

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's  
**New Arts, Commerce, and Science College**  
**Ahmednagar (Autonomous)**  
(Affiliated to Savitribai Phule Pune University, Pune)



**National Education Policy (NEP)**  
**Choice Based Credit System (CBCS)**

**Programme Framework and Syllabus for**  
**Open Elective: Computational Science(Computer**  
**Science,B.C.A. Science, Data Science, Cloud**  
**Computing)**

(For Students of Arts, Commerce and Science Faculty)

**Implemented from**  
**Academic Year 2024-25**

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's  
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**Introduction of Open Electives (Computational Science): For Arts and Commerce Faculty**

The syllabus has been designed such that the knowledge of fundamental concepts, advanced technologies and specific skills will be developed among students. To understand basic and advanced Tally technologies students should first understand the basic concepts of Tally. In the first Semester of the Bachelor degree the basic concepts of Tally with the required theoretical understanding have been covered. During the second Semester students will learn about Advanced Tally learning aspects and in addition to that the fundamentals of Office automation and E-commerce which has large application areas will covered in subsequent year.

Konwledge of ICT Tools has revolutionized various fields including communication, consumer appliances, medical, defense ,marketing, data analysis and so on. The advances in computer technology make systems smaller, smarter and powerful. BPO / KPO technology based approach has been used mostly in the syllabus that trains students to apply the acquired knowledge to the enterprises application.

**Open Elective/ Generic Elective Framework and Course Distribution:**

**Subject: Computational Science (For Arts and Commerce Faculty )**

Sr. No.	Year	Semester	Level	Course Type	Course Code	Title	Credits
1.	I	I	4.5	OE-01	OE-CS 01T/P	BasicTally	02
2.	I	II	5.0	OE-01	OE-CS 02T/P	Advanced Tally	02
3.	II	III	5.5	OE-03	OE-CS 03T/P	Office Automation	02
4.	II	IV	6.0	OE-04	OE-CS 04T/P	E-Commerce	02
<b>Total</b>							<b>08</b>

## Syllabus of Open Elective: Computational Science

Title of the Course: Basic Tally								
Year: I				Semester: I				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
OE-01	OE-CS 01	02	00	02	30	15	35	50

### Learning Objectives:

- Preparation of Financial Statements.
- Recording of day to day accounting transactions.
- Clarity on accounting fundamentals.
- Banking and vendor/customer ledger reconciliation.

### Course Outcomes (Cos)

1. After successfully completion of this course, students will be work with well-known accounting software i.e. Tally.
2. Student by their own will create company, enter accounting voucher entries including advance voucher entries, reconcile bank statements, do accrual adjustments, and also print financial statements, etc. in Tally software.
3. Students will possess required skill and can also be employed as Tally data entry operator.

### Detailed Syllabus:

### Allotted Lectures

Unit I: Introduction to TallyPrime.	( 03)
Unit II: Maintaining chart of Account.	(06)
Unit III: Recording and maintaining accounting transactions.	(07)
Unit IV: Banking	(08)
Unit V: Generating financial statements and MIS reports.	(06)
Unit VI: Data Security	(07)
Unit VII: Company Data Management	(08)

### Suggested Readings/Material:

1. Tally Essential - Level 1, Tally Education Pvt. Ltd.
2. Tally ERP 9 Made Simple Basic Financial Accounting Book by Ashok K Nadhani
3. Tally Erp 9 Power Of Simplicity Book by Shraddha Singh Navneet Mehra

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**Syllabus of Open Elective: Computational Science**

<b>Title of the Course: Advanced Tally</b>								
<b>Year: I</b>				<b>Semester: II</b>				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
<b>OE-02</b>	OE-CS 02	02	00	02	30	15	35	50

**Learning Objectives:**

- This course aims to provide the knowledge of advanced features in Tally for overall control and efficiency in operating.
- Functions useful for managers and persons responsible for internal reporting are generation of reports, analysis of financials, tax, Cost / Profit Centres Management ,cost centre reporting, etc.

**Course Outcomes (Cos)**

1. After successfully completion of this course, students will be work with well-known accounting advanced software i.e. Tally.
2. Work with well-known accounting software i.e. Tally ERP 9.
3. Enter accounting voucher entries including advance voucher entries, etc. in Tally ERP 9 software.
4. Possess required skill and can also be employed as Tally data entry operator.
5. Students will possess required skill and can also be employed as Tally data entry operator.

**Detailed Syllabus:**

Allotted Lectures

Unit I: Storage and Classification of Inventory.	(04)
Unit II: Account Recievable and Payable Management.	(05)
Unit III: Purchase and Sales Order Management	(04)
Unit IV: Cost / Profit Centres Management.	(05)
Unit V: Generating and Printing Reposrts.	(03)
Unit VI: Goods and Services Tax	(12)
Unit VII: Tax Deducted at Source	(08)
Unit VIII: Management of Business Data	(02)
Unit IX: Moving to the next Financial Year	(02)

**Suggested Readings/Material:**

1. Tally Essential - Level 2, Tally Education Pvt. Ltd.
2. Tally Essential - Level 3, Tally Education Pvt. Ltd.
3. Learn Tally ERP 9 with Self-Study Approach by Rakesh Sangwan

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**Syllabus of Open Elective: Computational Science**

Title of the Course: Office Automation								
Year: II				Semester: III				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
OE-03	OE-CS 03	02	00	02	30	15	35	50

**Learning Objectives:**

- Recognize when to use each of the Microsoft Office programs to create professional and academic documents.
- Use Microsoft Office programs to create personal, academic and business documents following current professional and/or industry standards.

**Course Outcomes (Cos)**

- To provide an in-depth training in use of office automation, internet and internet tools.
- The course also helps the candidates to get acquainted with IT.
- students would be able to documents, spreadsheets, make small presentations and would be acquainted with internet.

**Detailed Syllabus:**

Unit:1	Introduction to Office Automation	Allotted Lectures
	<ul style="list-style-type: none"> <li>• Goals</li> <li>• Greater efficiency, • Better service, • Better accuracy, • Demanding for timeliness, • Facility in control, • Standardization of office routine, • Relieves of monotony, • Prevention of fraud, • Better information retrieval, • Lower operating cost, • Reduction in paper work, • Improved communication environment.</li> <li>• Functions of Office Automation</li> <li>Planning, Communication, Compilation and Presentation of Statistics, Systematization and Cost, Creation and Management of Information :</li> <li>• Characteristics Office Automation</li> </ul>	08
Unit:2	Office Automation tool –I (Word)	09
	<ul style="list-style-type: none"> <li>• <b>Introduction to Word</b> – Shortcut Bars Menu bar – Task bar – Status bar– Toolbar –</li> <li>Manipulating Images – Graphic elements – Charts – Collaborating on documents – Securing a document – Hyper Link – Shortcut keys - Document creation – Paragraph formatting – Header and Footer – Tables – Mail Merge - Managing Document Security, Comments and Tracked changes – Spell check – File Operations – Cut, Copy and Paste , Drag and Drop – Dynamic Data exchange – Templates – Formula – Undo – Redo – Find and Replace - Auto correct</li> </ul>	

<b>Unit:3</b>	<b>Office Automation tool –II (Excel)</b>	09
<ul style="list-style-type: none"> <li>• <b>Introduction to Excel</b> – Work sheet – Data types – Wizards – Insert – delete – Resize of the Columns and Rows – Views of Worksheets – Hiding – Usage of Formula and Calculation – Different Charts - Functions – Tables and Formatting – Query – Macros – Simulations – Formatting Spreadsheets – Sorting – Security – Calculator – Usage of Formula – Formatting text and Cells – Using wizards – File Management – Spell check and Error checking - Working with dates and times – Sparklines –Troubleshooting worksheets.</li> </ul>		
<b>Unit:4</b>	<b>Office Automation tool –III (Power Point)</b>	09
<ul style="list-style-type: none"> <li>• <b>Introduction to Power Point</b> – Creating a presentation – Formatting a presentation – Adding effects to the presentation – Reusability and Templates of the presentation – Different views of Slides – Files in power point presentation – Printing Handouts – Tables – Columns and Lists – Adding Graphics – Sounds and Movies of a Slide – Objects – Design – Effects – Animation – Multimedia in PPT – Slide show – Transition and Timings – Diagrams – Clipart and Pictures – File management – Power point presentation on mobiles and Desktops – Mobile Apps for PPT</li> </ul>		
<b>Unit:5</b>	<b>Computer Mail System</b>	10
<ul style="list-style-type: none"> <li>• What is CMSS?</li> <li>• Message Distribution</li> <li>• Voice Mail System</li> <li>• Transmission of Text</li> <li>• Videotex</li> <li>• Teletext</li> <li>• Viewdata</li> <li>• Transmission Pictures</li> <li>• Modem</li> </ul>		

**Suggested Readings:**

- 1 R. Gabriel Gurley, ‘A Conceptual Guide to OpenOffice.org 3’, Create Space Independent Publishing Platform, 2008
- 2 Alexis Leon, Mathews Leon, and Leena Leon, Vijay Nicole ‘Introduction to Information Technology’, Imprints Pvt. Ltd., 2013.
- 3 Greg jarboe, Hollis Thomases, Mari Smith, Chris Treadaway ‘MS Office XP complete’, BPB publication, 2001.

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**Syllabus of Open Elective: Computational Science**

Title of the Course: E-Commerce								
Year: II				Semester: IV				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
OE-04	OE-CS 04	02	00	02	30	15	35	50

**Learning Objectives:**

- Identify the component parts of e-commerce
- Identify the benefits of selling online
- Know how to optimise and stay safe when selling online
- Have an outline strategy for eCommerce for your business

**Course Outcomes (Cos)**

- Impart the students with higher level knowledge and understanding of contemporary trends in e-commerce and business finance.
- To provide adequate knowledge and understanding about E-Com practices to the students.
- Learners will be able to recognize features and roles of businessmen, entrepreneur, managers, consultant, which will help learners to possess knowledge and other soft skills and to react aptly when confronted with critical decision making.

**Detailed Syllabus:**

Unit	Title	Details of Topic	Allotted Lectures
Unit I	Introduction to E-Commerce	The revolution is just beginning, A Brief History, Understanding Digital Markets and Digital Goals. Advantages and Disadvantages of Transaction Online, Types of e-commerce and M-commerce, Benefits of E-commerce to business, Present scenario of E-commerce.	10
Unit II	E-commerce Concepts, functions & security	Concept of E-commerce. E-commerce Business Models, B2B, B2C, C3G, B2G and G2B, B2B application, Drivers of E-commerce, Purchase and sale Procedures, Supply Chain management, Value Chains in E-Commerce. Electronic Payment Systems, Authentication of payment, Mode of Payments E-Commerce Security and Security Requirements. Security Mechanisms-Encryption, Digital Signature, E-Certificate, Secure electronic transaction protocol. Problems in Taxing of E-Commerce.	15



Unit III	E-commerce marketing	Consumer online: The Internet Audience and Consumer Behaviour, Basic Marketing Concepts, Internet Marketing Technologies, B2C and B2B E-commerce marketing and business strategies, The Retail sector, Analyzing the viability of online firms, E-commerce in action: E-tailing Business Models, Common Themes in online retailing, The service sector: offline and online, Online financial services, Online Travel Services, Online career services	14
Unit IV	E-commerce Social networks	Social networks and online communities: Difference between social n/w, Pros and Cons of Social Networking site Growth of social networks and communities Online auctions, E-commerce portals Types of E-commerce portals	06

**Suggested Readings:**

1. Kenneth C. Laudon, E-Commerce : Business, Technology, Society, 4th Edition, Pearson
2. S. J. Joseph, E-Commerce: an Indian perspective, PHI