

JHARKHAND UNIVERSITY OF TECHNOLOGY
Jharkhand, Ranchi



Syllabus for

BACHELOR OF COMPUTER APPLICATION
(B.C.A) Programme

Sixth Semester

Subject Code	Course Type	Subject Name	Load Allocation			Marks distribution		Total Marks	Credit
			L	T	P	Internal Marks	External Marks		
5OE01	Elective- VI	Open Elective – VI	3	0	0	30	70	100	4
	Elective- VII	Open Elective – VII	4	0	0	30	70	100	4
5OE01	Skill Enhancement	Android Programming	4	0	0	30	70	100	3
5SE01	Ability Enhancement	Mentoring and Professional Development	0	0	2	25	25	50	2
5CR01-L	Skill Enhancement Lab- 2	Android Programming Lab	0	0	2	25	25	50	2
5CR02-L	Skill Enhancement Lab- 3	Project Work	0	0	2	25	25	50	2
Semester Total			18	0	4	165	285	450	17

Open Elective – VI

1. Organization Behaviour
2. Principles of Management

Open Elective – VII

1. Business Communication
2. Unix and Shell Programming

Course Code: 5OE01

Course Name: Organization Behaviour

Module-1

OB: Learning objectives, Definition & Meaning, Why to study OB, An OB model, New challenges for OB Manager **LEARNING:** Nature of learning, How learning occurs, Learning & OB Case Study Analysis

Module-2

PERSONALITY: Meaning & Definition, Determinants of Personality, Personality Traits, Personality & OB **PERCEPTION:** Meaning & Definition, Perceptual process, Importance of Perception in OB **MOTIVATION:** Nature & Importance, Herzberg's Two Factor theory, Maslow's Need Hierarchy theory, Alderfer's ERG theory Case Study Analysis

Module-3

COMMUNICATION: Importance, Types, Barriers to communication, Communication as a tool for improving Interpersonal Effectiveness **GROUPS IN ORGANISATION:** Nature, Types, Why do people join groups, Group Cohesiveness & Group Decision Making- managerial Implications, Effective Team Building **LEADERSHIP:** Leadership & management, Theories of leadership- Trait theory, Behavioural Theory, Contingency Theory, Leadership & Followership, How to be an Effective Leader **CONFLICT:** Nature of Conflict & Conflict Resolution **TRANSACTIONAL ANALYSIS:** An Introduction to Transactional Analysis Case Study Analysis

Module-4

ORGANISATIONAL CULTURE: Meaning & Definition, Culture & Organisational Effectiveness **HUMAN RESOURCE MANAGEMENT:** Introduction to HRM, Selection, Orientation ,Training & Development, Performance Appraisal, Incentives **ORGANISATIONAL CHANGE:** Importance of Change, Planned Change & OB Techniques **INTERNATIONAL OB:** An Introduction to Individual & Interpersonal Behaviour in Global Perspectives Case Study Analysis.

Referential Books:

1. Organizational Behavior Text, Cases and Games- By K.Aswathappa, Himalaya Publishing House, Mumbai, Sixth Edition (2005)
2. Organizational Behavior Human Behavior at Work By J.W. Newstrom, Tata McGraw Hill Publishing Company Limited, New Delhi, 12th Edition (2007)
3. Organizational Behavior - By Fred Luthans 4 Organizational Behavior - By Super Robbins

Course Code: 5OE01
Course Name: Principles of Management

UNIT – I

Management: Meaning & concept, Management principles (Fayol & Taylor), Management process (in brief), Managerial levels, Roles & skills of a manager, Management Theories (Classical, Neo classical, Behavioral, Systems & Contingency)

UNIT – II:

Planning: Meaning, Purpose & process, Decision making: Concept & process, Organizing: Process, Departmentation, Authority & Responsibility relationships, Decentralization. Staffing: Nature & Importance

UNIT-III

Staffing: Concept, nature & importance of staffing. Directing: Motivation: concept & theories (Maslow's, Herzberg Two factor, McGregor's theory X & Y), Leadership: Concepts & styles. Controlling: Nature, Importance, significance & Process of control.

UNIT – IV:

Managing People - Meaning, Need of understanding human behavior in organization, Models of OB, Major concepts in OB (elementary)- Personality, Learning, Perception & Attitude Building.

UNIT – V:

Management of Change: Models for Change, Force for Change, Need for Change, Alternative Change Techniques, New Trends in Organization Change, Stress Management.

Reference Books:

1. Essential of Management – Horold Koontz and Itainz Weibrich- McGraw-Hill's International
2. Management Theory & Practice – J.N.Chandan
3. Essential of Business Administration –K.Asawthapa, Himalaya Publishing House
4. Principles & practice of management – Dr. L.M.Prasad,, Sultan Chand & Sons – New Delhi
5. Business Organization & Management – Dr. Y.K.Bhushan
6. Management: Concept and Strategies by J.S. Chandan, Vikas Publishing
7. Principles of Management, ByTripathi, Reddy Tata McGraw Hill
8. Business organization and Management by Talloo, Tata McGraw Hill

Course Code: 5OR02
Course Name: Business Communication

UNIT-I

Means of Communication: Meaning and Definition – Process – Functions – Objectives – Importance – Essentials of good communication – Communication barriers, 7C's of Communication

UNIT-II

Types of Communication: Oral Communication: Meaning, nature and scope – Principle of effective oral communication – Techniques of effective speech – Media of oral communication (Face-to-face conversation – Teleconferences – Press Conference – Demonstration – Radio Recording – Dictaphone – Meetings – Rumour – Demonstration and Dramatisation – Public address system – Grapevine – Group Discussion – Oral report – Closed circuit TV). The art of listening – Principles of good listening.

UNIT-III

Written Communication Purpose of writing, Clarity in Writing, Principle of Effective writing, Writing Techniques, Electronic Writing Process.

UNIT-IV

Business Letters & Reports: Need and functions of business letters – Planning & layout of business letter – Kinds of business letters – Essentials of effective correspondence, Purpose, Kind and Objective of Reports, Writing Reports.

UNIT-V

Drafting of business letters: Enquiries and replies – Placing and fulfilling orders – Complaints and follow-up Sales letters – Circular letters Application for employment and resume

UNIT-VI

Information Technology for Communication: Word Processor – Telex – Facsimile(Fax) – E-mail – Voice mail – Internet – Multimedia – Teleconferencing – Mobile Phone Conversation – Video Conferencing – SMS – Telephone Answering Machine – Advantages and limitations of these types of communication

Reference Books :

- 1) Business Communication – K.K.Sinha – Galgotia Publishing Company, New Delhi.
- 2) Media and Communication Management – C.S. Rayudu – Hikalaya Publishing House, Bombay.
- 3) Essentials of Business Communication – Rajendra Pal and J.S. Korlhalli- Sultan Chand & Sons, New Delhi.
- 4) Business Communication (Principles, Methods and Techniques) Nirmal Singh – Deep & Deep Publications Pvt. Ltd, Delhi.
- 5) Business Communication – Dr.S.V.Kadvekar, Prin.Dr.C.N.Rawal and Prof.Ravindra Kothavade- Diamond Publications, Pune.
- 6) Business Correspondence and Report Writing – R.C. Sharma, Krishna Mohan – Tata McGraw-Hill Publishing Company Limited, New Delhi.

Course Code: 5OR02

Course Name: Unix And Shell Programming

Course Objectives: This course will enable students to:

- Learn basic commands to interact with UNIX System and VI editor.
- Understand the history, origin, features and architecture of UNIX Operating System.
- The usage of various commands in UNIX environment.
- Develop the ability to evaluate regular expressions and use them for pattern matching.
- Apply essential facets of SHELL programming in order to solve the SHELL script problems.

Module - I

INTRODUCTION: The UNIX operating system, Linux and GNU, The UNIX architecture, features of UNIX, POSIX and Single UNIX specification, Internal and External commands, Command structure, man browsing and manual pages on-line. File System: The parent – child relationship, the HOME variable, pwd, cd, mkdir, absolute pathname, relative pathname. 08 Hours Mod

Module – II

Vi editor: Basics, input mode, saving text and quitting, searching for a pattern (| and ?), substitution-search and replace(:s). Basic file attributes: ls: listing directory contents, the UNIX file system, ls -l, -d option, file ownership, file permissions, chmod, directory permissions, changing file ownership. More file attributes: File systems and inodes, hard links, symbolic links and ln, the directory, umask, modification and access times, find.

Module – III

Process basics: ps: process status, system processes(-e or -a), mechanism of process creation, process states and zombies, running jobs in background, nice:job execution, job control. Simple filters: pr, head, tail, cut, paste, sort, uniq, tr. Filters using regular expressions – grep and sed: grep, Basic Regular Expressions (BRE), Extended Regular Expressions (ERE) and egrep.

Module – IV

Simple filters: sed: the stream editor, line addressing using multiple instructions (-E and -F) context addressing, writing selected lines to a file (w), text editing, substitution (s), basic regular expression revisited. The shell: The shell's interpretive cycle, shell offerings, pattern matching, escaping and quoting, redirection, pipes, tee, command substitution, shell variables.

Module – V

Essential shell programming: Shell scripts, read using command line arguments, exit and exit status of command, the logical operators and ||, the if conditional, using test and {} to evaluate expression. The case conditional, expr, \$0, while, for, debugging.

Text Book:

1. Sumitabha Das: “UNIX – Concepts and Applications”, (Chapters 1,2,4,6- 9,11-14,17,19), Tata McGraw Hill, Noida, 4th Edition, 15th Reprint, 2011, ISBN-13: 978- 0-07-063546-3. Reference Books: 1. Behrouz A. Forouzan and Richard F. Gilberg: “UNIX and Shell programming”, Cengage Learning, India, 1st Edition, 2005, ISBN: 81-35-0325-9.
2. M G Venkatesh Murthy: “UNIX and Shell programming”, Pearson Education, Delhi, 1st Edition, 2005, ISBN: 81-7758-745-5.

Course Code: 5OR02

Course Name: Android Programming

Unit 1

Introduction: What is Android?, Android Architecture, Setting Android Environment, Android SDK Manager & required Packages, Using Android Studio, Android Virtual Device(AVD), Creating First Android Application, Package Structure

Unit 2

Introduction to Gradle, Running the Application, Views, Layouts and more. Introduction to Views: Text View, Edit Text View, Radio Button and Check Box View, Button View, Image View and Image Button View, Toast, Notifications.

Unit 3

Introduction to Layouts/View Groups: Linear Layout, Relative Layout, Tabular Layout, Hierarchical Layout Arrangements, Adapter and Adapter View, Using List View and Grid View, SQ Lite Database.

Unit 4

Spinner in Android, Working with Spinners, Margin and Padding, Working with Edit Text and Text View, Radio Group, Radio Button and Check Box, Auto Complete Text View in Android, Android Core and Projects.

Unit 5

Location Based Services: Sending Email, Sending SMS, Phone Calls Activity in Android, Intents in Android, Introduction to Fragments, Working with Fragments

Suggested Readings: Android Programming for Beginners by John Horton Publisher: Packt Publishing

- Learn Java for Android Development (2nd edition) by Jeff Friesen Publisher: Apress
- Android application development for java programmers. By James C. Sheusi. Publisher: Cengage Learning, 2013. Beginning Android Programming with Android Studio, Fourth Edition by Jerome F.
- DiMarzio Publisher: John Wiley & Sons Android Programming: The Big Nerd Ranch Guide by Kristin Marsicano , Chris
- Stewart ,Bill Phillips Publisher: Big Nerd Ranch Guides

Course Code: 5SE01
Course Name: Mentoring And Professional Development

Guidelines regarding Mentoring and Professional Development The objective of mentoring will be development of: • Overall Personality • Aptitude (Technical and General) • General Awareness (Current Affairs and GK) • Communication Skills • Presentation Skills The course shall be split in two sections i.e. outdoor activities and class activities. For achieving the above, suggestive list of activities to be conducted are:

Part A (Class Activities)

1. Expert and video lectures
2. Aptitude Test
3. Group Discussion
4. Quiz (General/Technical)
5. Presentations by the students
6. Team building Exercises

Part – B (Outdoor Activities)

1. Sports/NSS/NCC
2. Society Activities of various students chapter i.e. ISTE, SCIE, SAE, CSI, Cultural Club, etc.

Evaluation shall be based on rubrics for Part – A & B Mentors/Faculty in charges shall maintain proper record student wise of each activity conducted and the same shall be submitted to the department.

Course Code: 5CR01-L
Course Name: Android Programming

COURSE OBJECTIVES: To build programming logic and thereby developing skills in Programming. • To help students in learning the basics of android studio. • To aid students in understanding how to use the android studio and use the databases

LEARNING OUTCOMES: Enable to build programming logic and thereby developing skills in Programming. • Enables the students to develop their own applications. • Enable students to develop the skills to become entrepreneurs.

PART-A

1. Create an android application to demonstrate any five types of textboxes.
2. Create an android application to demonstrate Checkboxes.
3. Create an android application to demonstrate radio buttons.
4. Create an android application to demonstrate Image View.
5. Create an android application to demonstrate Scroll View.
6. Create an android application to demonstrate List View.
7. Create an android application to demonstrate Grid View.

PART-B

1. Create an android application to demonstrate page navigation.
2. Create an android application to demonstrate any three types of layouts.
3. Create a simple calculator application.
4. Create an android application to demonstrate Map View.
5. Create an android application to demonstrate registration form.
6. Create an android application to demonstrate login form by connecting to the database.
7. Create an android application to retrieve a data from the database and display it.

Course Code: 5CR02-L

Course Name: Project Work

Practical Training and Project Work:

1. Project Work may be done individually or in groups (maximum three) in case of bigger projects. However if project is done in group each student must be given a responsibility for a distinct module and care should be taken to monitor the individual student.
2. Project Work can be carried out in the college or outside with prior permission of college.
3. The Student must submit a synopsis of the project report to the college for approval. The Project guide can accept the project or suggest modification for resubmission. Only on acceptance of draft project report the student should make the final copies.
4. The project report should be hand written.

Submission Copy: The Student should submit spiral bound copy of the project report. **Format of the Project:**

- (a) Paper: The Report shall be typed on White Paper of A4 size.
- (b) Final Submission: The Report to be submitted must be original.
- (c) Typing: Font:- Times New Roman Heading:- 16 pt., Bold Subheading:- 14 pt, Bold Content:- 12 pt. Line Spacing:- 1.5 line. Typing Side:-One Side Font Color: - Black.
- (d) Margins: The typing must be done in the following margin: Left : 0.75” Right: 0.75” Top: 1” Bottom: 1” Left Gutter: 0.5”
- (e) Binding: The report shall be Spiral Bound.
- (f) Title Cover: The Title cover should contain the following details: Top: Project Title in block capitals of 16pt. Centre: Name of project developer’s and Guide name. Bottom: Name of the university, Year of submission all in block capitals of 14pt letters on separate lines with proper spacing and centering.
- (g) Blank sheets: At the beginning and end of the report, two white blank papers should be provided, one for the Purpose of Binding and other to be left blank.
- (h) Content:
 - I. Acknowledgement
 - II. Institute/College/Organization certificate where the project is being developed. 36 ©MGSU, Bikaner Exam 2021-2022-2023

- III. Table of contents
- IV. A brief overview of project
- V. Profiles of problem assigned
- VI. Study of Existing System
- VII. System Requirement
- VIII. Project plan o Team Structure o Development Schedule of Programming languageand Development Tools
- IX. Requirement Specification
- X. Design o Detailed DFD's and Structure Diagram o Data structure, Database and File Specification
- XI. Project Legacy o Current Status of project o Remaining Areas of concern o Technical and Managerial Lessons Learnt o Future Recommendations
- XII. Nomenclature and Abbreviations.
- XIII. Bibliography
- XIV. Source Code.