Amity Institute of Information Technology

Bachelor of Science – Information Technology

FLEXILEARN-Freedom to design your degree



Programme Structure

Curriculum & Scheme of Examination

2015

AMITY UNIVERSITY CHHATTISGERH RAIPUR

B.Sc. – Information Technology

Programme Structure

FOURTH SEMESTER

Course Code	Course Title	Lecture (L) Hours Per Week	Tutorial (T) Hours Per Week	Practical (P) Hours Per Week	Total Credits
IFT2401	Structured System Analysis & Design	2	-	-	2
IFT2402	Introduction to Open Source Technologies (PHP, MySql)	3	-	-	3
IFT2403	Operating Systems	2	1	-	3
IFT2404	Introduction to Open Source Technologies (PHP, MySql) Lab	-	-	2	1
IFT2405	Introducing Routing & Switching in the Enterprise	2	-	-	2
IFT2406	Design and Analysis of Algorithm	2	1	-	3
IFT2407	Introducing Routing & Switching in the Enterprise Lab	-	-	2	1
	Concentrat	ion Electives			3
IFT2408	Human Resource Management	3	-	-	3
IFT2409	Fundamentals of E-Commerce	2	-	-	2
IFT2410	Fundamentals of E-Commerce Lab	-	-	2	1
IFT2432	Project(with Presentation and Evaluation)	-	-	-	3
IFT2434	Study Abroad(12 days)				3
	Open Electives		4*+3		
CSS2451	Corporate Communication *	1	-	-	1
BEH2451	Stress and Coping Strategies*	1	-	-	1
LAN2451 LAN2452 LAN2453 LAN2454 LAN2455 LAN2456 LAN2457 LAN2458	Foreign Language – IV* French - IV German - IV Spanish - IV Russian - IV Chinese - IV Portuguese –IV Korean-IV Japanese-IV	2	-	-	2
	TOTAL				25

SUMMER PROJECT – II

Syllabus – Fourth Semester

STRUCTURED SYSTEM ANALYSIS AND DESIGN

Course Code: IFT2401 Credit Units: 02

Course Objective:

This course addresses both what is required of an Information System and how this can be achieved. Studying the practices, processes, activities and technologies involved in the development of an Information system provide an excellent insight to develop skills for employment & professional life. Students are involved in activities ranging from the front-end of requirements analysis and system design to the development of User Interfaces and testing & maintenance of software. The course equips the student to carve a niche in the growing portfolio of Information systems careers or go in for higher studies e.g. MCA, MBA & other Master"s level programmes.

Course Contents:

Module I: System Concepts and the Information Systems Environment

What is System?, Important System Characteristic, Business Systems, Business, Information Systems, Categories of Information Systems, Transaction, Processing System, MIS, DSS, and Scope of Information system.

The Role of System Analyst: Overview of System Analysis and Design, Multifaceted role of System analyst: Analytical Skill, Technical Skills, and Interpersonal Skills.

Module II: System Development Life Cycle

The System Development Life Cycle, Structured Analysis Development Method, Systems Prototype Method. System planning and Initial Investigation: System Planning: Information System Committee Method, User Group Committee Method, Initial Investigation, Feasibility Study: Operational, Technical and Economical Feasibility Cost Benefit Analysis: Data Analysis, Cost Benefit Analysis, The system proposal.

Module III: Determining System Requirements

Performing Requirements Determination, Traditional Method, Modern' Methods, Radical Methods. The Tools of Structured Analysis: Process Modeling: DFD, Logical Modeling: Structured English, Decision Trees, and Data Modeling: ER Diagram

Module IV: Process and Stages of System Design

The process of design: logical design, physical design, Structured Design, Functional Decomposition, and Structured Walkthrough. Input/Output and Forms Design: Input design, output design, forms design, types of forms, layout considerations and forms control.

Module V: File organization and Database Design

File structure, file organization, -objectives of database, data structure, normalization, the role of database administrator. Automated Tools *for* Systems Development: CASE Tools

Examination Scheme:

Components	CT1	A/C/Q	Attd	EE
Weightage (%)	10	15	5	70

Text & References:

Ш	P-analysis & Design of Information Systems James A. Senn
	Modern System Analysis & Design: Jeffery A. Hoffer, Joey F. George, Joseph S. Valacich
	Elements of System Analysis & Design: Elias Awad.

INTRODUCTION TO OPEN SOURCE TECHNOLOGIES (PHP, MySql)

Course Code: IFT2402 Credit Units: 03

Course Objective:

This course is aimed to provide a fundamental understanding of dynamic web site creation. PHP is the language used for development of most common web sites. Syllabus includes basic and advanced features of PHP which includes detailed introduction of PHP and MYSQL, Arrays, Loops and variables etc. It also gives an overview open source framework like JOOMLA, ZEND etc...

Course Contents:

Module I: Introduction to PHP programming

Introduction to PHP, installation and configuration, Variables, data types, various types of function, creating your own function.

Module II: Operator, Loops and Array

Operators, Conditions, Loops, Array, Multidimensional Array, Associative array

Module III: Classes and Functions

Object oriented prg with Php, Working with Datetime, code re-use, require (), include(), and the include_path; filesystem functions, and file input and output; file uploads; error handling and logging; sending mail & use of email server.

Module IV: Working with database

MYSQL, Introducing MySQL; database design concepts; the Structured Query, Language (SQL); communicating with a MySQL backend via the PHP, MySQL APIBuilding Database Applications,

Module V: Working with Frameworks

Working with Mambo, Working with Joomla, Working with framework. Use of Joomla in rapid development of website. Developing of simple website using joomla.

Examination Scheme:

Components	CT1	PR.	ATTD.	EE
Weightage (%)	10	15	5	70

Text & References:

☐ PHP Manual.

	Beginning PHP, Apache, MySQL Web Development Michael K. Glass, Yann Le Scouarnec, Elizabeth Naramore, Gary Mailer, Jeremy Stolz, Jason Gerner
Re	ferences:

OPERATING SYSTEMS

Course Code: IFT2403 Credit Units: 03

Course Objective:

The objective of this course is to provide a clear description of the concepts that underlie operating systems. It tells about fundamental concepts that are applicable to a variety of systems. We present a large number of examples that pertains particularly to UNIX and to other popular operating systems. This course basically revolves around process, and it tells about every thing about a process.

Course Contents:

Module I: Operating System as a Resource Manager

Operating System Classifications

Monitor, Multiprogramming, Time Sharing, Real Time Systems,

Multiprocessor Systems and Operating System Services. Android O.S.

Module II: CPU Scheduling

Basic Scheduling Concepts, Process Overviews, Process States, Multiprogramming, Scheduler and Scheduling Algorithms, Multiple Processor Scheduling

Module III: Memory Management

Bare Machine, Resident Monitor, Partition, Paging and Segmentation, Virtual Memory and Demand Paging, Replacement Policies, Cache Memory

Module IV: File Systems

File Support, Access Methods

Allocation Methods- Contiguous Linked and Index Allocation

Directory Systems

Single Level, Tree Structured, Acyclic Graph and General Graph Directory, File Protection

Deadlock

Deadlock Characterization, Deadlock Prevention, Deadlock Avoidance and Deadlock Recovery

Module V: Security and Protection

Security Policies and Mechanism

Protection and Access Control-Access Matrix Model of Protection, Access Hierarchies, Access List, Capabilities

Overview of Unix Operating System

Command-Language User"s View of Unix, Implementation of Unix, Unix Summary Etc.

Examination Scheme:

Components	CT1	A/C/Q	Attd.	EE
Weightage (%)	10	15	5	70

Text & References:

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Peterson And Silberschatz, Operating System Concepts
Operating System Concepts silberschaty, Galving WSE Publication

References:

Tannenbaum A.S., Modern Operating System
Crowly Charrles, Operating System- A design Approach
Dietel H.M., Operating Systems

INTRODUCING ROUTING AND SWITCHING IN THE ENTERPRISE

Course Code: IFT2405 Credit Units: 02

Course Objective:

This course focuses networking in enterprise network, switching in enterprise network, addressing in enterprise network, routing & distance vector and link state protocol, and Trouble shooting an enterprise network.

Course Contents:

Module I: Networking in the Enterprise

Describing the Enterprise Network, Identifying Enterprise Applications
Describing the Current Network, Supporting the Enterprise Edge, Reviewing Cisco Routing and Switching

Module II: Switching & Addressing in an Enterprise Network

Describing Enterprise Level Switching, Preventing Switching Loops, Configuring VLANs, Trunking and Inter-VLAN Routing, Maintaining VLANs on an Enterprise Network

Using a Hierarchical IP Network Address Scheme, Using VLSM, Using Classless Routing and CIDR, Using NAT and PAT

Module III: Routing Protocols

Managing Enterprise Networks, Routing Using the RIP Protocol, Routing Using the EIGRP Protocol, Implementing EIGRP. Routing Using the OSPF Protocol, Implementing Single-Area OSPF, Using Multiple Routing Protocols

Module IV: Enterprise WAN and ACL

Connecting the Enterprise WAN, Comparing Common WAN Encapsulations

Using Frame Relay. Using Access Control Lists, Using a Wildcard Mask, Configuring Access Control Lists, Permitting and Denying Specific Types of Traffic, Filtering Traffic Using Access Control Lists

Examination Scheme:

Components	CT1	PR.	ATTD.	EE
Weightage (%)	10	15	5	70

Text & References:

Text:

	CCNA-Discovery 4.0, module 3, Cisco Certified Networking Academy
Rej	ferences:
	Data Communication and Computer Network, Forozoun, TMH Publication
	Data Communication and Network, Stallings, PHI
	Computer Network, Tanenbaum, PHI

DESIGN AND ANALYSIS OF ALGORITHM

Course Code: IFT2406 Credit Units: 03

Course Objective:

The designing of algorithm is an important component of computer science. The objective of this course is to make students aware of various techniques used to evaluate the efficiency of a particular algorithm. Students eventually should learn to design efficient algorithm for a particular program

Course Contents:

Module I: Introduction

Algorithm Design paradigms - motivation, concept of algorithmic efficiency, run time analysis of algorithms, Asymptotic Notations. Recurrences- substitution method, recursion tree method, master method

Module II: Divide and conquer

Structure of divide-and-conquer algorithms: examples; Binary search, quick sort, Merge sort, Strassen Multiplication; Analysis of divide and conquer run time recurrence relations.

Greedy Method

Overview of the greedy paradigm examples of exact optimization solution (minimum cost spanning tree), Approximate solution (Knapsack problem), Single source shortest paths, traveling salesman

Module III: Dynamic programming

Overview, difference between dynamic programming and divide and conquer, Applications: Shortest path in graph, chain Matrix multiplication, Traveling salesman Problem, longest Common sequence, knapsack problem

Module IV: Graph searching and Traversal

Overview, Representation of graphs, strongly connected components, Traversal methods (depth first and breadth first search)

Back tracking

Overview, 8-queen problem,

Brach and bound

LC searching Bounding, FIFO branch and bound, LC branch and bound application: Traveling Salesman Problem

Examination Scheme:

Components	A	CT	S/V/Q	HA	EE
Weightage (%)	5	10	8	7	70

CT: Class Test, HA: Home Assignment, S/V/Q: Seminar/Viva/Quiz, EE: End Semester Examination; Att: Attendance

Text & References:

Text:

- E. Horowitz, S. Sahni, and S. Rajsekaran, "Funadmentals of Computer Algorithms," Galgotia Publication
- T. H. Cormen, Leiserson, Rivest and Stein, "Introduction of Computer algorithm,"

References:

- Sara Basse, A. V. Gelder, "Computer Algorithms," Addison W
- J.E Hopcroft, J.D Ullman, "Design and analysis of algorithms"
- D. E. Knuth, "The art of Computer Program

INTRODUCTION TO OPEN SOURCE TECHNOLOGIES (PHP, MySql) LAB

Course Code: IFT2404 Credit Units: 01

Course Contents:

- 1. Write the process of installation of web server.
- 2. Write programs to print all details of your php sever. Use phpinfo().
- 3. Write a program to give demo of ECHO and PRINT command.
- 4. Write a program sort ten number by using array.
- 5. Create a database in MySql and connect that database from PHP.
- 6. Write a program to Update, insert and delete the values of table in Question No 9 database.
- 7. Design of Reg. form.
- 8. Design of online calculator.
- 9. WAP to find Max of 3 no.
- 10. WAP for Marksheet generation.
- 11. WAP for design Login form.
- 12. WAP to demonstrate Associative array.
- 13. WAP demonstrate multidimensional array.
- 14. WAP to use clam & object in PHP

Examination Scheme:

IA			H.	E	
A	PR	LR	V	PR	V
5	10	10	5	35	35

Note: IA -Internal Assessment, EE- External Exam, PR- Performance, LR - Lab Record, V - Viva.

INTRODUCING ROUTING AND SWITCHING IN THE ENTERPRISE LAB

Course Code: IFT2407 Credit Units: 01

Course Contents:

- 1. Application of Cisco Router and Switches in Enterprise Network with example design.
- 2. Enterprise level Switching techniques.
- 3. Creating LAN with switch and preventing loops with example.
- 4. Creating, Managing and deleting different VLAN.
- 5. Creating Trunking and Intr-VLAN Routing.
- 6. Use of VLSM and CIDR for Hierarchical IP Network Address Scheme with some example scenario.
- 7. Configuration of NAT and PAT in router.
- 8. Configuring router with RIP Protocol.
- 9. Configuring router with EIGRP Protocol.
- 10. Configuration of ACL in router and use of Wildcard Mask.
- 11. Configuring router as gateway for traffic filtering with example scenario.
- 12. Troubleshooting Switching, Routing, WAN and ACL issues.

Examination Scheme:

IA			E	E	
A	PR	LR	V	PR	V
5	10	10	5	35	35

Note: IA –Internal Assessment, EE- External Exam, PR- Performance, LR – Lab Record, V – Viva. Software: Packet tracer.

HUMAN RESOURCE MANAGEMENT

Course Code: IFT2408 Credit Units: 03

Course Objective:

The Course Aims to introduce the Students to the Fundamentals, Process, Techniques, and Practices of Human Resource Management and Industrial Relations.

Course Contents:

Module I: Introduction: Human resource Management

Introduction, Personnel Management v/s HRM,

Role of HR Manager: Duties and responsibilities of HR Manager.

Module II: Functions of HR Department: Procurement and Development

Job Analysis, Job description, Job specification,

Recruitment & Selection: Placement and Induction and socialisation. Cost of Recruitment.

Replacement, Turnover, Retention.

Training and Development: Training Process & Methodology, Need and objectives – Training

Procedure Methods of Training – Tools and Aids – Evolution of training Programs.

Module III: Functions of HR Department: Compensation

Job change - Career Planning, promotion, Demotion, Transfer, Separations.

Job evaluation: Merit rating, Types, Advantages, perquisites.

Wage system in India - Methods of wage payment - Minimum Wage, Fair Wage, Living Wage -

Productivity Linked wages and Incentives Compensation

Module IV: Functions of HR Department: Maintenance, Integration & Audit

Welfare, Amenities & Fringe benefits Administration, Safety & Accident Prevention – Work environment – Fatigue safety, accident prevention. Addressing Employee Grievances & their redressal, Suggestion Schemes, Administration of discipline.

Performance Appraisal - Purpose, Appraisal Process, Methods, Training & Retraining, Personnel Productivity, Human Resource Information Systems

Examination Scheme:

Components	CT1	A/C/Q	Attd	EE
Weightage (%)	10	15	5	70

Text:

Human Resource and Personnel Management, K Awasthappa, Tata McGrew Hill
Human Resource Management, LM Prasad, Sultan Chand & Sons

References

Human Resource Management (Text & Cases), VSP Rao, Excel Books

FUNDAMENTALS OF E-COMMERCE

Course Code: IFT2409 Credit Units: 02

Course Objective:

This course is aimed at incorporating the fundamentals of E-Commerce which involves study of Network Infrastructure, Mobile Commerce, Web Security, encryption, etc. which are essential components of Managing e-transactions making life even simpler and getting rid of various time consuming and tedious activities.

Course Contents:

Module I: Introduction

Traditional commerce – an overview, What is E-commerce?, Comparison between Traditional and Electronic commerce, Issues associated with electronic commerce.

Inter Organisational E- commercee, Intra Organisational E-Commercee, Architectural frame work.

Module II: Network Infrastructure

Network infrastructure for E Commerce. Market forces behind I-Way. Component of I Way. Access Equipment. Global Information Distribution Network, Broad band Telecommunication.

Module III:

The Internet, Intranets & Extranets as E-Commerce Ingrastructure.

Module IV:

Legal Requirements in E-Commerce.

Module V: Mobile Commerce

Introduction to Mobile Commerce. Mobile Computing Applications. Wireless Application Protocols. WAP Technology. Mobile information Devices .

Module VI: Web Security

Introduction to Web Security, Firewalls & Transaction Security, Client Server Network, Emerging Client Server Security Threats. Firewalls and Network Security.

Module VII: Encryption

World wide web & security, Encryption, Transaction security, Secret Key Encryption, Public key Encryption, Virtual Private Networks, Implementation & management issues.

Module VIII: Electronic Payment Scheme

Traditional Payment methods, View of internet payment process, Understanding card payment schemes on internet, Cyber Cash, Veritone and First Virtual payment schemes, SET and JEPI, Electronic cheques, Digital Cash.

Module IX: Electronic Data Interchange (EDI)

History of EDI, Implementation difficulties of EDI, EDI working concepts, Financial EDI, EDI and Internet.

Examination Scheme:

Components	CT1	PR.	ATTD.	EE
Weightage (%)	10	15	5	70

Text & References:

Text:

• Ravi Kalakota. Andrew Whinston. "Frontiers of Electronic Commerce". Addison Wesley

References:

- Denial Amor "The E Business revolution", Addison Wesley
- Sokol. "From EDI to Electronic Commerce: A Business Initiative", TMH
- Greenstein & Feinman, "Electronics Commerce", Tata McGraw Hill
- Diwan Sharma, "E Commerce", Excel
- Asset international, "Net Commerce", TMH
- Bajaj & Nag, "E Commerce: The cutting edge of Business", TMH

FUNDAMENTALS OF E-COMMERCE LAB

Course Code: IFT2410 Credit Units: 01

Course Contents:

Case Study - I

Web Page Development / Designing

Develop or enhance your Web Page. You can create a personal home page, and put it up on the World Wide Web (WWW). Also explain the concept of web site hosting and web site domain booking (address of web site).

- 1. The page must have a theme that must be displayed in the background, icons and layout of the page.
- 2. Web Page must include at least two images or graphics on your home page.
- 3. For images in web page either copy the image to your html directory, or create a direct link to the image's original site.
- 4. Include one or more tables in the design of web page.
- 5. Home page must have a title.
- 6. The page must include some basic information about you, and some links to sites related to you and your interests, and must include something interesting about yourself.
- 7. The body of the personal home page should have your name and e-mail address. Make use of the available headings to give a professional appearance to your page.
- 8. The e-mail address should include a "hot link," so that any person with proper settings in their browser should be able to send you a message directly from your home page.
- 9. Also include a form that allows readers to provide some structured feedback about a topic of interest to you.

Case Study – 2

Web Page Evaluation

Explore three commercial Web pages (must be taken the concern of faculty) in a particular industry or segment. Complete the Home Page Evaluation sheet for each and provide a critical appraisal of what you find at each site. This critique should include answers to at least the following questions.

- 1. What is the purpose of the company in developing the site?
- 2. Does the site convey a positive or useful message for the company?
- 3. Who is the intended audience?
- 4. What information content is provided?
- 5. What business model is the site following?
- 6. What functions are provided?
- 7. Does the company generate revenues from the site? How?
- 8. What costs are associated with generating those revenues?
- 9. Is the site well designed from the point-of-view of clarity, ease of use, speed of access?
- 10. How well does the company use design and layout features?
- 11. Is the site aesthetically pleasing?
- 12. What are the benefits of the structure provided by the company?
- 13. What does the company do to provide a competitive advantage?
- 14. What features supporting ecommerce (security, transaction management, information collection, navigation, search engine, site map, index, help, and easily available policies) does the site support?
- 15. How broad is the coverage of the content?
- 16. What currency (ies) are accepted? How are they accommodated?
- 17. Are the sites useful?
- 18. Are different strategies being employed?
- 19. Would you recommend any company's approach over the others?
- 20. How do you think these sites will evolve?

21. Can you develop a general framework that will help other companies in this industry design their Web sites?

Case Study – 3

Online Shopping

Shopping of an item over the net by using credit card/ debit card. Example for small purchase: a CD (e.g., CDnow or 1-800-music-now) or a book (e.g., Amazon) or software (e.g, Stream or Cybersource or Internet Shopping Network or atOnce) Or participate in the wave of the future -- an electronic auction (e.g., Onsale) Or, if you enjoy good grape, one of the classic web sites: Virtual vinyards.

- 1. Write a description of the experience and a short critique. Develop a set of criteria to assess what you encountered.
- 2. In summary state whether or not you will use the site and/or the Internet (for shopping) again.

Case Study – 4

Business Resource Page

Develop a business web-page that looks at information gathered from the web focusing on a particular type of business (a resource guide for that type of business). This web site must design to familiarize you with the effective use of search engines on the web. The resource page should include links to appropriate sites with a descriptive statement regarding the site as a resource. The guide must link to at least 10 resources. The resource guide can focus on a particular industry, product or country.

The choice must be approved by concern faculty of department. After creation of web page, ensure that all of the links are working properly.

Case Study – 5

Web Portal Development and Evaluation

Explore a Web portal and/or community (must be taken the concern of faculty). Complete the Portal Evaluation sheet and provide a critical appraisal of what you find. Consider the issues discussed in the Web Page Evaluation (described previously). In addition, consider some of the questions regarding portals, including:

- 1. How does this virtual community generate revenue?
- 2. What are the critical factors in generating these revenues?
- 3. What types of companies or entrepreneurs are best suited to participate in this portal?
- 4. Additional specific issues to evaluate will be discussed later in the semester.

Note: In all the above case study the following features must be available, at minimum.

- 1. Company background page listing location of corporate headquarters or equivalent;
- 2. Business Policies, if transactions are conducted, including; complete and easy to understand rate charges if the business provides a service
- 3. Shipping policy and charges
- 4. Tax policy
- 5. Return policy
- 6. Privacy Policy
- 7. Security Statement
- 8. Issue at least one cookie
- 9. Use at least one form
- 10. Use at least one search feature
- 11. Use at least one image
- 12. Interact with a database in some form, such as
 - a. Displaying records
 - b. Querying records

- c. Collecting data and writing it to a database, this can be combined with the form requirement
- 13. Provide space for at least one banner advertising.
- 14. Provide a webmaster e-mail function on each page
- 15. In designing of web site, the following aesthetics must be considered:
 - a. Appropriate use of colors and contrasts
 - b. Appropriate amount of information on each page do NOT clutter your pages
 - c. Appropriate use of images (so that load time is not too high)
 - d. Consistent corporate image throughout the site

Examination Scheme:

IA				EE	
A	PR	LR	V	PR	V
5	10	10	5	35	35

Note: IA -Internal Assessment, EE- External Exam, PR- Performance, LR - Lab Record, V - Viva.

PROJECT WITH PRESENTATION

Course Code: IFT2432 Credit Units: 03

Objectives:

The aim of the project is to provide the students with an opportunity to further their intellectual and personal development in the chosen field by undertaking a significant practical unit of activity (Such as an internship or training). Topics of project are to be based on the latest trends, verifying engineering concepts /principals and should involve elementary research work. The projects may involve design, fabrications, testing, computer modeling, and analysis of any engineering problem. On completion of the practical training the students are to present a report covering various aspects learnt by them and give a presentation on same.

Chapter Scheme:

Chapter 1: Introduction

Chapter 2: Literature Review

Chapter 3: Research Methodology

Chapter 4: Results

Chapter 5: Conclusions & Future Scope

Evaluation Scheme:

Fabrication/Experimentation	Report	Presentation	Viva
40 marks	20	25	15

Components of a Project Report

The outcome of Project Work is the Project Report. A project report should have the following components:

- 1) Cover Page: This should contain the title of the project proposal, to whom it is submitted, for which degree, the name of the author, name of the supervisor, year of submission of the project work, name of the University.
- **2) Acknowledgement:** Various organizations and individuals who might have provided assistance /co-operation during the process of carrying out the study.
- **3) Table of Content:** Page-wise listing of the main contents in the report, i.e., different Chapters and its main Sections along with their page numbers.
- 4) Body of the Report: The body of the report should have these four logical divisions
- a) Introduction: It shall justify and highlight the problem posed, define the topic and explain the aim and scope of the work presented in the project report. It may also highlight the significant contributions from the investigation., and Chapter Planning.
- **b) Literature Review:** This chapter shall present a critical appraisal of the previous work published in the literature pertaining to the topic of the investigation.
- c) Research Methodology: In this chapter, the main concern shall be given to experimental setups, procedures adopted, techniques developed, methodologies developed and adopted.
- d) Results: This shall form the penultimate chapter of the project report and shall include a thorough evaluation of the investigation carried out and bring out the contributions from the study. The discussion shall logically lead to inferences and conclusions as well as scope for possible further future work.
- e) Conclusions & Future Scope: This will be the final chapter of the project report. A brief report of the work carried out shall form the first part of the Chapter. Conclusions derived from the logical analysis presented in the Results and Discussions Chapter shall be presented and clearly enumerated, each point stated separately. Scope for future work should be stated lucidly in the last part of the chapter
- 5) **References:** This section will include the list of books and articles which have been used in the project work, and in writing a project report.

6) **Appendix:** The appendix should be used for data collected (e.g. questionnaires, transcripts, ...) and for tables and graphs not included in the main text due to their subsidiary nature or to space constraints in the main text.

Guidelines for Evaluation:

- Each of the students has to undertake a Project individually under the supervision of a teacher and to submit the same following the guidelines stated below.
- Language of Project Report and Viva-Voce Examination must be English. The Project Report must be typed and hard bound.
- Failure to submit the Project Report or failure to appear at the Viva-voce Examination will be treated as "Absent" in the Examination. He /she has to submit the Project Report and appear at the Viva-Voce Examination in the subsequent years (within the time period as per University Rules).
- No marks will be allotted on the Project Report unless a candidate appears at the Viva-Voce Examination. Similarly, no marks will be allotted on Viva-Voce Examination unless a candidate submits his/her Project Report.
- Evaluation of the Project Work to be done jointly by panel of three/four faculty members. The average marks of the panel members will be allotted to the candidate.