

Job Oriented Course

UIT -120

Programme Code: 12		For All Students		
Title of the Paper: JOC – 1- Ability Enhancement Lab				
Batch 2026 – 2027	Hours / Week 2	Total Hours 30	Credits 2	Skill Development

Course Objectives

1. To develop practical skills in Microsoft Office tools for professional use.
2. To familiarize students with modern digital and AI-based productivity tools.
3. To enhance professional communication and collaboration skills.
4. To prepare students for career readiness through LinkedIn and job application skills.
5. To create awareness about cybersecurity and safe digital practices.

LIST OF PRACTICAL PROGRAMS

1. Create a professional resume with appropriate formatting, styles, and layout for a job application.
2. Design a formal letter template and perform a mail merge to generate personalized letters for multiple recipients.
3. Prepare a structured report incorporating a table of contents, customized headers and footers with logo and date, and automatic page numbering.
4. Create and format a table with cell alignment, borders, and shading, and use Track Changes and Comments to review and edit a shared document collaboratively.
5. Apply basic functions such as SUM, AVERAGE, MAX, MIN, COUNT, and IF on a given dataset and design a student mark sheet with conditional formatting to classify performance grades.
6. Create a monthly budget tracker or expense sheet using formulas and apply data validation rules with dropdown lists to manage data effectively.
7. Perform data sorting and filtering operations and create bar, pie, and line charts to visually represent a provided dataset.
8. Apply VLOOKUP function and Pivot Tables to analyze and summarize data from a large dataset.
9. Design a professional presentation by applying themes, slide layouts, animations, and images for effective visual communication.
10. Use an AI tool such as ChatGPT or Claude to draft documents, summarize content, and generate ideas for workplace tasks.
11. Design a professional poster using Canva with appropriate layout, branding, colors, and typography, and embed a QR code linking to a portfolio or LinkedIn profile.
12. Compose and manage professional emails with proper etiquette, CC/BCC usage, file attachments, and insert a digital signature using Gmail or Outlook.

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13. Create a professional LinkedIn profile, add skills and resume, connect with professionals, and apply for jobs online.
14. Create and manage a Google Form for data collection and demonstrate cloud-based file sharing using Google Drive.
15. Demonstrate password security best practices, identify phishing attempts, and configure Two-Factor Authentication (2FA) on an account.

E-Learning Resources:

1. https://www.classcentral.com/course/youtube-learn-complete-word-excel-powerpoint-in-7-hours-ms-office-office-applications-217078?utm_source=chatgpt.com
2. Computer Fundamentals & Office Applications.pdf
3. Microsoft Office Essentials - IT Essentials - Subject Guides at University of York

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Programme Code: 12		For All Students		
Title of the Paper: Title of the Paper: JOC – 2 DevOps Lab				
Batch 2026 – 2027	Hours / Week 2	Total Hours 30	Credits 2	Skill Development

Course Objectives

1. To Understand the Mobile Development Landscape.
2. To Learn Mobile Development Frameworks and Languages.
3. Design User-Friendly Interfaces.
4. Develop Functional Mobile Applications
5. Test and Debug Mobile Apps and Understand App Deployment.

LIST OF PRACTICAL PROGRAMS

1. Local Repository Creation and Version Control Operations
2. Remote Repository Management using GitHub
3. Branching and Merging Techniques in Git
4. Continuous Integration using Jenkins
5. Containerization using Docker
6. Docker Image and Container Lifecycle Management
7. Container Orchestration using Kubernetes
8. Configuration Management using Ansible
9. Monitoring using Prometheus
10. CI/CD Pipeline Implementation using DevOps Tools

E-Learning Resources:

1. <https://www.geeksforgeeks.org/devops/devops-tutorial/>
2. <https://learn.microsoft.com/en-us/azure/devops/boards/github/?view=azure-devops>
3. <https://devtron.ai/resources>
4. <https://about.gitlab.com/topics/devops/devops-beginner-resources/>
5. <https://devops.com/library/>

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UIT -123

Programme Code: 12		For All Students		
Title of the Paper: JOC – 3- Mobile Application Development Lab				
Batch 2026 – 2027	Hours / Week 2	Total Hours 30	Credits 2	Skill Development

Course Objectives

1. To Understand the Mobile Development Landscape.
2. To Learn Mobile Development Frameworks and Languages.
3. Design User-Friendly Interfaces.
4. Develop Functional Mobile Applications
5. Test and Debug Mobile Apps and Understand App Deployment.

LIST OF PRACTICAL PROGRAMS

1. Write a program for Mobile Application that creates Alarm Clock.
2. Write a program for Mobile application to rotating an image.
3. Write a program to develop an application that uses GUI Components, Font and Colors.
4. Write a program to develop a native Calculator Application.
5. Write a program to implement an application that creates an alert upon receiving a message.
6. Write a program to develop an application for working with Graphics and Animation.
7. Write a program to develop an application for working with location-based services.
8. Write a program to develop an application for working with device camera.
9. Write a program to develop an application for connecting to the Internet and sending mail.
10. Write a program to design a simple To-do list application using SQLite.

E-Learning Resources:

1. <https://developer.android.com>
2. <https://developer.android.com/training/data-storage/sqlite>
3. <https://www.geeksforgeeks.org/android-tutorial>
4. <https://www.youtube.com/watch?v=xbBlzObID10>
5. <https://www.youtube.com/c/CodinginFlow>

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Programme Code: 12		For All Students		
Title of the Paper: JOC – 4 - Network Security Lab				
Batch 2026 – 2027	Hours / Week 2	Total Hours 30	Credits 2	Skill Development

Course Objective

1. To enable the students to learn security attacks, policies and guidelines.
2. To learn and apply the data encryption methods in network security.
3. To understand the intrusion detection systems.
4. To understand the concept of security management, email and internet banking security policies.

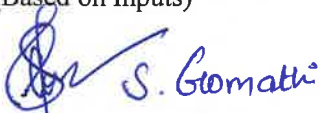
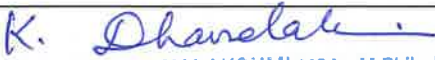
LIST OF PRACTICAL PROGRAMS

1. Write a program to encrypt the data using the encryption methods:
 - ☐ Substitution Ciphers
 - ☐ Transposition Ciphers
2. Write a program to implement DES algorithm.
3. Write a program to implement the Public Key Cryptography using Diffie –Hellman Algorithm.
4. Write a program to implement the Public Key Cryptography using RSA algorithm.
5. Write a program to secure the Database using User Authentication Security.
6. Write a server security program for Dynamic Page Generation.
7. Write a C program that contains a string (char pointer) with a value 'Hello World'.
The program should AND or and XOR each character in this string with 127 and display the result.
8. Write a C/JAVA program to implement the Blowfish algorithm logic
9. Write a C/ JAVA program to implement the Diffie-Hellman Key Exchange mechanism.
10. Write a program to implement format string vulnerabilities.

E-Learning Resources:

1. <https://www.geeksforgeeks.org/cryptography-and-network-security-principles>
2. <https://www.tutorialspoint.com/cryptography>
3. <https://www.javatpoint.com/cryptography-tutorial>
4. <https://www.geeksforgeeks.org/data-encryption-standard-des-set-1>

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