Specialization*

- Networking, Corporate Accounting, Income Tax Law, Cloud
- C++, Java, Python
- Community Engagement Module:
 - Assisting Local Entrepreneurs and SHGs in developing computer skills
 - Business Consultancy for Rural Enterprises

- *Semester IV & V: Advanced Specialization and Project Work*

- Management Accounting, GST and Taxation, Auditing
- Advance Java, E-Commerce, Web Development
- Community Engagement Module:
 - Project Work (Mandatory for Final Year):
 - Preparation of Business Plans for Social Enterprises
 - Income Generation Programs for Rural Youth

Awareness Drives on Digital Transactions and Cyber Security

2. Community Engagement Modules (As per NEP 2020):

1. Service-Learning Projects (2-4 Credits):

- Mandatory participation in community service.
- Projects include financial literacy, digital banking, self-help groups, and rural development initiatives.
- Example: Organizing cyber security awareness camps and income tax return filing for rural communities.

2. Internships and Field Visits:

- Collaboration with local businesses, MSMEs, social enterprises, and NGOs.
- Practical exposure to community business models.

3. Extension Activities and Volunteering:

- Community development programs on women empowerment, skill development, and environmental sustainability.
- Engaging students in activities like tree plantation, cleanliness drives, and awareness campaigns.

3. Skill Development and Training (Aligned with NEP 2020):

- **Workshops and Training Sessions:**
 - Leadership, Communication, Digital Marketing, and Entrepreneurship Skills.
- *Skill Development for Rural Youth:*
 - Vocational training on hardware maintenance and digital payments.
- *Financial Inclusion and Digital Literacy Programs:*
 - Promoting UPI, mobile banking, and financial inclusion.

4. Assessment and Evaluation (Aligned with NEP 2020):

- 1. Continuous Assessment and Internal Evaluation:**
 - Project Reports, Case Studies, Presentations, and Viva-Voce.
- 2. Community Impact Evaluation:*
 - Measuring the impact of projects on community development.
- 3. Reflective Journals and Peer Assessment:*
 - Reflective writing on community engagement experiences.
- 4. Evaluation by External Experts:*
 - Industry and NGO representatives to assess student projects.

5. Institutional Collaboration and Partnerships:

- 1. MoUs with NGOs, Cooperatives, MSMEs, and Social Enterprises:**
 - Facilitating community projects, internships, and research opportunities.
- 2. Industry-Academia Collaboration:*
 - Joint community service and research projects on financial inclusion, cloud networking, cyber security, microfinance, and entrepreneurship.
- 3. Alumni Engagement:*
 - Mentorship and networking for students engaged in community service.

Expected Outcomes:

1. Graduates with holistic development, social consciousness, and professional competence.
2. Enhanced employability through practical skills, leadership, and entrepreneurship.
3. Effective contribution to community development and sustainable economic growth.
4. Strengthened reputation of Higher Education Institutions (HEIs) as catalysts of change.

5. Promotion of lifelong learning and responsible citizenship.

Accountancy & Financial Literacy

1. Financial Literacy Camps for Rural and Urban Communities
2. Personal Finance Management and Budgeting Workshops
3. Bookkeeping Training for Small Businesses and Self-Employed Individuals
4. Financial Planning for Families and Individuals
5. Introduction to Double-Entry Bookkeeping for Beginners
6. Accountancy Support for NGOs and Social Enterprises
7. Financial Statement Preparation and Analysis Workshops
8. Digital Accounting Awareness (Tally, ERP Software)
9. Basics of Accounting for Farmers and Agricultural Businesses
10. Financial Literacy for Women Entrepreneurs
11. Financial Literacy Awareness Programme Digital Literacy Awareness Programme
Education Loan Awareness Programme Entrepreneurship Awareness Programme
Awareness Programmes on Government Schemes Products Market Awareness Services Market
Awareness Consumer Awareness Programme Accounting Awareness Programme for
Farmers Accounting Awareness Programme for Street Vendors etc.

Taxation

11. Income Tax Filing and Planning Workshops
12. Tax Planning for Individuals and Small Businesses
13. Direct and Indirect Taxation Awareness Campaigns
14. Property Tax Awareness for Homeowners
15. TDS (Tax Deducted at Source) Compliance for Small Businesses
16. Tax Advisory Services for Farmers and Rural Businesses

Auditing & Assurance Services

17. Internal Audit Awareness for Small Enterprises
18. Fraud Detection and Prevention Workshops
19. Risk Management and Internal Control Awareness
20. Statutory Compliance and Regulatory Audit Support
21. Audit Training for NGOs and Social Organizations
22. Forensic Auditing Awareness for Local Businesses

Financial Accounting & Reporting

23. Preparation of Final Accounts for Small Enterprises
24. Basics of Financial Reporting and Analysis
25. Financial Accounting for Micro, Small, and Medium Enterprises (MSMEs)
26. Accounting for Partnerships and Family-Owned Businesses
27. Training on Preparing Balance Sheets, P&L Accounts
28. Awareness of Financial Modeling for Business Growth

Specialized Engagement Areas

29. Accounting and Taxation for Freelancers and Gig Workers
30. Accounting for E-Commerce Businesses
31. Awareness on Digital Payments, UPI, and E-Banking

Information Technology related Areas

32. Developing websites for SHGs & small enterprises
33. Cyber security campaign for students
34. Developing e-commerce for rural enterprises
35. Developing hardware networking training for rural youth

1. Accountancy Outcomes

1. **Enhanced Financial Literacy:** Participants can manage personal and business finances efficiently using accounting principles.
2. **Practical Bookkeeping Skills:** Ability to prepare and maintain accurate financial records, including journals, ledgers, and trial balances.
3. **Preparation of Financial Statements:** Competency in preparing balance sheets, profit & loss accounts, and cash flow statements.
4. **Understanding of Advanced Accounting Concepts:** Knowledge of partnership accounting, branch accounting, and departmental accounts.
5. **Digital Accounting Proficiency:** Ability to use accounting software (e.g., Tally, ERP) for financial management.
6. **Support for Small Businesses and NGOs:** Capability to handle financial management for small businesses and non-profit organizations.
7. **Accounts Reconciliation:** Skill in reconciling accounts and identifying discrepancies.

8. **Accounting for Decision-Making:** Enhanced ability to make informed financial decisions using accounting data.

2. Information Technology Outcomes

9. **Use of IT tools and Software:** Ability to use IT tools and software for accounting, data Management and business operations.
10. **Spreadsheets, databases, ERP and cloud platforms:** ability to apply various software tools in commerce applications.
11. **E-commerce, cyber security and digital payments:** Understand fundamentals of E-commerce, cyber security and digital payments
12. **Analyze business data:** Ability to analyze business data using basic analytics and visualization tools.

3. Taxation Outcomes

13. **Comprehensive Tax Knowledge:** Understanding of direct and indirect taxes, including Income Tax, and TDS.
14. **Tax Filing and Compliance:** Ability to file individual and business tax returns accurately.
15. **Tax Planning and Management:** Knowledge of tax-saving investments and deductions.
16. **Handling Tax Audits:** Understanding procedures and documentation for tax audits.
17. **Tax Calculation Skills:** Ability to calculate tax liability for individuals and businesses.
18. **Advisory Skills in Taxation:** Capability to offer tax advisory services to individuals and MSMEs.
19. **Awareness of Tax Reforms:** Understanding recent changes and reforms in tax laws.
20. **Tax Compliance for NGOs and Trusts:** Knowledge of tax exemptions and benefits for charitable organizations.
21. **Managing TDS and Tax Credits:** Understanding TDS provisions, returns, and tax credit mechanisms.

4. Auditing Outcomes

- 22. **Understanding Audit Concepts:** In-depth knowledge of auditing principles, standards, and procedures.
- 23. **Audit Planning and Execution:** Ability to plan, execute, and document audits effectively.
- 24. **Internal Control Evaluation:** Skills to assess and strengthen internal controls for businesses.
- 25. **Audit of Financial Statements:** Competency in auditing financial statements and verifying accuracy.
- 26. **Fraud Detection and Prevention:** Ability to detect, prevent, and report financial frauds.
- 27. **Risk Assessment and Management:** Skill in identifying and mitigating financial risks.
- 28. **Compliance Audits:** Understanding compliance requirements and regulatory audits.
- 29. **Forensic Auditing Skills:** Ability to investigate financial discrepancies and irregularities.
- 30. **Audit Reporting and Documentation:** Proficiency in preparing audit reports with actionable insights.
- 31. **Advisory Services in Auditing:** Capability to provide audit and assurance services to businesses.

5. Integrated Outcomes (Accountancy, Taxation, and Auditing)

- 32. **Holistic Understanding of Finance:** Ability to integrate accounting, taxation, and auditing for comprehensive financial management.
- 33. **Financial Decision-Making:** Enhanced ability to make strategic financial decisions using accounting data and audit findings.
- 34. **Practical Problem-Solving Skills:** Confidence in addressing real-world accounting, taxation, and auditing challenges.
- 35. **Compliance and Regulatory Knowledge:** Understanding of legal and regulatory frameworks for businesses.
- 36. **Community Support Services:** Capability to offer advisory services in accountancy, taxation, and auditing to local businesses and NGOs.
- 37. **Digital Competency:** Skilled in using digital tools for accounting, tax compliance, and auditing.

38. **Promoting Financial Discipline:** Ability to encourage financial discipline within the community.
39. **Building Trust and Transparency:** Knowledge to ensure financial transparency and accountability.
40. **Support for Startups and Entrepreneurs:** Ability to guide startups on financial management, tax planning, and compliance.
41. **Ethical Financial Practices:** Awareness of ethical practices in accounting, taxation, and auditing.

Overall Impact on the Community

- Strengthened financial management skills for businesses, NGOs, and individuals.
- Improved tax compliance and awareness of tax-saving opportunities.
- Enhanced accountability, transparency, and governance through effective auditing.
- Empowered individuals and businesses with digital accounting and compliance tools.
- Development of a financially literate and self-sufficient community.

IMPORTANT RULES AND REGULATIONS FOR CEP:

Concurrent Fieldwork: Students must conduct comprehensive studies on various challenges that they face in their chosen field. Every work relevant to the subject matter should be compiled and documented. Students should keep separate fieldwork diary or maintain journal in order to record their fieldwork experiences i.e. reading, e- contents, tasks, planning and work hours have to be recorded in the diary. Detailed work records report on students' fieldwork experiences and activities to be submitted and should be presented. The fieldwork conference is part of the timetable and is mandatory. Faculty should hold a fieldwork conference FOREIGHTNIGHTLY for all students. In addition to the principal curriculum, the students engage in a variety of community development- related activities. They are encouraged to plan and carry out programs, processions, and events for social causes. These activities seek to enhance students' personal and professional skills as well as foster self- development. "Rural Camp" should be embedded in the curriculum for first-year students to be held in the backward and neglected areas of District's Concurrent Fieldwork is the core curriculum activity in the CEP course. Hence, 100% attendance of the students is mandatory in case of absence on any student, supplementary fieldwork must be arranged and accomplished with the approval of the faculty supervisor.

EVALUATION/ASSESSMENT SCHEME:

Students should keep a Field Diary / journal to record, content, readings and field visit planning. The assessment pattern is internal and external i.e. 40+10.

1.	Internal continuous Assessment:	Participation in concurrent field visits.	16
2.		Individual field project conference, report/journal submission.	16
3.	External Assessment:	Presentation of field project findings (VIVA) should be assigned.	08
4.	INTERNAL	College Assessment	10
	TOTAL		50

PAH SOLAPUR UNIVERSITY, SOLAPUR

Faculty of Commerce Information Technology

GUIDELINES FOR FIELD PROJECT

**UG Second Year Students (Semester III/V) Under
NEP 2020 Pattern**

B.COM II-WITH EFFECT FROM 2025-26

Guidelines for Field Project (FP) UG
(Year-II Semester-III/V)

Preamble:

The Field Project initiative, aligned with the National Education Policy (NEP) 2020, aims to bridge the gap between academic learning and societal needs by fostering experiential and practical learning among undergraduate students. This program encourages students to engage with real-world scenarios, enabling them to develop essential skills such as scientific reasoning, interdisciplinary thinking, communication, teamwork, and analytical abilities. The project provides an opportunity for students to systematically document and analyze societal challenges, thereby cultivating a holistic understanding of community dynamics.

As part of our ongoing commitment to enhancing the educational experience of our undergraduate students, I am writing to introduce the implementation of a Field Project program aligned with the National Education Policy (NEP) 2020.

The NEP 2020 emphasizes bridging the gap between current learning outcomes and societal requirements. It has come to our attention that many of our students lack essential societal experience and graduate attributes such as measurement, observation, and documentation skills. To address this, we propose a field project initiative that will enable students to engage with their surroundings and develop critical skills including scientific reasoning, interdisciplinary thinking, communication, teamwork, and cooperation.

This program will provide students with data collection experience, allowing them to systematically study, document, and analyze region-specific realities and challenges. The studies can be conducted individually or in groups and focused on real-life situations, emphasizing the measurement and quantification of various societal phenomena.

In NEP 2020 we are offering to UG (Second Year-second Semester) students **Field Project (FP)** for **TWO (2) credits i.e. 50 Marks**. The total time allocation for the student to carry out field project is **60 hours**. The actual field work should be carried out after college hours or on holidays.

Objectives:

1. **To develop practical skills and critical thinking:** Equip students with skills in measurement, observation, documentation, and analysis through field-based learning.
2. **To promote interdisciplinary and scientific reasoning:** Encourage students to apply concepts from various subjects to understand and address societal challenges.
3. **To enhance communication and teamwork skills:** Foster collaboration, leadership, and effective communication among students by working in groups.
4. **To cultivate problem-solving abilities:** Enable students to identify, analyze, and propose solutions for community issues using data-driven approaches.

5. **To align education with societal needs:** Bridge the gap between theoretical learning and real- world applications, ensuring holistic development.
-

Outcomes:

1. **Enhanced analytical and observational skills:** Students will gain the ability to systematically collect, analyze, and interpret data for practical insights.
2. **Practical exposure to societal issues:** Students will develop a deep understanding of local challenges and the socio-economic landscape.
3. **Improved research and documentation skills:** Students will learn to prepare comprehensive reports based on fieldwork findings.
4. **Increased confidence and communication skills:** Effective presentation of project outcomes will enhance students' public speaking and interpersonal skills.
5. **Holistic development for societal contribution:** Graduates will possess essential skills and values for contributing meaningfully to society.

To carry out the field project work following guidelines should be used:

1. Field-based learning: Students should participate in field-based learning/projects under the supervision of faculty.
2. A minimum of **30 hours of learning per credit** in a semester is required.
3. Assignment of project topics to individual student or groups of students (2 or 3 students in one group/ Commerce Information Technology faculty can have 5 students per group) and one faculty member from the department will act as GUIDE for the student or group of students.
4. If the project is related to survey type work, then prepare a questionnaire (20 -30 questions or more) related to their project topic (in Marathi or English). If the project is related to work that does not involve SURVEY work, then the questionnaire part can be replaced accordingly.
5. The departmental coordinator/guide should check the questions and finalize the questionnaire. The question that may create unnecessary complications should be avoided. The questions should be qualitative as well as quantitative. If the project is related to other type work (e.g. Data collection, sample collection etc.), then the guide should discuss with student and finalize the methodology for the same.
6. Students should go to their chosen field with the questionnaire and collect the information regarding the questions asked to the concerned people. Collect as much information as possible by collecting 25 or more questionnaires or enough number of samples or reasonable amount of data. The more the data, the better it will be for analysis.
7. The student should compile all the relevant data and carry out its analysis.
8. Write a project report in the standard format (2 Copies): Index, Chapter-1 INTRODUCTION ,

Chapter-2 PROFILE OF THE ORGANISATION , Chapter- 3 DISCUSSION Chapter-4 Conclusion, References etc. The report should mention the clear **OUTPUT** drawn from the study. The typed project report should have minimum 25 pages (excluding title, Certificate, index and acknowledgement pages etc.), in Times New Roman with font size 12, and line spacing of 1.5.

9. Submit the project report with the Guide's signature to the department.
10. The Oral presentation for all the projects in the department should be arranged in the department. To evaluate the project, TWO examiners should be appointed by HoD (The details about appointment of examiners, weightage to internal and external marks etc. will be provided by examination section).
11. The total project work including preparation of questionnaire or sample/data collection to oral presentation should be evaluated for 2 credits (50 Marks). The details about the allocation of time, marks and scheme of examination for field project is given in Table. The departmental FP coordinator/HoD should submit the marks as per regular procedure to the examination section.
12. Since it is a compulsory subject in our syllabus, passing students in this **field project** is **MUST** to complete their degree.

Typical Time and marks allocation for the different stages of the field project is:

Step of Project	Individual students work in hours	Marks
Topic Selection/ Study Design	05	05
Survey preparation / Fieldwork	25	20
Analysis	10	05
Report writing	20	10
Oral Presentation		10
Total	60	50

College Letter Head

To,

Subject :- Request for inclusion of student/s of our college for Field Project Program...

Madam / Sir,

-----NAME OF THE COLLEGE----- has introduced 'Field Project' for Second Year Under- Graduate Students in its revised syllabus.

The purpose of the Field Project program is to provide hands-on training and experience to the students about various aspects of activities related to their field of studies. The Field Project will also enhance employability of students.

In view of this, I request you to provide following student/s of our college (List enclosed) with an opportunity for Field Project in your esteemed organization.

We look forward to a mutually rewarding academic association with your organization.

Thank you.

Sincerely,

*Departmental Coordinator,
Field Project Program*

HoD

Principal

UNDERTAKING FROM STUDENT

1. Name of the Student	:	
2. Class	:	
3. Division and Roll Number	:	
4. Present address	:	
5. Permanent address	:	
6. Contact Number	:	
7. Contact Number (Parent)	:	
8. Email ID	:	

To,

The Principal,

Sub : Undertaking

Respected Sir,

I am studying in semester III of S.Y.SEMESTER III/IV..... I am going to join ---
----- (Name of the organization) for my 60 hours Field Project program
during -----to -----.

I assure that I will follow all the rules and instruction issued by the Field Project providing organization. I will be responsible for my behavior and performance during the Field Project period.

Thank you.

Yours obediently,

(Name & Signature of parent)

(Name & signature of the student)

Date :

**UNDERTAKING FROM STUDENT TO THE FIELD PROJECT PROVIDING
ORGANIZATION**

To,

Subject : Undertaking

Respected Madam / Sir,

I am a student of -----

---- College. I am studying in semester III/IV of S.Y. --. I am going

to join your esteemed organization for my 60 hours Field Project program during ----- to

-----.

I assure that I will follow all the rules and instruction issued by you. I will be solely responsible for my behavior and performance during the Field Project period.

I will not disclose any information that is made available to me to anyone during or after the Field Project period.

I assure you that I will do my best and the Field Project opportunity provided to me will be a mutually rewarding experience.

Thanking you.

Yours sincerely,

Date :

Place :

(Name & signature of the student)



Log sheet of work performed during Field Project

Letter Head of the Field Project Provider Organization (if available)

1. Name of the Student	:	
2. Name of the College	:	
3. Division and Roll Number	:	
4. Address	:	
5. Contact Number	:	
6. Email ID	:	
7. Special Subject	:	
8. Field Project start date	:	
9. Field Project end date	:	

Log Sheet of Work Performed During Field Project

Date	Time		Total Hours	Details of Work Done	Sign of Officer	Sign of Students
	From	To				

Certified that -----(Name of the student) has satisfactorily completed the Field Project assigned to him.

Name & signature of manager	Name & Signature of supervisor	Name & Signature of section in-charge

Date :

Or Signature of GUIDE

Field Project Completion Certificate

Letter Head of the Field Project Provider Organization or Guide

To,

The Principal,

----- College -----

Subject: Field Project Completion Certificate

Dear Madam/ Sir,

I am happy to inform you that following students of your college have successfully completed the '60 Hours Field Project Program' in this organization.

Sr. No.	Name of the student	Roll No.	Aadhar No.	UG Class
1.				
2.				
3.				
4.				
5.				

These students have been provided with adequate exposure and necessary hands- on training pertaining to their Field of Study.

I wish them every success in future endeavors.

Thank you.

Sincerely,



Name & Signature (Authorised Signatory)

FEEDBACK FROM FIELD PROJECT PROVIDER ORGANIZATION (If Applicable)

Dear Madam/ Sir,

Please provide your valuable feedback about the performance of the student on following parameters. Your feedback will enable us to make necessary changes in the Field Project process. Thank you.

Field Project Program Feedback Form

Sr. No.	Particulars	Details
1)	Name of the Supervisor/ Officer :	
2)	Department :	
3)	Designation :	
4)	Name of the Student :	
5)	Name of the College :	
6)	Roll Number :	
7)	Special Subject :	

Part – A – Individual Ranking (Please tick the suitable checkbox)

No.	Parameter for feedback	Excellent	Very Good	Good	Satisfactory	Needs improvement
1)	Domain Knowledge					
2)	Communication Skills					
3)	Punctuality & Dedication					
4)	Ability to work in teams					
5)	Problem solving skills					
6)	Quality of work done					
7)	Effectiveness					
8)	Efficiency					
9)	Ability to take Initiative					
10)	Positive attitude					
11)	Appearance					
12)	Using full potential at work					
13)	Work habits					
14)	Honesty & Integrity					
15)	Creativity					

Part B – SWOC analysis of the student (Please mention below the strengths and weaknesses of the student and the areas for improvement)

Part C – Suggestions to make the Field Project program more productive and effective.

1.

2.

3.

Part D – Changes required in the curriculum to improve employability of students.

1.

2.

3.

Name, Designation and Signature of the Supervisor / Reviewing Officer

Place of Review :



STUDENT FEEDBACK FORM

1. Name of the Student	:	
2. Class	:	
3. Division and Roll Number	:	
4. Present address	:	
5. Contact Number	:	
6. Email ID	:	

Please provide your rating about following aspects pertaining to your Field Project Experience on the scale of 10; where 10 means strongly agree and 0 means do not agree at all.

Sr. No.	Parameter	Response
1.	The pre- Field Project training provided by the college was very useful	
2.	I was properly introduced to the task assigned to me in the organization	
3.	I was given proper guidance to carry out my responsibility	
4.	My supervisor / officer was very cooperative and supportive	
5.	I found my task interesting and worth learning	
6.	My supervisor / officer addressed to my queries/ doubts quickly	
7.	I received due respect from my colleagues in the organization	
8.	The contents of the syllabus match with the practical work	
9.	The knowledge that I gained in the college was useful to carry out Field Project program in a satisfactory manner	
10.	The Field Project Program is very useful to enrich my knowledge	

Please give your suggestions to make the Field Project program more productive and effective.

1.
2.
3.

Please give your overall feedback about your experience during the Field Project (Not mentioned above).

.....

Signature & Name of the student with date

Punyashlok Holkar Solapur University, Solapur

Policy and Guidelines for Internship and On-Job-Training for Undergraduate and Post-Graduate Students as per National Education Policy-2020

Introduction:

Punyashlok Holkar Solapur University, Solapur, is dedicated to provide a comprehensive education that emphasises academic achievement and preparing students for contemporary workforce difficulties. The university policy aims for an organised internship and on-the-job-training (OJT) strategy that overcomes the knowledge gap between academia and industry in accordance with the National Education Policy (NEP) 2020. The NEP-2020 highlights the significance of experiential learning through students' active participation in practical situations that increase their academic knowledge, improving their employability and entrepreneurship skill sets.

This policy aims to provide students with significant internship experiences that familiarise them with industry methods, professional settings and practical challenges. It also aims to develop essential skills such as teamwork, leadership, problem-solving, and communication, which are crucial for success in the 21st-century job market. The university looks to incorporate practical training within the academic curriculum to provide students with essential hands-on experience for success in their respective industries.

According to the directives established by NEP-2020, University Grants Commission (UGC) and the Government of Maharashtra, experiential learning is essential for comprehensive education. The National Credit Framework (NCrF) also emphasises the significance of internships and on-the-job training (OJT) in promoting a more dynamic and adaptable educational system. This policy aims to conform to national regulations, guaranteeing that students receive academic credits for their internship experiences, thus enhancing their overall academic performance and growth.

The University's Internship and OJT policy addresses the varied requirements of students from different disciplines by offering internship opportunities. The university aims to establish strong industry-academia partnerships to engage with

prominent organisations to provide hands-on and beneficial internships to students. These collaborations expose students to contemporary industry trends, technology innovations and professional work culture. The Internship and OJT policy represents a crucial progression in cultivating a workforce-prepared group of graduates. It seeks to enhance students' adaptability, resilience and preparedness to meet the changing requirements of the industry.

Objectives of the OJT and Internship Policy

The specific objectives of the Internship and On-Job-Training policy are:

- Provide students with meaningful practical experiences to develop essential skills for employability, preparing them for the demands of the job market.
- Enable students to bridge the gap between theoretical knowledge and real-world application, enhancing their understanding of professional environments.
- Equip students with hands-on technical and managerial skills critical for success in their future careers.
- Establish strong collaborations between the university and industries to offer students diverse and relevant internship opportunities.
- Instill professional ethics, integrity and responsibility in students by exposing them to real workplace environments and industry expectations.
- Integrate internships as a fundamental part of the educational framework, ensuring students gain academic knowledge and practical skills.
- Foster a lifelong learning and adaptability mindset, encouraging students to continue developing their skills and knowledge beyond the classroom.
- Provide students opportunities to engage with emerging technologies and industry innovations, keeping them updated with the latest trends.
- Encourage students to develop problem-solving and critical thinking abilities by addressing real-world challenges.

Expected Learning Outcomes

After completing the Internship and On-Job-Training, the students will be able to develop:

- Increased employability skills by acquiring practical skills that align with industry expectations and job market demands.

- Ability to apply theoretical concepts effectively in real-world settings, bridging the gap between academic learning and workplace practices.
- Proficiency in performing industry-specific tasks, demonstrating both technical and managerial competence.
- Clear understanding and practice of workplace ethics, professionalism and responsibility in various professional settings.
- Informed decision-making regarding career choices and future job opportunities based on real industry exposure.
- Enhance ability to work with and adapt to emerging technologies, ensuring technological relevance in the workplace.
- Strengthen problem-solving and critical thinking skills through hands-on experiences in tackling professional challenges.
- Demonstrate leadership and initiative in managing projects and working effectively within teams.

Indicative Areas of Internship and On-the-Job Training (OJT) for Solapur City and District

Social Sciences and Languages

- **Education and Language Development**

Internships in urban and rural schools, language centres and NGOs across Solapur. Students will work on teaching assistance, curriculum development, and literacy initiatives that cater to diverse linguistic needs.

- *Public Policy, Social Work, and Local Governance*

Opportunities in local self-governance bodies such as gram panchayats, Solapur Municipal Corporation and talathi offices. Interns will support community outreach, policy implementation, and rural and urban development projects.

- *Media, Journalism and Communication*

Internships with local newspapers, news channels, and radio stations. Students will gain hands-on experience in reporting, content creation, and media outreach while covering local issues and events in Solapur and surrounding areas.

- *Cultural and Heritage Preservation and Tourism*

Internships with cultural organisations and tourism boards. Students will work on promoting heritage. The tourism sector offers roles in event management, cultural promotion and hospitality services.

2. *Commerce and Management*

- **Banking, Finance and Insurance**

Internships in local and cooperative banks, financial services, CA firms, share market firms and insurance firms. Students will develop customer service, financial analysis and risk management skills, particularly in nationalised and cooperative banking.

- *Retail, FMCG and Marketing*

Opportunities in local retail businesses, marketing firms and FMCG companies. Interns will assist in market research, sales strategies and consumer behaviour analysis, supporting Solapur's fast-growing retail and consumer goods industry.

- *Business Development and Entrepreneurship*

Hands-on experience with start-ups, small and medium enterprises (SMEs) and cooperatives. Students will engage in business planning, operations and financial management, contributing to the growth of entrepreneurial ventures in Solapur.

- *Supply Chain, Logistics, and Agricultural Markets (APMCs)*

Internships in Agricultural Produce Market Committees (APMCs), logistics firms, and cooperatives. Students will gain practical knowledge in inventory management, transportation and supply chain operations, focusing on agricultural commodities.

- *Taxation and Governmental Financial Services*

Internships in local tax offices and revenue departments, offering experience in taxation processes and financial audits. Students will assist in tax administration for both rural and urban populations.

3. *Science and Technology*

- **Information Technology and Electronics**

Internships with IT companies and electronics manufacturing units. Students will develop skills in software development, system management and digital solutions, contributing to the growing tech sector in Solapur.

- *Healthcare and Life Sciences*

Training opportunities are available in hospitals, clinics and pharmaceutical companies in Solapur District. Interns will gain experience in patient care, diagnostics, medical research and healthcare management.

- *Agriculture, Rural Development and Agri-Processing*

Internships with agribusinesses, rural development agencies and agro-processing units such as sugar, cotton ginning and oilseed processing. Students will contribute to sustainable farming practices, rural entrepreneurship and agricultural processing in Solapur's rural areas.

4. *Industrial and Rural Sectors*

- **Solapur's Cotton and Textile Industry**

Internships in Solapur's renowned cotton and textile mills. Students will engage in production management, quality control and textile design.

- *Sugar and Agro-Processing Industry*

Opportunities in sugar mills and agro-processing units. Interns will assist in production operations, process optimisation and supply chain management in Solapur's rural agro-industrial sector.

- *Chemical and Manufacturing Industry*

Internships in chemical plants and manufacturing units. Students will gain insights into industrial production, safety compliance and research and development in growing manufacturing sector.

- *Logistics and Transportation*

Internships with local logistics companies, focusing on transportation planning, warehousing, and operational efficiency. Students will support the logistics needs of Solapur's industries, including cotton, sugar and retail sectors.

5. *Public Administration and Local Governance*

- **Government and Semi-Government Offices**

Internships in various government offices such as the District Collector's office, water supply departments and Taluka panchayats, corporations, Nagar parishads, municipal corporations, etc. Students will assist in administrative tasks, public service delivery and infrastructure projects.

- *Water Supply and Resource Management*

Internships in local water supply offices, focusing on sustainable water distribution and infrastructure management. Students will contribute to water conservation projects and urban and rural Solapur service delivery.

- *Cooperatives and Rural Societies*

Experience in daily cooperatives, agricultural societies and self-help groups (SHGs). Interns will work on community-based financial inclusion, rural development and cooperative management.

- *Public Transport and Infrastructure*

Internships in transportation departments and local transport authorities. Students will assist in planning and managing public transportation services, contributing to Solapur's urban infrastructure development.

Important Instruction: *This is only an indicative list, not an exhaustive one. The institutions/ colleges/departments may consider any other establishment for internship/OJT at their convenience; however, it must be ensured that the establishment is officially registered as per the government rules and regulations of industry/enterprise/establishment.*

Structure/Formation of University-Level Internship Cell and Roles and Responsibilities

University-Level Internship Cell

The University Level Internship Cell will manage internships and On-the-Job Training (OJT) across the university departments, colleges and institutions. It will representatively coordinate on a larger scale with industry partners, students and academic departments to ensure internships align with the university's educational goals and industry standards; however, the departments and colleges may also establish collaborations with local establishments per their requirements.

Designation	Roles and Responsibilities
Vice Chancellor/Dean/Principal	Provides strategic leadership, ensures the internship policy aligns with university goals and oversees major decisions.

Nodal Officer/Training & Placement Officer (TPO)	Coordinates with industries, secures internships, manages operational tasks and resolves student grievances.
Assistant Coordinators	Assist in managing day-to-day operations, outreach and data management.
Faculty Coordinators (Department-Level)	Act as liaison between departments and the Internship Cell, mentor students and track progress.
Student Coordinators	Facilitate communication and outreach, assist peers and ensure the smooth flow of information between students and the cell.

Roles and Responsibilities of the University-Level Internship Cell:

- **Strategic Planning:** Develop and implement internship policies in line with NEP 2020.
- **Industry Partnerships:** Establish collaborations with industries, government bodies, and NGOs for internships.
- **Coordination with Colleges:** Ensure uniform implementation of the internship policy across departments and institutions.
- **Policy and Procedure Monitoring:** Manage internship guidelines, timelines and credit allocation.
- **Central Data Management:** Maintain a centralised database of internship providers, student records, and performance evaluations.
- **Issue Resolution:** Manage student grievances and internship-related issues.

College/Institutional Level Internship Cell

The College Level Internship Cell will be responsible for managing internships/OJTs within the institution, working closely with the University Level Internship Cell. It engages with local industries and prepares students for their internships.

Designation	Roles and Responsibilities
Principal/Director	Provide leadership at the college level, ensuring effective implementation of the internship policy.
Training & Placement Officer (TPO)	Secure student internships, bridges with the University Internship Cell and oversees institutional internship processes.
Faculty Coordinators (Department-Level)	Guide and mentor students, coordinate with the TPO and ensure academic relevance of internships.
Student Coordinators	Assist in organising training sessions, facilitate communication between the Internship Cell and peers.

Roles and Responsibilities of the College/Institutional Level Internship Cell:

1. **Internship Identification:** Identify relevant internship opportunities based on academic and industry needs.
2. **Student Preparation:** Organise workshops on resume writing, interview skills, and workplace etiquette.
3. **Monitoring and Guidance:** Assign faculty mentors to guide students throughout the internship period.
4. **Evaluation and Reporting:** Ensure submission of internship reports and conduct evaluations in accordance with University guidelines.
5. **Industry Engagement:** Engage with local industries and government bodies for internship placements.

Roles and Responsibilities of the Faculty Mentor

The faculty mentor to whom students will be assigned for mentorship will carry out the following tasks.

1. Guidance and Supervision

Provide consistent mentorship to students throughout their internship, ensuring they align their tasks with academic and professional objectives.

2. Internship Planning

Assist students in identifying suitable internships based on their academic background, interests and career goals and ensure the internship's relevance to the curriculum in coordination with Institutional Internship/OJT cell.

3. Monitoring Progress

Regularly check in with students during the internship to monitor their performance and progress. Maintain contact with the industry supervisor to track the student's development.

4. Academic Integration

Ensure that the tasks and projects undertaken during the internship align with the academic learning outcomes and contribute to the student's educational development.

5. Problem Resolution

Act as a first point of contact for students regarding any challenges faced during the internship, whether academic, professional or personal and assist in resolving them.

6. Evaluation and Feedback

Provide constructive feedback on the student's performance, skills and learning during the internship. Review and evaluate their internship reports, diaries and presentations.

7. Liaison with Industry Supervisors

Maintain communication with the industry supervisor to ensure that the intern performs as expected and that any issues are promptly addressed.

8. Assessing Internship Reports

Review the student's final internship report or project to ensure it meets the institution's academic standards, providing guidance on improvements if necessary.

9. Professional Development

Encourage the development of professional skills such as communication, teamwork and problem-solving, ensuring students grow both academically and professionally.

10. Documentation and Reporting

Ensure the student's internship experiences and learning outcomes are documented and submitted to the relevant department or internship cell for formal Evaluation.

11. *Final Evaluation and Grading*

Participate in the final evaluation process, including viva voce or presentations and contribute to the grading based on the student's overall performance during the internship.

12. *Mentorship Beyond Internship*

Offer continued guidance for students even after the internship, helping them reflect on their experiences and how they shape their future career path or academic pursuits.

Roles and Responsibilities of Industry/Internship/Training Provider Establishments

Industry/Internship Provider	Roles and Responsibilities
Assign Supervisor	Provide a dedicated supervisor to guide and supervise interns.
Task Allocation	Assign meaningful tasks and projects that align with the intern's academic background and the organisation's needs.
Mentorship and Guidance	Offer mentorship, ensuring interns receive regular feedback and support in their tasks and professional growth.
Monitoring and Feedback	Monitor the intern's performance, ensuring productivity and adherence to professional standards and provide feedback to the institution.
Evaluation	Evaluate the intern's overall performance and submit reports to the institution, including assessment of skills gained and areas of improvement.
Compliance with Institutional Guidelines	Ensure the internship aligns with the university's academic guidelines and timelines.

Table of Credit Allocation for Internship/OJT for UG and PG Programs across different faculties

Faculty	Level (UG/PG)	Name of the Programme	Year/Level in Credit Structure	Credits Assigned by University
Faculty of Humanities	UG			
	PG			
Faculty of Commerce and Management	UG			
	PG			
Faculty of Science and Technology	UG			
	PG			
Faculty of Interdisciplinary Studies	UG			
	PG			
Faculty of Commerce Information Technology	UG			

Explanation:

- **UG Programmes:** Allocate **XXXX credits for internships/OJTs**, with students participating after the **XXXXX** semester, depending on the programme. The batch size for UG programmes may range between **60 to 120** students, depending on the faculty.
- **PG Programmes:** Allocate **XXXX credits** for internships or On-the-Job Training (OJT). The batch size for PG programmes ranges from 30 to 60 students, as PG courses tend to have more focused and smaller groups of students.
- The credits assigned represent the work required for the internship, with **1 credit equating to 30 hours of practical work**. This ensures that the academic workload is consistent across faculties.

Process of Implementation for Internship/OJT Policy

The following is a detailed and structured process for implementing the Internship/On-the-Job Training (OJT) policy for effective execution at both the university and college/institutional levels. Each step is accompanied by the necessary documentation, period and corresponding annexure numbers.

1. Formation of University and College Level Internship Cells

- **Action:** Establish the University and Institutional Level Internship Cells.
- **Period:** Within the first month of the academic year.
- *Documentation:*
 - University and College Internship Cell Structure (Annexure 1).
 - Roles and Responsibilities of Members (Annexure 2).

2. Internship Policy and Guidelines Finalisation

- **Action:** The university finalises internship guidelines in line with NEP 2020, UGC regulations and university goals.
- **Period:** Within the first two months of the academic year.
- *Documentation:*
 - Final Internship Guidelines Document (Annexure 3).

3. Outreach to Industry and Internship Providers

- **Action:** The Training & Placement Officer (TPO) at both university and institutional levels reaches out to potential industry partners, government offices and NGOs to establish internships.
- **Period:** Ongoing; however, most outreach should be completed within the first two months of the academic year.
- *Documentation:*
 - **Memorandum of Understanding (MoU)** between the university and industry partners to formalise internship opportunities (Annexure 4).
 - List of Partnering Organisations and Contact Details (Annexure 5).

4. Student Registration and Internship Application

- **Action:** Students register for internships through the college/institutional Internship Cell.

- **Period:** Registration opens after the outreach phase and should remain open for at least one month.
- *Documentation:*
 - **Student Internship Registration Form** (Annexure 6).
 - **Resume Format Template** for student submissions (Annexure 7).

5. Allocation of Internship Opportunities

- **Action:** The College/Institutional Internship Cell matches students with internship providers based on their academic programme, career interests and industry needs.
- **Period:** One month after the admission closes.
- *Documentation:*
 - **Student Allocation List** (Annexure 8).
 - **Internship Confirmation Letter** from the organisation (Annexure 9).

6. Pre-Internship Orientation and Student Preparation

- **Action:** Conduct workshops on workplace etiquette, resume writing, interview skills and professional communication for students.
- **Period:** Within two weeks of allocation.
- *Documentation:*
 - **Pre-Internship Orientation Schedule** and Content Outline (Annexure 10).
 - **Attendance Sheet** for orientation (Annexure 11).

7. Signing of Internship Contracts

- **Action:** Form the internships with contracts signed between the student, institution and the internship provider.
- **Period:** One week before the internship begins.
- *Documentation:*
 - **Internship Agreement/Contract** between student, institution, and industry (Annexure 12).

8. Commencement of Internship

- **Action:** Students begin internships/OJTs with industry supervisors supervising their tasks and projects.
- **Period:** Typically, internships is conducted between **4 to 8 weeks** for UG programmes and **4 to 6 weeks** for PG programmes.
- *Documentation:*
 - **Daily Internship Diary Format** for students to record activities (Annexure 13).
 - **Supervisor Evaluation Sheet** to track daily/weekly progress (Annexure 14).

9. Monitoring and Mid-Internship Review

- **Action:** Faculty Mentors from the institution conduct periodic check-ins with the students and the internship providers to ensure progress.
- **Period:** Mid-point of the internship duration.
- *Documentation:*
 - **Mid-Internship Review Form** completed by the Faculty Mentor (Annexure 15).
 - **Progress Report from Industry Supervisor** (Annexure 16).

10. Submission of Internship Reports

- **Action:** Students submit their final internship reports detailing their tasks, learning outcomes and experiences.
- **Period:** Within one week of completing the internship.
- *Documentation:*
 - **Internship Report Format** (Annexure 17).
 - **Student Self-Evaluation Form** reflecting on skills gained (Annexure 18).

11. Final Evaluation and Viva Voce

- **Action:** Conduct a viva voce or seminar presentation where students present their internship experience to an evaluation committee as per the defined evaluation structure and pointers with assigned weightage.
- **Period:** Within two weeks of internship completion.
- *Documentation:*

- **Evaluation Rubrics for Internship Presentation/Viva Voce** (Annexure 19).
 - **Grading Sheet for Final Evaluation** by the Faculty Mentor and Committee (Annexure 20).
-

12. *Submission of Internship Completion Certificates*

- **Action:** Internship providers issue completion certificates to students and provide final feedback.
- **Period:** Immediately after the Evaluation is finalised.
- *Documentation:*
 - **Internship Completion Certificate Template** (Annexure 21).
 - **Final Industry Supervisor Feedback Form** (Annexure 22).

13. *Credit Allocation and Reporting*

- **Action:** The University allocates academic credits based on the internship evaluation and the results are recorded.
- **Period:** Within one week after the final Evaluation.
- *Documentation:*
 - **Credit Allocation Sheet** for Internship Performance (Annexure 23).
 - **Internship Result Report** submitted to the university's Examination Section (Annexure 24).

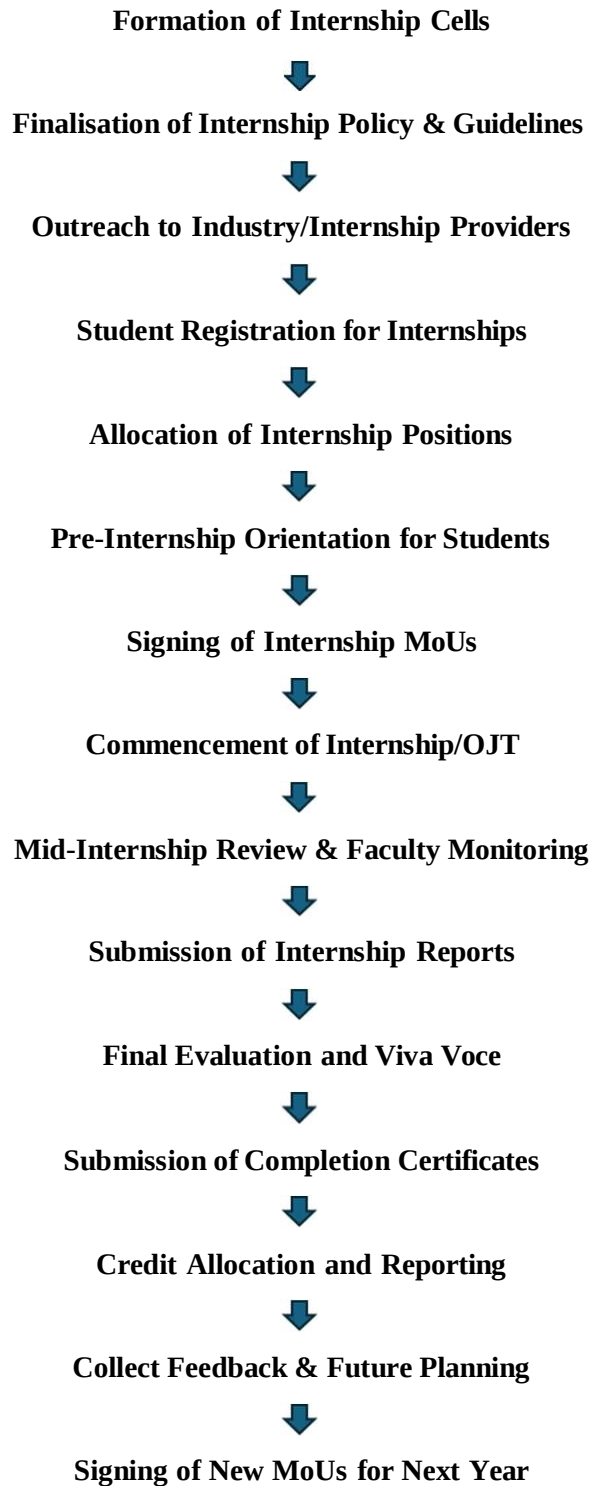
14. *Feedback and Future Improvement*

- **Action:** Collect feedback from students, faculty and industry providers to assess the internship/OJT effectiveness and identify areas for improvement.
- **Period:** Ongoing but collected after each internship/OJT cycle.
- *Documentation:*
 - **Internship Feedback Form** for Students and Industry (Annexure 25).
 - *Summary of Feedback and Recommendations for Next Cycle* (Annexure 26).

15. *Signing New Memoranda of Understanding (MoUs)*

- **Action:** The University/Institution establishes new MoUs with additional industry partners for the next academic year.

- **Period:** Ongoing; however, before the start of the next academic year.
- *Documentation:*
 - **Memorandum of Understanding (MoU) Format** (Annexure 27).



Detailed Process of Implementation for Internship/OJT Policy

The following details outline a step-by-step process for effectively implementing the Internship/On-the-Job Training (OJT) policy, integrating the roles and responsibilities of various stakeholders. This implementation is designed to clarify and ensure all activities are carried out smoothly, from the formation of internship cells to the final credit allocation and feedback collection.

1. Formation of Internship Cells and Assignment of Roles

The first step is the formation of University Level Internship Cell and College/Institutional Level Internship Cells. This is crucial as both levels will coordinate, supervise and ensure the effective execution of internships.

- The university Level Internship Cell will be headed by the Vice Chancellor/Dean, with the Nodal Officer (Training & Placement Officer - TPO) managing operations, assisted by Faculty and Student Coordinators.
- The college-level internship cell will have the principal as its head, supported by the college-level TPO, faculty coordinators and student representatives.

The **Nodal Officer at the university level** is responsible for supervising the formation and operation of the internship cells at the institutional level. The cells are to be established within the **first month** of the academic year. The structure and assigned roles of the members will be recorded and maintained.

2. Finalisation of Internship Policy

Once the internship cells are operational, the **University Level Internship Cell** will finalise the **Internship Policy and Guidelines** in accordance with NEP 2020, UGC regulations and industry standards. This policy will outline the academic credit structure, assessment criteria and the overall timeline for the internship process.

- The **Nodal Officer (TPO)** will ensure that the policy is communicated to all affiliated colleges and institutions, providing clarity on academic credits, evaluation methods and required documentation.

3. Industry Outreach and Partnership Establishment

The **TPO** at both the university and college levels will initiate outreach to industries, government bodies, NGOs and registered start-ups to establish internship opportunities. This is achieved by signing **Memoranda of Understanding (MoUs)**

with these organisations. The collaborations should be formalised to ensure a clear understanding of expectations between the institution and the internship providers.

The **TPO** will manage this process, ensuring each department can access relevant industry partnerships. The outreach is expected to be completed within the first two months of the academic year.

4. Student Registration for Internships

Once collaborations with internship providers are established, the **College/Institutional Level Internship Cells** will open student registration. Students will be required to submit their academic profile, resumes and indicate areas of interest.

- **Faculty Coordinators** will assist students in identifying relevant internship opportunities and preparing their resumes.
- The **TPO** ensures that all eligible students complete their registration on time.

After registration closes, the College Internship Cell will submit the student registration details to the University Internship Cell for tracking purposes.

5. Allocation of Internships

Based on the registrations received, the **College/Institutional Internship Cells** will allocate internships to students by matching their academic profile and preferences with available internship opportunities.

- The **TPO** and the Faculty Coordinators will ensure that students are allocated appropriate internships, prioritising alignment with academic objectives.
- The confirmed list of allocations will be communicated to the University Level Internship Cell.

Each student will receive a formal **Internship Confirmation Letter** from the allocated provider.

6. Pre-Internship Orientation

The College Level Internship Cell will will organise a pre-internship orientation session for all students who have been assigned internships. The orientation will cover essential skills like professional communication, workplace etiquette, resume writing, and interview techniques.

- Industry representatives may be invited to conduct parts of the training.

- The **TPO** will ensure that all students attend the orientation and that attendance is recorded.

7. Signing of Internship MoUs

Before the commencement of the internship, formal **Internship Agreements** will be signed between the student, the institution and the internship provider. This agreement clearly outlines the roles and responsibilities of each party.

- The **TPO** will ensure that these agreements are completed and stored in the student's internship file.
- A copy of each agreement will be submitted to the University Internship Cell for record-keeping.

8. Commencement of Internship

Students begin their internships under the guidance of their **Industry Supervisor**. Throughout the internship, students are required to maintain a **Daily Internship Diary**, recording their tasks, learning outcomes and skills gained.

- The **Faculty Coordinator** will monitor students during the internship and conduct regular check-ins.
- The **Industry Supervisor** will periodically evaluate the student's performance, ensuring their tasks align with the agreed-upon objectives.

9. Mid-Internship Review

At the midpoint of the internship, the **Faculty Mentor** will conduct a **Mid-Internship Review** with the student and the Industry Supervisor to evaluate the student's progress. This will ensure that any issues are addressed promptly and that the internship continues to meet both academic and professional objectives.

- The **TPO** will also review student progress and assist in resolving any issues that may arise.
- A progress report will be submitted to the University Internship Cell after the review.

10. Submission of Internship Reports

After completing the internship, students are required to submit their **Internship Reports** within one week. This report must detail the tasks they completed, the skills they developed and the overall learning experience.

- **Faculty Mentors** will review the reports and provide feedback.
- The reports are then submitted to the **TPO** and forwarded to the University Level Internship Cell for academic record-keeping.

11. Final Evaluation and Viva Voce

Students will present their internship experiences through a **Viva Voce or Seminar Presentation**. An evaluation committee, consisting of the **Faculty Mentor**, **TPO**, and other faculty members, will assess the students' performance based on their report and presentation.

- Grades will be assigned based on the evaluation rubric, which considers both the student's report and the viva voce.
- The final grades and evaluation sheets are submitted to the University Level Internship Cell.

12. Issuance of Completion Certificates

Upon successful completion of the internship, the **Industry Supervisor** will issue a **Completion Certificate** and provide final feedback on the student's performance. The certificate is submitted to the College Level Internship Cell and then forwarded to the University Level Internship Cell.

- The **TPO** ensures that the certificates are recorded in the student's academic file.

13. Credit Allocation and Reporting

After the final Evaluation, the **University Internship Cell** will allocate academic credits based on the student's performance during the internship. The **TPO** will submit the final grades to the Examination Section for inclusion in the student's academic records.

14. Feedback Collection and Process Improvement

Once the internship cycle is complete, the **University and College Internship Cells** will collect feedback from students, faculty and industry supervisors. This feedback will be used to improve the internship process for future batches.

- The **TPO** compiles the feedback and submits a report to the University Level Internship Cell.
- Recommendations for improving the process are made based on the feedback collected.

15. *Renewal and Signing of New MoUs*

At the end of each academic year, the **TPO** will work on renewing MoUs with existing industry partners and establishing new partnerships for the upcoming academic year. The **University Internship Cell** will monitor and support this process, ensuring the institution has access to various internship opportunities.

Components for Evaluation of Internships/OJT

Evaluation of internships or On-the-Job Training (OJT) is a critical process that assesses the performance and learning outcomes of the students. The evaluation process is divided into **Internal** and **External** components to ensure a comprehensive review of the student's practical work experience. Each component plays a significant role in determining the final credit allocation and student success.

1. *Internal Evaluation*

Internal Evaluation is carried out by the **Faculty Mentor** and the College Level Internship Cell. The purpose is to assess the student's performance from an academic perspective, ensuring that the internship aligns with the learning objectives of the academic programme.

Key Components of Internal Evaluation:

- **Regularity and Punctuality:** Attendance, timely submission of reports and adherence to deadlines.
- **Mid-Internship Review:** The Faculty Mentor conducts periodic student progress reviews. This includes checking for task completion, problem-solving skills, and the relevance of tasks to the student's academic goals.
- **Internship Report:** The student submits a comprehensive report detailing the tasks they performed, skills they developed and lessons learned during the internship. The report is evaluated for clarity, depth and connection to the student's academic curriculum.

- **Viva Voce or Presentation:** Students present their internship experience before a panel, including the Faculty Mentor and other department members. This presentation evaluates the student's understanding of the practical work done and how they can relate it to theoretical knowledge.
- **Faculty Mentor's Evaluation:** The Faculty Mentor evaluates the student's overall progress, work ethic, initiative and problem-solving ability.

2. *External Evaluation*

External Evaluation is carried out by the **Industry Supervisor** or the organisation hosting the student during the internship. This Evaluation is crucial as it assesses the student's ability to work professionally and apply academic knowledge in real-world tasks.

Key Components of External Evaluation:

- **Task Performance:** The industry supervisor evaluates the quality and efficiency with which the student performed assigned tasks.
- **Technical Skills:** Assessment of the student's technical skills related to the internship, including their ability to apply learned theories practically.
- **Professional Behaviour:** The supervisor assesses the student's punctuality, communication skills, teamwork and adherence to the organisation's protocols.
- **Problem-Solving and Initiative:** Evaluation of the student's capacity to take initiative and solve problems independently within the scope of their tasks.
- **Final Supervisor Feedback:** The supervisor provides feedback on the overall performance of the student, highlighting strengths, weaknesses and areas for improvement.

Suggestive Grid for Assessment and Evaluation

A **suggestive grid** provides a systematic way to assign weightage to various components of both internal and external evaluations. The following grid outlines the distribution of marks/grades for an internship/OJT evaluation process:

Component	Weightage (Marks)	Evaluated By
Internal Evaluation		
Regularity and Punctuality	10	Faculty Mentor
Mid-Internship Review	15	Faculty Mentor
Internship Report	20	Faculty Mentor
Total Internal Evaluation	XXX Marks	
External Evaluation		
Task Performance	20	External Examiner
Technical Skills	10	External Examiner
Professional Behaviour	10	External Examiner
Problem-Solving and Initiative	10	External Examiner
Total External Evaluation	50 Marks	
Grand Total	100 Marks	

1. Appendix

1.1. Appendix I: Internship Undertaking

1. Student Name:			
2. Current Address			
3. Residence Address			
4. Email id			
5. Mobile Nos.			
6. Aadhar			
7. PAN			
8. Overall GPA			
9. Mode of Internship			
10. Internship Preferences			
	Location	Core Area	Organization / Institute
Preference-1			
Preference-2			
Preference-3			
I confirm that I agree with the terms, conditions, and requirements of the Internship Policy Student Signature: Date_____			
I confirm that the student has attended the internship orientation and has met all paperwork and process requirements to participate in the internship program, and has received approval from his/her mentor. Sign of Department Faculty Coordinator Date			

1.2. Appendix II: Draft Resume Template

Name

Contact Number and Email ID:

Education

HEI Name Year

Degree / Specialization:

CGPA:

HEI Name: <bachelor's degree> Year

Degree / Specialization:

CGPA:

Internship / Work Experience

Organization Year

Project:

Brief:

Academic Experience

Semester Year

Project:

Brief:

- Emphasize accomplishments that are relevant to the field
- Be specific—omit unnecessary words and sentences
- Start your sentence with an action verb, not a passive one Use past-tense verbs to show what you have accomplished Quantify results as much as possible
- Use key words that will catch a recruiter's eye

Other Achievements and Personal Interests

- List other achievements also in reverse chronological order
- Leadership positions held outside of your formal work environment
- Personal interests and accomplishments that will distinguish you from other applicants
- Volunteer service/Social Work

1.3. Appendix III: Organization Outreach Letter

<HEI Letter Head>

To,

The (Manager, HR)

.....

Subject: Request for _____ weeks internship of Students pursuing < >

Dear Sir,

The HEI established in <year>, <HEI>, Maharashtra reflects the vision of leading industrialists and educationalists. Institute is accredited with '< >' grade by NAAC in March 2015. The HEI has been recognized about its over all academic excellence and infrastructure.

In view of the above, I request your good self to allow our following (no. of students) students for practical raining in your esteemed organization. Kindly accord your permission and give at least one-week time for students to join training after confirmation.

S.No.	Name	Roll no.	Year	Department

The resumes of these students are attached with this letter. If vacancies exist, kindly do plan for Interviews for the students in above branches.

A line of confirmation will be highly appreciated.

Yours sincerely,

Nodal Officer/TPO

<HEI Name and Date>

1.4. Appendix IV: Relieving Letter of Student

<HEI Letter Head>

To,
The General Manager (HR)
.....

Subject: Relieving letter of student

Dear Sir,

Kindly refer your letter/e-mail dated.....on the above cited subject. As permitted by your good self the following students will undergo Industrial Internship in your esteemed organization under your sole guidance and direction

S.No.	Name	Roll no.	Year	Department

This training being an essential part of the curriculum, the following guidelines have been prescribed in the curriculum for the training. You are therefore, requested to please issue following guidelines to the concerned student mentor.

- Internship schedule may be prepared and a copy of the same may be sent to us.
- Each student is required to prepare Internship diary and report.
- Kindly check the Internship diary of the student daily.
- Issue instruction regarding working hours during training and maintenance of the attendance record

You are requested to evaluate the student's performance on the basis of grading i.e. Excellent, Very Good, Satisfactory and Non-Satisfactory on the below mentioned factors:

- Attendance and general behavior
- Relation with workers and supervisors
- Initiative and efforts in learning
- Knowledge and skills improvement
- Contribution to the organization

The performance report may please be forwarded to the undersigned on completion of training in sealed envelope.

Your efforts in this regard will positively enhance knowledge and practical skills of the students, your cooperation will be highly appreciated, and we shall feel obliged.

The students will abide by the rules and regulation of the organization and will maintain a proper discipline with keen interest during their internship. The students will report to you on dated along with a copy of this letter.

Yours sincerely,

Nodal Officer/TPO

<HEI Name and Date>

1.5. Appendix V: Student Diary (Log) Recording Format

Week	Task Assigned	Activities Performed	Key Learnings	Additional Remarks

Signature of Industry Supervisor

1.6. Appendix VI: Attendance Sheet

<Organization Letter Head>

Name & Address of Organization

Name of the Student	
Roll Number	
Name of Course	
Date of Commencement of Training	
Date of Completion of Training	

Month and Year:

Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						

- Attendance Sheet should remain affixed in Daily Training Diary. Do not remove or tear it off.
- Holidays should be marked in Red Ink in attendance column. Absent should be marked as 'A' in Red Ink.

Name and Signature with date of Internship Supervisor_____

1.7. Appendix VII: Supervisor Evaluation of Intern

<Organization Letter Head>

Student Name: _____ Date: _____

Work Supervisor: _____ Title: _____

Organization: _____

Internship Address: _____

Dates of Internship: From _____ To _____

Please evaluate intern by indicating the frequency with which you observed the following behaviors:

Parameters	Needs Improvement	Satisfactory	Good	Excellent
Behaviors				
Performs in a dependable manner				
Cooperates with co-workers and supervisors				
Shows interest in work				
Learns quickly				
Shows initiative				
Produces high quality work				
Accepts responsibility				
Accepts criticism				
Demonstrates organizational skills				
Uses technical knowledge and expertise				
Shows good judgment				
Demonstrates creativity/originality				
Analyzes problems effectively				

Is self-reliant				
Communicates well				
Writes effectively				
Has a professional attitude				
Gives a professional appearance				
Is punctual				
Uses time effectively				

Overall performance of student intern (circle one):

(Needs improvement / Satisfactory / Good / Excellent)

Additional comments, if any:

Signature of Industry supervisor_____

HR Manager _____

1.8. Appendix VIII: Student Feedback of Internship

(To be filled by Students after Internship completion)

Student Name: _____ Date: _____

Industrial Supervisor: _____ Title: _____

Supervisor Email: _____ Internship is: _____ Paid _____ Unpaid _____

Organization: _____

Internship Address: _____

Faculty Coordinator: _____ Department: _____

Dates of Internship: From _____ To _____

Give a brief description of your internship work (title and tasks for which you were responsible):

Was your internship experience related to your major area of study?

- Yes, to a large degree
- Yes, to a slight degree
- No, not related at all

Indicate the degree to which you agree or disagree with the following statements.

This experience has:	Strongly Agree	Agree	No opinion	Disagree	Strongly Disagree
Given me the opportunity to explore a career field					
Allowed me to apply classroom theory to practice					
Helped me develop my decision-making and problem-solving skills					
Expanded my knowledge about the work world prior to permanent employment					
Helped me develop my written and oral communication skills					
Provided a chance to use leadership skills (influence others, develop ideas with others, stimulate decision-making and action)					

Expanded my sensitivity to the ethical implications of the work involved					
Made it possible for me to be more confident in new situations					
Given me a chance to improve my interpersonal skills					
Helped me learn to handle responsibility and use my time wisely					
Helped me discover new aspects of myself that I didn't know existed before					
Helped me develop new interests and abilities					
Helped me clarify my career goals					
Provided me with contacts which may lead to future employment					
Allowed me to acquire information and/ or use equipment not available at my Institute					

- In the Institute internship program, faculty members are expected to be mentors for students. Do you feel that your faculty coordinator served such a function? Why or why not?
- How well were you able to accomplish the initial goals, tasks and new skills that were set down in your learning contract? In what ways were you able to take a new direction or expand beyond your contract? Why were some goals not accomplished adequately?

- In what areas did you most develop and improve?
- What has been the most significant accomplishment or satisfying moment of your internship?
- What did you dislike about the internship?
- Considering your overall experience, how would you rate this internship? (Circle one).
-Satisfactory/ Good/ Excellent
- Give suggestions as to how your internship experience could have been improved. (Could you have handled added responsibility? Would you have liked more discussions with your professor concerning your internship? Was closer supervision needed? Was more of an orientation required?)

<Signature of Student>

<Name, Roll number, Date>

1.9. Appendix IX: Performa for Evaluation of Internship by Institute

<HEI Letter Head>

1. Name of Student _____
2. Mob. No. _____
3. Roll No. _____
4. Branch/Semester _____
5. Period of Training _____
6. Home Address with contact No. _____
7. Address of Training Site: _____
8. Address of Training Providing Agency: _____
9. Name/Designation of Training In- charge _____
10. Type of Work _____
11. Date of Evaluation _____
12. Please rate the following:

S.no.	Particular	Grade
1	Quality and effectiveness of presentation	
2	Depth of knowledge and demonstrated skills	
3	Variety and relevance of learning experience	
4	Practical applications and relationships with concepts taught	
5	Internship Report	
6	Attendance record, student log, supervisor evaluation	

Overall grade: _____

Additional Remarks:

Signature of Faculty Mentor

1.10. Appendix X: Student Resources: Internship Programs and Platforms

Government Internship Programs

- AICTE Internship: <https://internship.aicte-india.org/>
- NITI Ayog Internship: <https://www.niti.gov.in/internship>
- TULP Internship Program:
https://smartcities.gov.in/The_Urban_Learning_Internship_Program
- Digital India Internship:
<https://www.meity.gov.in/writereaddata/files/Digital%20Internship%20Scheme%202023%20%281%29.pdf>
- Directorate General of Foreign Trade Internship program:
<https://www.dgft.gov.in/CP/?opt=internship-scheme>
- National Commission for Scheduled Tribes Internship:
<https://ncst.nic.in/sites/default/files/2021/Internship/3677>
- Corporate Affairs Ministry Internship program:
<https://www.mca.gov.in/bin/dms/getdocument?mds=aC%252B%252F82boz%252FD%252FdHcFkAAJ0A%253D%253D&type=open>
- Finance Ministry Internship program: <https://dpe.gov.in/schemes/scheme-internship>
- Women and Child Development Ministry Internship program:
https://wcd.nic.in/sites/default/files/Internship%20Guideline.._0.pdf
- Ministry of Culture Internship programs: <https://nationalmuseumindia.gov.in/en/national-museum-internship-programme>

Online Platforms for Internships:

- Internshala: <https://internshala.com/>
- LetsIntern: <https://letsintern.in/>
- Twenty19: <http://twenty19.com.testednet.com/>
- HelloIntern: <https://hellointern.co/>
- Freshersworld: <https://www.freshersworld.com/>
- Youth4work: <https://www.youth4work.com/>
- Freshersnow: <https://www.freshersnow.com/internships-in-delhi/>
- Zuno by Foundit: <https://www.foundit.in/zuno/>
- LinkedIn: <https://www.linkedin.com/jobs/internship-jobs/?currentJobId=3647611763&originalSubdomain=in>
- Well Found (earlier, AngelList Talent): <https://wellfound.com/location/india>
- Indeed: <https://in.indeed.com/jobs?q=internships&l=&vjk=fd2d4f96a2564717>
- Naukri.com: <https://www.naukri.com/internship-jobs>
- TimesJobs: <https://www.timesjobs.com/jobs-by-roles/intern-jobs>
- NGO Box: https://ngobox.org/job_listing.php
- CSR Box: <https://csrbox.org/>

2. Annexure- Frequently Asked Questions for Students

i. **What is an internship?**

An internship is a structured, short-term work experience usually offered by organizations and academic / research institutions to students to gain practical exposure in a professional setting. Key benefits of an internship include:

- Practical application of classroom learning in real-world scenarios.
- Professional-skill development including communication, teamwork, etc.
- Exposure to industry-specific processes and environments.
- Opportunities for networking and potential future job prospects

ii. **How many hours do I need to complete to get the credits for my internship?**

The number of hours required varies based on the credit allocation for different programs. It is generally equivalent to 30 hours of work per credit. Technical programs typically require 12 credits, while other undergraduate programs require 12-14 credits. On the other hand, postgraduate programs require 10-12 credits.

iii. **When can I apply for Internship?**

The application timelines and duration are specified at the beginning of each academic year. Students can apply as per the specified timelines. The Internship Cell shall facilitate the application process and provide support with preparation.

iv. **What are the domains I can do my internship in?**

Internship domains are diverse, encompassing both core and non-core areas. Core domains are related directly to the student's field of study. On the other hand, non-core domains offer opportunities for cross-disciplinary learning and skill development. The internships can be of the following nature (but not limited to):

- Internships with Industrial organizations, both Industrial and Government
- NGO, MSME, Rural Internship
- Innovation and Entrepreneurship activities
- Inter/ Intra Institutional Activities
- Academic / industry research project
- Project work, Seminar (excluding credits for Advanced Courses)

v. How can I apply for Internship?

Students can apply through multiple channels. They can leverage existing internship platforms and programs, as given in Appendix of this Policy. Apart from these portals, students are encouraged to network through alumni, faculty mentors, and industry experts to find the organizations that suit their interests. They are also encouraged to engage in networking events, career fairs, and workshops organized by the HEI.

vi. What is the monetary compensation for my internship?

Compensation structures vary across internships and organizations. Some internships offer monetary compensation, while others may be partially compensated or unpaid. The focus remains on the quality and relevance of the internship experience.

vii. What should I write in my resume? Is cover letter Cover letter also necessary?

Resumes should highlight academic achievements, skills, previous experiences, and extracurricular activities relevant to the internship. A cover letter is recommended, showcasing the student's interest, qualifications, and suitability for the internship role. Students are required to follow a standard format for their Resume, as given in the Appendix of the Internship Policy.

viii. Can my internship lead to full time employment?

Internships often act as a gateway to potential future job opportunities within the hosting organization. However, full-time employment depends on various factors, including performance during the internship and organizational requirements. Students are required to report to the Internship Cell of any PPO made by the respected organization.

ix. How will my internship performance be assessed? Will the assessment affect my credits?

Internship shall be evaluated on the basis of quality and effectiveness of presentation, depth of knowledge and demonstrated skills, variety and relevance of learning experience, practical applications and relationships with concepts taught in the course, and Internship Report. Attendance record, student log, supervisor evaluation shall also be analyzed towards evaluation of the Internship. The credits will be allocated on the basis of overall grade (above Pass) received by the students during the assessment.

x. Can I work from home for the internship?

Depending on the nature of the internship and the organization's policies, remote work options might be available. However, compliance with the organization's requirements and maintaining communication with HEI is crucial.

xi. What if I find an internship, unaided by the University, i.e, through my own efforts? Students are free to find their own internship opportunities. They must inform the Nodal Officer/TPO and ensure compliance with internship guidelines.

xii. Whom can I contact for any clarifications / questions on internships and related processes?

For any queries or clarifications regarding internships and related processes, students can reach out to the designated Nodal Officer/TPO or the Faculty Coordinators at the Departmental level. If any student has any grievance with respect to termination and/or any penal action ordered by concerned HOD, then such a student can submit his appeal in writing to the Nodal Officer/TPO, who shall be the final arbiter on such matters.