Semester: Fourth Course Code: 401

Name Of Course: Information Security

Common With Program (S):

Scheme: Jul. 10 Paper Code: 6431

Rationale

Security is an essential part of e-business strategy, to meet the main objectives of computer and information security systems, like confidentiality, data integrity, non-repudiation, authentication. Hence, information security in the enterprise and over networks has become the primary concern. Such areas of computer science also occupy an important position in diploma level studies.

The course deals with the basic principles of information security, cryptography, information hiding techniques such as Steganography etc. It deals with how organizations and nations organize their information security policies and efforts. It also covers how to strategize and implement security with a special focus on emerging technologies. , various security measures, for example firewalls and virtual private network, and web security help students of diploma engineering to work in related areas.

Semester: Fourth Scheme: Jul. 10
Course Code: 401 Paper Code: 6431

Name Of Course: Information Security

Common With Program (S):

SCHEME OF STUDIES AND SPECIFICATION TABLE

Lectures: **5**Hrs. per week Practical: **2** Hrs. per week

SCHEME OF STUDIES

	SCHEME OF STUDIES			
S.No.	TOPICS	THEORY (HRS.)	PRACTICAL (HRS)	TOTAL (HRS)
1.	Overview of Information Security	06	00	06
2.	Encryption Methods	10	04	14
3.	Confidentiality & key management	20	06	26
4.	Information Hiding and data integrity	12	80	20
5.	Authentication and identity management	10	06	16
6	Software Vulnerabilities and Firewalls	06	02	08
7	Web and Network Security	05	04	09
8	Computer Ethics and Cyber Law	06	00	06
	TOTAL	75	30	105



DIPLOMA IN INFORMATION TECHNOLOGY

Semester: Fourth Scheme: Jul. 10
Course Code: 401 Paper Code:6431

Name Of Course: Information Security

Common With Program (S):

COURSE CONTENT

S. No.	Course Content	Hours of study
1.	Overview of Information Security	6
	1.1 Introduction	
	1.2 Need of Information Security	
	1.3 Basic types of Security (like Physical Security, etc.)	
	1.4 Principles of Security	
2.	Encryption Methods	10
	2.1 Introduction	
	2.1 Introduction 2.2 Transposition Cipher	
	2.3 Substitution Cipher	
	2.4 Caesar Cipher	
	2.5 Playfair Cipher	
	2.6 Monoalphabetic	
	2.7 Hill Cipher	
	2.8 Vigenere Cipher	
	2.9 One –time pad	
3.	Confidentiality & key management	20
	3.1 Introduction	
	3.2 Cryptanalysis	
	3.3 Types of Cryptography	
	3.4 Symmetric Key Cryptography	
	3.5 Asymmetric Key Cryptography	
	3.6 DES	
	3.7 RSA	
	3.8 Diffie Hellman	
	3.9 Kerberos	
	3.10 Elliptic Curve Arithmetic	
1		



DIPLOMA IN INFORMATION TECHNOLOGY

Semester: Fourth Scheme: Jul. 10
Course Code: 401 Paper Code: 6431

Name Of Course: Information Security

Common With Program (S):

4.	Information Hiding and data integrity	12
	4.1 Introduction	
	4.2 Steganography	
	4.3 Digital Signature	
	4.4 Audio and Video Watermarking	
	4.5 Birthday Attack	
	4.6 Hash Function	
	4.7 RC-5	
	4.8 MD-5	
	4.9 SHA	
5.	Authentication and identity management	10
	5.1 Introduction	
	5.2 Passwords	
	5.3 MAC	
	5.4 Digital Certificates	
	5.5 Session Keys	
	5.6 Smart Card	
	5.7 Biometrics	
	5.8 Trusted Servers	
	5.9 CAPTCHA	
	3.9 CAFTCHA	
6.	Software Vulnerabilities and Firewalls	6
	6.1 Introduction	
	6.2 Types of Vulnerabilities	
	6.2.1 Virus	
	6.2.2 Worm	
	6.2.3 Trojan Horses	
	6.2.4 Zombies	
	6.2.5 Trap Doors	
	6.3 Types of Attacks	
	6.3.1 Back-Door Attack	
	6.3.2 Brute Force Attack	
	6.3.3 Dictionary Attack	
	6.3.4 DoS Attack	
	6.3.5 Distributed DoS Attack	
	6.3.6 Man-in-the-Middle Attack	
	6.4 Characteristics of Firewall	
	6.5 Types of Firewall	
	6.6 Trusted System	

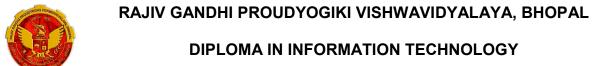


Semester: Fourth Scheme: Jul. 10
Course Code: 401 Paper Code: 6431

Name Of Course: Information Security

Common With Program (S):

7.	Web and Network Security	5
	 7.1 Introduction 7.2 SSL/TLS 7.3 SSL Objectives and Layers 7.4 IP Security Architecture 	
8.	Computer Ethics and Cyber Law 8.1 Introduction 8.2 Categories of Computer Ethics Issues	6
	 8.3 Need of Cyber Law 8.4 Evolution of Cyber law 8.5 Cyber Crime and its Classification 8.4 Punishment/Provision/Act in Different Cyber Crime 	
	Total	75



Semester: Fourth Scheme: Jul. 10
Course Code: 401 Paper Code: 6431

Name Of Course: Information Security

Common With Program (S):

LIST OF EXPERIMENTS

Practical: 2 Hrs. per Week

S.NO.	Name of experiments	Hours of Study	
1.	Implement the password and identify the valid and invalid user.		
2.	Implement the Substitution cipher method of cryptography		
3.	Implement the Block cipher method of cryptography		
4.	Understanding of cryptographic algorithms and implementation of		
	the same in different programming languages		
5.	Performance evaluation of various cryptographic algorithms.		
6.	Implementation of proxy based security protocols in different		
	programming languages with features like confidentiality, integrity		
	and authentication.		
7.	Implementation of Hash Function and SHA.		
8.	Understanding of Software Vulnerabilities and different types of		
	Attacks.		
9.	Understanding the working of all SSL protocols.		
10.	Case Study on different authentication and identity management		
	techniques.		
	Total Hrs.	30	

Semester: Fourth Scheme: Jul. 10
Course Code: 401 Paper Code: 6431

Name Of Course: Information Security

Common With Program (S):

BOOKS RECOMMANDED

REFERENCE BOOKS:-

- Information Security, Theory and Practice by Dhiren R. Patel, PHI Learning
- Cryptography and Information Security by V.K.Pachghare, PHI Learning
- Cryptography and Network Security by Behrouz A. Forouzan, Tata McGraw Hill
- Network Security by Charlie Kaufman, Radia Perlman, Mike Speciner. PHI Learning
- Cryptography and Network Security by Wilianm Stalling. Prentice Hall
- IS Principles and Practices by Mark Merkow, Jim Breithaupt, Person Education
- Information System Security by Nina Godbole, Wiley
- Cryptography and Network Security by Atul Kahate, Tata McGraw Hill

DIPLOMA IN INFORMATION TECHNOLOGY

Semester: Fourth

Course Code: 402

Name Of Course: Data Base Management System With Query Language

Common With Program (S):

RATIONALE

DBMS is the major data base management system that we are using for the general data processing and web based processing. Design provides an excellent means of communication. Clients are more likely to get what they need, when data base system design is approached carefully and thoughtfully. Clients may also discover how their organizations really function once a good data base design is completed.

Data base management has evolved from a specialized computer application to central component of a modern computing environment and as a result knowledge about data base systems has become an essential part of education in computer science. The aim is to give a start to the student to quickly understand the concept behind relational data base and SQL and many new upcoming technologies related to data bases.



DIPLOMA IN INFORMATION TECHNOLOGY

Semester: Fourth

Course Code: 402

Name Of Course: Data Base Management System With Query Language

Common With Program (S):

SCHEME OF STUDIES AND SPECIFICATION TABLE

Lectures: 4Hrs. per week Practical: 4Hrs. per week

SCHEME OF STUDIES

		THEORY	Practical	Total
Sr. No.	TOPICS	(HRS)	(Hrs)	(Hrs)
1.	DATA BASE CONCEPTS	08	02	10
2.	DATA MODELS	08	10	18
3.	DATA BASE DESIGN CONCEPTS AND	12	80	20
	NORMALIZATION			
4.	INTRODUCTION TO SQL	12	17	29
5.	INTRODUCTION TO PL/SQL	14	18	32
6.	ADVANCED DATA BASE CONCEPTS	06	05	11
	TOTAL	60	60	120

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DIPLOMA IN INFORMATION TECHNOLOGY

Semester: Fourth

Course Code: 402

Name Of Course: Data Base Management System With Query Language

Common With Program (S):

COURSE CONTENT

Sr. No.	Course Content	Hours of study
1.	 DATABASE CONCEPTS 1.1 Introduction to database and databade management system, history of DBMS. 1.2 Disadvantages of file system data management. 1.3 Database system applications. 1.4 Advantages and disadvantages of DBMS. 1.5 Three level architecture: Mapping between views , data independence. 1.6 DBMS users and administrators, DBMS Architecture. 1.7 DML, DDL & DCL. 	08
2.	DATA MODELS 2.1 Introduction to data models. 2.2 Entities, attributes & association, Relationship among entities, representation of association & relationship. 2.3 Entity-Relationship model: Entity sets, relationship sets, constraints, E-R diagram, Entity- Relationship design issues, Generalization, Specialization & aggregation. 2.4 Relational Model: Attributes and Domains, tuples, relations and their schemas, relation representation, keys, relationship, integrity rules. 2.5 Codd's Relational database rules	08

DIPLOMA IN INFORMATION TECHNOLOGY

Semester: Fourth
Course Code: 402
Name Of Course: Data Base Management System With Query Language

Common With Program (S):

3.	DATABASE DESIGN CONCEPTS & NORMALIZATION	12
	3.1 Relational algebra: Basic operation, select, join, projection, additional relational algebra, queries. 3.2 Functional dependency: Definition, inference axioms for functional dependency, closure, cover and equivalence of FD, Referential integrity 3.3 Normalization 3.3.1 Introduction to Normalization. 3.3.2 1 NF, Data anomalies in 1 NF. 3.3.3 Partial dependency, 2 NF, Data anomalies in 2 NF. 3.3.4 Transitive Dependency, 3NF, Data anomalies in 3 NF. 3.3.5 Boyce-Codd Normal Form, Lossless or Lossy Decomposition.	
4.	INTRODUCTION TO SQL 4.1 Introduction to SQL language. 4.2 Structure of SQL statements & SQL writing guidelines. 4.3 Data Definition commands, describing the structure of a table. 4.4 Data manipulation commands. 4.5 Basic structure of SQL queries 5.5 SQL query structure for selection & join operators, defining primary keys, foreign keys in a table, CHECK constraints, removing constraints from table. 5.6SQL functions: SUM(), AVG(), MAX(), MIN(), COUNT().	12
5.	 5.1 Declaring Variables: PL/SQL Block Structure, Program Constructs, Use of Variables, Types of Variables, Declaration ,Assigning & Initialization, Keywords, Scalar Data types, Scalar Variable Declaration, %TYPE attribute: for variable declaration, Declaring Boolean Variables, PL/SQL Record Structure. 5.2 Writing Executable Statements: PL/SQL Block Syntax, SQL Functions in PL/SQL, ,Data type Conversion, Operators in PL/SQL, SQL Statements in PL/SQL, Retrieving & Manipulating data in PL/SQL, Commit and Rollback Statements. 	14
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DIPLOMA IN INFORMATION TECHNOLOGY

Semester: Fourth

Course Code: 402

Name Of Course: Data Base Management System With Query Language

Common With Program (S):

	5.3 SQL Cursor, and Cursor Attributes;	
	5.4 Writing Control Structures: Controlling PL/SQL Flow of Execution, IF statements, IF-THEN- ELSE Statement Execution Flow, IF-THEN-ELSIF Statement Execution Flow, Building Logical Conditions, Boolean Conditions, Iterative Control: LOOP Statement, Basic Loop, FOR Loop, While Loop;	
	5.5 Creating Procedures: Overview of Procedures, Developing Stored Procedures and its Advantages, , Procedure Parameter Modes, Creating Procedures with Parameters, DEFAULT Option for Parameters, Removing Stored Procedures;	
	5.6 Introduction to Triggers And Types Of Triggers.	
6.	ADVANCE DATABASE CONCEPTS	06
	6.1Introduction to transactions.	
	6.2 Introduction to concurrency control.	
	6.3 Data mining & Data Warehousing.	
	6.4 Distributes & Object based database.	
	6.5 Introduction to Cloud based database.	



Semester: Fourth

Course Code: 402

Name Of Course: Data Base Management System With Query Language

Common With Program (S):

LIST OF EXPERIMENTS

Practical: 4 Hrs. per Week

S.NO.	NAME OF EXPERIMENTS	HOURS OF STUDY
1	Execute Data Definition SQL commands like create table	2
2	Execute Data Manipulation SQL commands like insert, update, delete data from single & multiple tables.	10
3	Creating users, granting & revoking permission, set roles to users.	8
4	Basic PL/SQL program using flow control statement functions.	10
5	Creating triggers, stored procedure and cursors.	10
6	Database access from a programming language such as JAVA or C++.	10
7	Building web application	10
	TOTAL	60



DIPLOMA IN INFORMATION TECHNOLOGY

Semester: Fourth

Course Code: 402

Name Of Course: Data Base Management System With Query Language

Common With Program (S):

REFERENCES

TEXT BOOKS

- **1.** Silberschatz A. , Korth, Sudarshan 6th edition, Database System Concepts, TMH New Delhi.
- 2. Schaum's Outlines, Database Management System, TMH.
- **3.** Database Management System Oracle SQL and PL/SQL, by Pranab Kumar Das Gupta ,PHI Learning

REFERENCE BOOKS

- **1.** Desai Biplin C. (2001), An Introduction to Database Management System, Galgotia Publication Pvt. Ltd., New delhi.
- 2. Ivan Byrose, SQL programming.
- **3.** Peter Rob & Carlos Coronel, Database System Concepts, Indian Edition, Cengage Learning India Pvt. Ltd..
- 4. Date C.J., An Introduction to Database Systems, Narosa.
- **5.** Leon, SQL complete reference, TMH.



DIPLOMA IN INFORMATION TECHNOLOGY

Semester: Fourth Scheme: Jul. 10
Course Code: 403 Paper Code:6374

Name Of Course: Linux and Shell programming

Common With Program (S): Computer Science & Engineering (403)

Rationale

The objective of the course is to make students aware of a multi-user operating system. This course will serve as a foundation course for the higher level course in LINUX. The students are expected to learn the commands while doing practical and emphasis should be given to those switches/options and flags, which are most frequently used in real life. After completion of the course students will be able to:

- Understand Operating System concepts.
- Use System calls and memory management.
- Use LINUX commands and editors.
- Carry out LINUX File management and shell programming in LINUX.
- Do Network configuration and security management in LINUX.

DIPLOMA IN INFORMATION TECHNOLOGY

Semester: Fourth Scheme: Jul. 10
Course Code: 403 Paper Code: 6374

Name Of Course: Linux and Shell programming

Common With Program (S): Computer Science & Engineering (403)

SCHEME OF STUDIES AND SPECIFICATION TABLE

Lectures: **4** Hrs. per week Practical: **2** Hrs. per week

SCHEME OF STUDIES

Sr No	TOPICS	THEORY (HRS)	PRACTICAL (HRS)	TOTAL (HRS)
1.	Introduction	08	02	10
2.	Linux Usage and Basics	12	02	14
3.	Text processing and Standard I/O	08	05	13
4.	Shell Programming and Processes	12	08	20
5.	System Administration	12	08	20
6.	Networking Services On LINUX	08	05	13
	Total	60	30	90



DIPLOMA IN INFORMATION TECHNOLOGY

Semester: Fourth Scheme: Jul. 10
Course Code: 403 Paper Code: 6374

Name Of Course: Linux and Shell programming

Common With Program (S): Computer Science & Engineering (403)

COURSE CONTENT

S.No.	Course Content	Hours of study
1	Introduction 1.1 Linux Ideas and History Understanding Open Source, Linux Origins, Distributions, Linux Principles 1.2 Linux Usage and Basics Logging in to a Linux System, Switching between virtual consoles and the graphical environment, Elements of the X Window System, Starting the X server, Changing your password, The root user, Changing identities, Editing text files.	08
2	 Linux Basics and File System 2.1 Running Commands and Getting Help Running Commands, Some Simple commands, Getting Help, The whatis command, The – help Option, Reading Usage Summaries, The man command, Navigating man pages, The info command, Navigating info pages, Extended Documentation. 2.2 File System Linux File Hierarchy Concepts, Some Important Directories, Current Working Directory, File and Directory Names, Absolute and Relative Pathnames, Changing Directories, Listing Directory Contents, Copying, Moving, Renaming, Creating and Removing Files & Directories, Using Nautilus, Determining File Content. 2.3 The Linux File System In-depth Partitions and File system, I-nodes, Directories, Hard Links, Symbolic (or soft) Links, The Seven Fundamental File types, Checking Free Space, mounting & unmounting File system, working with etc/fstabe, Archiving Files, Compressing, Creating, Listing and Extracting File, Other Archiving Tools 	12



DIPLOMA IN INFORMATION TECHNOLOGY

Semester: Fourth Scheme: Jul. 10
Course Code: 403 Paper Code: 6374

Name Of Course: Linux and Shell programming

Common With Program (S): Computer Science & Engineering (403)

3	Text processing and Standard I/O	8
	3.1 Text Processing Vi: Opening Medifying equips and exiting vi text editor, made of vi	
	Vi: Opening, Modifying, saving and exiting vi text editor, mode of vi. Viewing file contents, sorting text, Eliminating Duplicate lines, Comparing files,	
	Compressing the file.	
	3.2 Standard I/O and Pipes	
	Standard Input and Output, Redirecting Output to a File, Redirecting STDOUT to a	
	Program(Piping), Combining Output and Errors, Redirecting to Multiple Targets	
	(tee), Redirecting STDIN from a file, Sending Multiple Lines to STDIN.	
4	Shell Programming and Process	12
'	Using and configuring the Bash Shell	
	Introduction of Bash shell, Bash Features, Command Line, Command Line	
	Expansion, and Editing, gnome-terminal.	
	Shell Programming	
	Scripting Basics, Creating Shell Scripts, Handling Input/ Output, Control Structures,	
	Conditional Execution, File and string Tests, continue and break, Using positional	
	parameters, Scripting at the command line, Shell Script debugging.	
	Investigating and Managing Process	
	Process, Listing Processes, Finding Processes, Signals Sending, Signals to	
	Processes, Scheduling Priority, Altering Scheduling Priority, Interactive Process	
	management tools, Job Control, Scheduling a Process to execute later, Crontab	
	File format. Different run levels	
5	SYSTEM ADMINISTRATION:	12
	Common Administrative tasks, identifying administrative files –	
	configuration and log files, Role of system administrator, Managing user	
	accounts –adding & deleting users, changing permissions and	
	ownerships, Creating and managing groups, modifying group attributes,	
	Temporary disable user's accounts, creating and mounting file system,	
	checking and monitoring system performance, file security, password and	
	Permissions, becoming super user using su.	
	Getting system information – host name, disk partitions & sizes, users, kernel.	
	Backup and restore files, linuxconf. Utility in GUI, reconfiguration	
6	hardware with kudzu.	0
6	NETWORKING SERVICES ON LINUX:	8
	Server –side setup, configuration, and basic administration of common	
	networking services: Sambha, DNS, NIS, Apache, SMB, DHCP, Sendmail, FTP	
	Other common services: tftp, pppd, proxy	



DIPLOMA IN INFORMATION TECHNOLOGY

Semester: Fourth Scheme: Jul. 10
Course Code: 403 Paper Code: 6374

Name Of Course: Linux and Shell programming

Common With Program (S): Computer Science & Engineering (403)

LIST OF EXPERIMENTS

Practical: 2 Hrs. per Week

S.NO.	Name of experiments	Hours of Study
1.	Files and Directories	
	Cat, cd, chgrp, chmod, cp, file, find, grep, head, just, lpq, lpr, lprm, cancel, ls,	
_	mkdir, more, page, mv, pwd, rm, rmdir, tail, touch,	
2.	File Editors	
	Editors are used to create and amend files.	
3	Emacs, ex, edit, gedit, nedit, xemacs, emacs, dtpad, pico, vi,	
	Manipulating data	
_	The contents of files can be compared and altered with the following commands.	
5.	Awk, cmp, comm, cut, diff, expand, unexpand, gawk, Join, look, perl, paste, sed, sort, split, tr, uniq, wc,	
	Compressed files	
6.	Files may be compressed to save space.Compressed files can be created and	
0.	examined.	
	Compress, uncompress, zcat, zcmp, zdiff, zmore, gzip, gunzip.	
7.	Information	
	Manuals and documentation are available on-line. The following Shell commands	
8	give information.	
	answerbook2, apropos, dthelpview, man, info, help.	
9	Shell Programming	
	Writing shell scripts for arithmetic operations, file permission.	
	Messages between Users	
	The UNIX systems support on-screen messages	
	to other users and world-wide electronic	
	mail, pine, elm, dtmail, frm, from, dtmail, mesg, parcel, talk, write	
	Networking	
	Setup a small network in your lab and connect to that network Internet Protocol	
	Service. These commands are used to send and receive files from Campus UNIX	
	hosts and from other hosts and the Internet around the world. TOTAL	30
	I	30



DIPLOMA IN INFORMATION TECHNOLOGY

Semester: Fourth Scheme: Jul. 10
Course Code: 403 Paper Code: 6374

Name Of Course: Linux and Shell programming

Common With Program (S): Computer Science & Engineering (403)

BOOKS RECOMMANDED.

MAIN READING

1. Sumitabha Das, UNIX/LINUX: Concepts and Applications, Tata McGraw-Hill, 2008.

- 2. ISRD Group, Basics of OS, UNIX and SHELL Programming, Tata McGraw-Hill, 2006.
- 3. Stephen Prata Advanced UNIX -A programmer's Guide, BPB Publication, 2008.

REFERANCES

- 1. Linux Learning the Essentials by K.L. James, PHI Learning, 2012
- 2. Kochan S & Wood P, UNIX Shell Programming, Pearson Education, 2008.
- 3. Sarwar, Koretsky, and Sarwar, UNIX, the Text Book, Pearson Education, 2007.
- 4. Stevens W R, Rago S.A, Advanced Programming in UNIX Environment, Pearson Education, 2008.
- 5. Maurice J. Bach, Design of the UNIX Operating System, Pearson Education, 2008.

WEB REFRERANCES:

http://www.linux-tutorial.info/index.php

http://www.ee.surrey.ac.uk/Teaching/Unix/

http://www.aboutdebian.com/

www.developertutorials.com/tutorials/linux/

www.yolinux.com/TUTORIALS/

www.linuxquestions.org/

http://bash.cyberciti.biz/guide/Main Page

http://stommel.tamu.edu/~baum/programming.html

http://williamstallings.com/

Semester: Fourth Course Code: 404

Name Of Course: Web Programming

Common With Program (S):

Scheme: Jul. 10 Paper Code: 6433

RATIONALE

This subject is essential for providing knowledge and hands on experience over the issue of managing data on web developing powerful GUI based friendly user interface. In order to professionally design and handle the web site, knowledge of web languages and scripting is necessary. After learning this subject student will be able to develop projects required in curriculum as well as industry.

Semester: Fourth Scheme: Jul. 10
Course Code: 404 Paper Code: 6433

Name Of Course: Web Programming

Common With Program (S):

SCHEME OF STUDIES AND SPECIFICATION TABLE

Lectures: 3 Hrs. per week Practical: 4 Hrs. per week

SCHEME OF STUDIES

Sr. No.	TOPICS	THEORY (HRS)	PRACTICAL (HRS)	TOTAL (HRS)
1.	Introduction To Web Design	05	00	05
2.	HTML	10	16	26
3.	JAVA Script	10	16	26
4.	DHTML	10	16	26
5.	XML Basics	04	04	08
6.	Publishing the site	06	08	14
	TOTAL	45	60	105

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DIPLOMA IN INFORMATION TECHNOLOGY

Semester: Fourth Scheme: Jul. 10
Course Code: 404 Paper Code: 6433

Name Of Course: Web Programming

Common With Program (S):

1.	Introduction To Web Design Web page and Web site - Web publishing Process of Web, publishing, planning, organizing, Hierarchical, Linear, Webbed. Implementing, Testing, Maintenance.	5
2.	 Introduction Head section – Prologue, Link, Base, Meta, Script, Style Body Section – Header, Paragraphs, Text Formatting, Linking, Internal Linking, Embedding Images, Lists, Tables, Frames. Other Special Tags and Characters HTML Forms Image Editing Tools Flash Animation – Introduction, action scripting. 	10
3.	 Java Script Introduction Language Elements – Identifiers, Expressions, Keywords, Operators, Statements, Functions Object of Java Scripts – Window Object, Document Object, Forms Objects, Text Boxes and Text Areas, Buttons, Radio Buttons and Check Boxes, The Select Object Other Object – The Date Object, The Math Object, The String Object, Regular Expressions, Arrays, Worked Examples 	10

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DIPLOMA IN INFORMATION TECHNOLOGY

Semester: Fourth Scheme: Jul. 10
Course Code: 404 Paper Code: 6433

Name Of Course: Web Programming

Common With Program (S):

4.	DHTML	10
	Introduction	
	Cascading Style Sheet (CSS) – Coding, Properties of Text, Property	
	Values, Other Style Values, In-Line Style Sheet, Embedded Style Sheet, External Style Sheet, Grouping, Inheritance, Classes as	
	Selector, ID as Selector, Contextual Selector, Pseudo Classes and	
	Pseudo Elements, Positioning, Backgrounds, Element Dimensions	
	Web Page Editors like Eclipse, JEdit, Dreamweaver etc.	
5.	XML Basics	04
	Introduction	
	HTML vs. XML	
	Syntax of the XML Document	
	XML Attributes	
6.	Publishing The Site	06
	 Uploading Web pages - Using FTP and VPN 	
	 Running a Local Web server and Remote Web Server like CPanel 	
	Web hosting - Shared web hosting and maintaining websites.	



Semester: Fourth Course Code: 404

Name Of Course: Web Programming

Common With Program (S):

Scheme: Jul. 10 Paper Code: 6433

Practical: 4 Hrs. per week Total Lab Hours: 60

LIST OF PRACTICALS

- Design a Home Page of Website using HTML Tags.
- Write an HTML Document to provide a form that collects names and phone numbers.
- Write a program in Java Script to compare numbers whose inputs will be taken from HTML Form.
- Write a JAVA Script function to display current date and time using Date Object.
- Write a Java Script to generate Random Numbers
- Design three pages of your Home Page and link all of them to a single style sheet.
- Design a web page that demonstrates blinking and scrolling text.\
- Design a e Commence Site displaying the detail of the items that are sold in that store. The Site should provide a feature to sort the items based on the prize of the Items.
- Design a XML document using basic syntax.
- Uploading websites on FTP and Local Server.

Semester: Fourth Course Code: 404

Name Of Course: Web Programming

Common With Program (S):

Scheme: Jul. 10 Paper Code:6433

Recommended Text Books

Web Technology – A Developer's Perspective – PHI by N. P. Goplan and J. Akilandeswari

REFERENCE BOOKS:

- Allen D.W. & Steve Johnson; the Learning Guide to Internet; B.P.B. Publication.
- Alexis Leon and Matthew Leon; Internet for every one; Vikas publishing hous.
 Pvt. Ltd.New Delhi
- Internet for Dummy, Pustak Mahal, New Delhi
- Dixit Manish (1999); Internet, An Introduction, CI Stems TMH Series, Tat-McGraw Hill publishing company limited, New Delhi.
- Design Web Pages, BPB Publication.



SEMESTER: FOURTH SCHEME: Jul.10 COURSE CODE: 411 PAPER CODE: 6046

NAME OF COURSE: ENTERPRENUERSHIP

COMMON WITH PROGRAM (S):

RATIONALE

Since long entrepreneurship has been recognized as an essential ingredient of economic development. Concept of entrepreneurship has varied from time to time to suit the changing ethos of socio-economic reality. It was applied to business for the first time in 18th century, to designate a dealer who buys and sells goods at uncertain prices. Later on an entrepreneur was considered a dynamic agent of change, or the catalyst who transformed increasingly physical, natural and human resources, into corresponding production possibilities. In recent years, managerial aspects of entrepreneurship are being emphasized. It employs innovativeness, an urge to take risk in the face of uncertainties, and intuition, i.e. a capacity of seeing things in a way which afterwards proves to be true.

The course is kept in soft core under DCS, DME and DEE/ Videography/ Arch/CDDM/ Garment/ MOM/ Prod/ RAC/ CTM/ Auto/ Comp/ ETE/ IT/ Opto/ Print/ Textile technology.

To bring to surface certain common characteristics such as perception of economic opportunity, technical and organizational skills, managerial competence, and motivation to achieve result.



SEMESTER: FOURTH SCHEME: Jul.10 COURSE CODE: 411 PAPER CODE: 6046

NAME OF COURSE: ENTERPRENUERSHIP

COMMON WITH PROGRAM (S):

Lectures: 6 Hrs. per week

SCHEME OF STUDIES

S.No.	TOPICS	THEORY HRS.	PRACTIC AL HRS.	TOTAL HRS.
1.	INTRODUCTION TO ENTERPRENEURSHIP	11	-	11
2.	INDUSTRIES AND BUSINESS ORGANIZATIONA	11	1	11
3.	INSTITUTIONAL ASSISTANCE	11	1	11
4.	INCENTIVS/ CONCESSION/ FACILITIES AVAILABLE TO SSI ENTERPRENEUR	11	1	11
5.	PLANNING OF INDUSTRIAL UNIT	26	1	26
6.	ACHIVEMENT MOTIVATION	08	1	08
7.	FINANCIAL MANAGEMENT OF AN INDUSTRIAL UNIT (SSI)	12	1	12
	TOTAL	90	1	90



DIPLOMA IN INFORMATION TECHNOLOGY

SEMESTER: FOURTH SCHEME: Jul.10 COURSE CODE: 411 PAPER CODE: 6046

NAME OF COURSE: ENTERPRENUERSHIP

COMMON WITH PROGRAM (S):

Lectures: 6 Hrs. per week

CONTENT DETAILS

S.No.	Course Contents	Hrs of Study
01.	Introduction to Entrepreneurship	11
	 Definition of Entrepreneur / Entrepreneur Difference between Entrepreneurship / Entrepreneurship Need for Entrepreneurship qualities of successful entrepreneur Myths about Entrepreneurship Classification of entrepreneurs on the basis of different criteria Reasons for the failure of entrepreneurs 	
02.	Industries and Business Organization - Concept of Industry or Enterprise - Classification of Industries (a) On the basis of capital investment - Tiny (Micro) Industry - Small Scale - Medium Scale - Large Scale (b) Others - Rural Industry - Cottage Industry (c) Forms of Business Organization - Proprietorship - Board & Co-operative - Partnership - public Ltd. - Private Ltd. - Jt. Sector - Government Co-operative / Undertakings (d) Tiny small scale Industry - Definition - Its significance in National Development. - Govt. policies for SSI promotions - Sector / Product for SSI.	11

S.No.	Course Contents	Hrs of Study
03.	Institutional Assistance (a) Types of Institutional assistance - Infra - structural assistance - Technical Assistance - Financial assistance - Marketing Assistance (b) Information / guidance & Training - SISI - ASK - MPCON - CSIR - CED- MAP - NRDC (c) Infrastructure - D/C - AVN/AKVN (e) Finance - SIDBI- KVIB MPFC - NABARD - MPWDC NSIC M.P.A.V.V.N. (d) Marketing - MP- AGRO - NSIC - PM.LUN - EXPORT COPPORATION - KVIP - MPHSVN MPLDC (e) Quality Control - BIS - FPO - MPLUN F.D.A AG. MKT. Board.	11
04.	Incentives / Concession/ Facilities Available	11
	Seed moneyIncentive / subsidiesOthers (Phones, Lands etc)	
05.	Planning of Industrial Unit - Pre- Planning Stage - Scanning the environment - Market survey - Seeking information - product / project selection - Implementation Stage - PPR Preparation - DIC registration - Arrangement of Land - Arrangement of Power - Obtaining NOC / Licenses from various Deartments.	26

S.No.	Course Contents	Hrs of Study
	 DPR Preparation Seeking financial assistance Commercial Production Post Implementation stage Permanent registration from D.I.C. Availing Subsidies Diversification / Modification Setting up of marketing channel / Distribution. 	
06.	Achievement Motivation - Historical perspective - Concept of achievement motivation - Significance of achievement motivation - Development of achievement motivation	08
07.	Financial Management of an Industrial Unit (SSI) - Tools of financial analysis - Ratio analysis - Fund Flow / Cash flow analysis - Working capital and Concepts - Financial accounting	12



SEMESTER: FOURTH SCHEME: Jul.10 COURSE CODE: 411 PAPER CODE: 6046

NAME OF COURSE: ENTERPRENUERSHIP

COMMON WITH PROGRAM (S):

Lectures: 6Hrs. per week

In Addition to above, Students are advised to:

- 1. To prepare chart to showing various factors affecting entrepreneurship
- 2. To collect details related to various schemes run by Govt. for self employment and entrepreneurship
- 3. To identify and select a project and conduct market survey thereof
- 4. To collect various formats used in industries and Departments/Institution working in the field of entrepreneurship
- 5. Visit few small scale industries situated in city, nearby industrial area
- 6. Discuss the problems related to SSI (Small Scale Industries) with an entrepreneur.
- 7. Collect information about market rates quality and quantity of goods for their choice.
- 8. Develop logical and analytical approach to purchase raw material/ finished goods
- 9. To prepare case study for successful entrepreneurs
- 10. Prepare a project report for the industry/business they are willing to start



SCHEME:

PAPER CODE: 6046

Jul.10

SEMESTER: FOURTH COURSE CODE: 411

NAME OF COURSE: ENTERPRENUERSHIP

COMMON WITH PROGRAM (S):

REFERENCES

- 1. Entrepreneurial Development Vol. I,II,III by Vasant Desai Himalaya Publication
- 2. CEDMAP (Center of Entrepreneurial development Madhya Pradesh)
- 3. Udyamita Vikas by Anand Prakashan



SEMESTER: FOURTH SCHEME: Jul.10
COURSE CODE: 412 PAPER CODE: 5181

NAME OF COURSE: MARKETMANAGMENT

COMMON WITH PROGRAM (S):

RATIONALE

In the Era of Globalization and Liberalization, this course of Marketing Management is of utmost important to the entrepreneur, industrialist and people working in the field of Marketing and related work.

This course specially designed to help the students in widening their knowledge and understanding of the current market trends and also helpful to start their career in their respective fields along with the knowledge of marketing.

To produce something is not very difficult but to make people come forward to buy it is very difficult task. This statement shows the importance and need of this course in the present scenario.



SEMESTER: FOURTH SCHEME: Jul.10 COURSE CODE: 412 PAPER CODE: 5181

NAME OF COURSE: MARKETMANAGMENT

COMMON WITH PROGRAM (S):

Lectures: 6 Hrs. per week

SCHEME OF STUDIES

S.No.	TOPIC	THEORY	PRACTICAL	TOTAL
		1100	HRS.	HRS.
		HRS.		
1	MARKETING AND CONCE PT	7	-	7
	MARKETING ENDURANT			
2	MARKETING ENVIRONMENT	4	-	4
3	MARKETIN PLANNING AND	8	-	8
	ORGANISATION			
4	MARKET SEGMENTATION	8	-	8
5	MARKETING MIX	4	-	4
Α	PRODUCT MANAGEMENT	11	-	11
В	PLACE MANAGEMENT	9	-	9
С	PRICE MANAGEMENT	8	-	8
D	PROMOTION MANAGEMENT	9	_	9
		_		_
6	UNDERSTANDING CONSUMERS	7	-	7
7	MARKETING RESEARCH AND SALES	11	-	11
	FORECASTING			
8	SALES MANAGEMENT	4	-	4
	TOTAL	90	_	90



SEMESTER: FOURTH SCHEME: Jul.10 COURSE CODE: 412 PAPER CODE: 5181

NAME OF COURSE: MARKETMANAGMENT

COMMON WITH PROGRAM (S):

Lectures: 6 Hrs. per week

CONTENT DETAILS

CONTENT DETAILS				
S.No.	Course Contents	Hrs of		
0.4		Study		
01.	Marketing and Concept	07		
	Evolution of marketing-a historical background			
	The stage of barter			
	The stage of money economy			
	The stage of industrial revolution			
	The stage of competition			
	The emergence of marketing			
	 Selected definitions of marketing 			
	 Different concept of marketing 			
	 The exchange concept 			
	 The production concept 			
	 The product concept 			
	 The sales concept 			
	 The marketing concept 			
	 Difference between selling & marketing 			
	Benefits & significance of marketing			
	 Helps to remove causes for under development 			
	 Improve productivity & efficiency 			
	 Chanalize country's economic resources properly 			
	 Insure better deal for consumer 			
	 Make economic planning meaningful & relevant etc. 			
02.	Marketing environment	04		
	 Internal & external factors 			
	 Demographic environment 			
	 Economic environment 			
	 Political environment 			
	 Physical environment 			
	 Technological environment 			
	 Competitive environment 			
	 Social & cultural environment 			
	Micro & macro environment			

S.No.	Course Contents	Hrs of Study
03	 Marketing planning & organization Scope & importance of planning Steps in marketing planning process Purpose & principle of organization Models of marketing organization Line & staff type Product based organization Territory oriented organization Complex organization Task of chief marketing executive Decentralization 	08
04	Market segmentation - Types of market - Definitions & benefits of segmentation - Method s of segmentation - Geographic segmentation - Demographic segmentation - Psychographic segmentation - Buyer behavior Segmentation - Volume segmentation - Steps in market segmentation - Market targeting	08
05	Market mix Definition of market mix Elements of marketing mix (4 P'S)-Product, Place, Price, Promotion Environmental variable (uncontrollable variables) Customer variable Competition variable Trade variable Environmental variable (a) Product management Components of product The core or basic constituent The associated features The brand names, package,label Types of product The generic product The product management The product The differentiated product The differentiated product The augmented & potential product The product line & product mix New product development (NPD)	41

S.No.	Course Contents	Hrs of Study
	 Significance & classification of new product Stages in NPD Estimating the demand for new product Test marketing Product life cycle (PLC) Concepts & benefits of PLC Different stages in PLC Strategies used in different stages 	
	 (b) Place management Definitions & importance of physical distribution Designing the physical distribution system The distribution channel The role & importance of distribution channel Planning & designing of distribution channel Types of distribution intermediaries 	
	(c) Price management The meaning & importance of pricing Objectives of pricing Factors affecting pricing —Internal & external Pricing methods Cost based pricing Break even pricing Demand based pricing Competition based pricing Product line pricing Tender pricing Affordability pricing Differentiated pricing Pricing policies & setting the price	
	(d) Promotion management - Sales promotion - Importance & objectives of sales promotion - Tools &techniques of sales promotion - Advertising - Role & importance of advertising - Types of advertising - Deciding on the advertising budget - Evaluating advertising effectiveness Difference between sales promotion & advertising	

S.No.	Course Contents	Hrs of Study
06	Understanding consumer - Factor influencing buyer behavior - Information from variety of sources - Socio-cultural environment of buyer - Group influence - Religion & language - Concern about status - Buying motives –Product & patronage motive - Buying habits – Convenience, shopping and spatiality goods	07
07	Marketing research & sales forecasting Definition & importance of marketing research Defining research Defining problem Problem analysis Developing research design Developing research procedure Data collection —Primary & secondary Analyzing & interpretation Summarizing & preparing the research report Method of market research Necessity & purpose of sales forecasting Methods of sales forecasting	11
08	Sales management - Designing the sales force - Managing the sales force - Recruitment & selection - Training, compensation, control - Supervision & direction - Motivation of salesman - Fixing sales quota - Duties & responsibilities of sales manager	04



SCHEME:

PAPER CODE: 5181

Jul.10

SEMESTER: FOURTH COURSE CODE: 412

NAME OF COURSE: MARKETMANAGMENT

COMMON WITH PROGRAM (S):

REFERENCES

- 1. Marketing management Analysis, Planning & Control Philip Kotler
- 2. Principles & practice of Marketing in India C.B.Memoria & R.L.Joshi
- 3. Contemporary Marketing Louis & Boone & David L. Kurtz
- 4. Essential of Management –Koontz
- 5. Marketing management- S.A. Sherlekar

RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL



DIPLOMA IN INFORMATION TECHNOLOGY

Semester: Fourth Scheme: Jul. 10 Course Code: 407 Paper Code:

Name Of Course: PROFESSIONAL ACTIVITIES (PA).

Common With Program (S):

RATIONALE

In this rapidly changing technological world, engineers and technicians are expected to adapt to different situations and perform multiple roles. Hence, it is expected that students must be given ample opportunities to develop multiple skills to excel in the present day circumstances. As engineers, it is vitally important to be able to present/communicate thoughts and ideas effectively using a variety of tools and medium.

Job requirement of technicians also demand, confident and well groomed personality. Also due to stress on quality and time bound activities in the world of work, time management is also equally important. In the industry, the students have to work independently as well as in a group, therefore, apart from their subject knowledge, they are called upon to work as leader of a group of workers, be a team member of a task group. They are also to lead and participate in group discussions, speak extempore on some current subject or technology, present a paper on some project, solve problems and some times even counsel people working with/under him/her. In the polytechnic our student stays for almost three years or so, apart from developing professional/technical skills in the students, the students are also required to develop certain generic skills for total personality development.

Hence, this course has been designed to develop the skills such as presentation skills, learning to learn skills, time management, personality development in the technician passouts.

This course is therefore of a special nature. These generic skills need to be developed in integration with the technical subjects throughout the three years duration.

ENABLING OBJECTIVES:

The students after completing the course will be able to –

- 1.1 present themselves effectively verbally and in writing.
- 1.2 develop learning to learn skills.
- 1.3 develop study skills.
- 1.4 search the information from different sources on the given topic.
- 1.5 manage time effectively.
- 1.6 learn the different techniques of yoga, meditation, exercises etc.
- 1.7 develop the well groomed personality.

Semester: Fourth Scheme: Jul. 10 Course Code: 407 Paper Code:

Name Of Course: PROFESSIONAL ACTIVITIES (PA).

Common With Program (S):

Scheme of Studies

Practicals: 2 Hrs Per Week

S.No.	Topics	Total Hrs
1.	PRESENTATION SKILLS :	
2.	LEARNING TO LEARN SKILLS :	
3.	STUDY SKILLS :	
4.	INFORMATION SEARCH :	
5.	TIME MANAGEMENT :	
6.	PERSONALITY:	
7.	PERSONAL GROOMING :	
		30

Semester: Fourth Scheme: Jul. 10 Course Code: 407 Paper Code:

Name Of Course: PROFESSIONAL ACTIVITIES (PA).

Common With Program (S):

Content Details

S.No.	Course Contents	Hrs of Study
1.	PRESENTATION SKILLS:	
	1.1 Oral Presentation :	
	 Need of effective oral presentation. Characteristics of good oral presentation. Ways of Oral Presentation (Seminar, Viva-voce, Interview, Group Discussion, Lecturing, Power Point Presentations etc.) Gestures/Mannerism during oral presentation Media, methods used for effective oral presentation. Assessment of oral presentation. 	
	1.2 Written Presentation :	
	 Need and characteristics of written presentation. Ways of written presentation (Report writing, manual, handout, notes etc.). Grammar, Punctuation, referencing paragraphing during written presentation. 	
2.	LEARNING TO LEARN SKILLS :	
	Need of Learning to Learn Skills. Type of Learning Skills (Learning face to face, Individualized learning, Distance learning, Self- learning). Developing Learning to Learn Skills.	
3.	STUDY SKILLS :	
	Methods of Good Study Habits Note Taking Developing Reading Skills.	

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DIPLOMA IN INFORMATION TECHNOLOGY

Semester: Fourth Scheme: Jul. 10 Course Code: 407 Paper Code:

Name Of Course: PROFESSIONAL ACTIVITIES (PA).

Common With Program (S):

4.	INFORMATION SEARCH:	
	4.1 Objectives of information search. 4.2 Ways of information search (Internet surfing, Library search, Abstracts, Journals, books etc.)	
	4.3 Assimilation and presentation of information.	
5.	TIME MANAGEMENT :	
	 5.1 Principles of Time Management. 5.2 Time Management matrix. 5.3 Criteria governing Time Management. 5.4 Possible time waster 	
6.	PERSONALITY:	
	6.1 Concept and meaning of personality. 6.2 Characteristics of good personality. 6.3 Factors influencing personality. 6.4 Types of personality. 6.5 Need for desirable personality for success. 6.6 Qualities of complete personality.	
7.	PERSONAL GROOMING:	
	 7.1 Posture and Health. 7.2 Types and importance of posture. 7.3 Importance of yoga and meditation. 7.4 Factors affecting good health-diet, exercise personal cleanliness, sleep and rest. 7.5 Use of cosmetics. 7.6 Dress Code 7.7 Physical Fitness and Inner Strength. 	

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Semester: Fourth Scheme: Jul. 10 Course Code: 407 Paper Code:

Name Of Course: PROFESSIONAL ACTIVITIES (PA).

Common With Program (S):

A) SUGGESTED IMPLEMENTATION STRATEGIES:

- 1. Students should be made to listen to effective presentations of experts, comprehend that and then summarise that orally and in writing. Feedback should be given immediately after each task.
- 2. Also they should be given certain task/assignment on which they need to collect new information in specified time.
- 3. Students should be able to take decision that the particular information can be gathered from such and such sources and should be able to present that confidently in verbally or in writing.

In this particular subject only practical hours are allotted, but, it may be essential to take up certain inputs followed by assignments This may include expert lectures, group discussion, plenary session etc.

B) SUGGESTED LIST OF EXPERIENCES/TUTORIALS:

- 1. Seminar Presentation on Specific topic for fixed time duration.
- 2. Information Collection on a particular topic followed by presentation in specified time duration.
- 3. Visit to multinational outlet for observing personality traits of officials and preparing detailed report.
- 4. Demonstration exercise by personality experts.
- 5. Arranging expert lecturers of well known personality like Shiv Khera etc.
- Selected Book Review.

C) EVALUATION:

Following grade scale of evaluation of performance in PA has been established.

<u> Frades</u>	Level of performance
Α	Excellent
В	Good
С	Fair
D	Average
Ε	Below Expectations

Semester: Fourth Scheme: Jul. 10 Course Code: 407 Paper Code:

Name Of Course: PROFESSIONAL ACTIVITIES (PA).

Common With Program (S):

Reference Books:

S. NO.	TITLE	AUTHOR, PUBLISHER, EDITION & YEAR	ISBN NUMBER
1	How to achieve success and	Sultan Chand and Sons,New	
	happiness	Delhi	
2	How to develop effective	Dr Mittal and Agarwal CS	
	personality		
3	The Art of Public Speaking	Stephen E Lucas	
4	Public Speaking and	Dale Carnegie	
	Influencing Business		