UNIVERSITY OF MUMBAI

No.UG/ 369 of 2005

162

CIRCULAR :

Attention of the Principals of the affiliated colleges in the faculty of Arts, Science and Commerce and Professor-cum-Director, Institute of Distance Education are hereby invited to this office Circular No.UG 164 of 2005 dated 9th May, 2005 relating to introduction of various following Add-on Courses under the University Grant Commission scheme of "Vocationalization of Higher Education in the Faculties of Arts, Science and Commerce and they are informed that approved syllabi of the following Add-on courses are forwarded herewith for their information and record :-

Name of the Course

1. E-Commerce
2. Foreign Trade Management
3. Customer Research Management
4. Stock Market Operation
5. Tax Procedure and Practice
6. Family Business Management
7. International Business (Export Management)
8. Stock Market Operation Management
9. Management of Retail Business
10. Marketing Communication
11. Advertising, Sales Promotion and Sales Management
12. Personal Selling Salesmanship and Sales Force Management
13. Secretarial Practice and Office Management
14. Foreign Trade Management
15. Biodiversity
16. Horticulture
17. Design & Maintenance of Domestic and Industrial (Electric & Electronic Appliances)
18. Food and Nutrition
19. Acturial Science
20. Hindustani Classical Music
21. Functional English
22. Child Care and Child Development
23. Environmental Auditing
24. Web Designing and Office Automation
25. Hardware Maintenance
26. Tissue Culture
27. Horticulture
28. Equipment
29. Maintenance
30. Heritage Management

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To Principals of the affiliated colleges in the faculty of Arts, Science and Commerce and Professor-cum-Director, Institute of Distance Education.

A.C.7.13/18.06.04
M.C.17/31.07.04

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No.UG/ 369-A of 2005 9th September, 2005.

Copy forwarded with Compliments to the Dean, Faculty of Arts, Science and Commerce for information

for REGISTRAR.

****

Copy for information to :-

The Director, Board of College and University Development, Deputy Registrar (Eligibility and Migration)/the Personal Assistants to the Vice-Chancellor, the Pro-Vice-chancellor, the Registrar and the Assistant Registrar, Administrative Sub-Centre, Ratnagiri.

OSD-Cum-Controller of Examinations (10 copies), The Finance and Accounts Officer, Accounts Section, Fort (2 copies), Director (U.C.C., I.D.E. Bldg., Vidyanagari Campus) (2 copies), The Deputy Registrar, A.A. Unit, (2 copies), D.R.(E.A.U.)(1 copy), They are requested to treat this as Action taken report on the concerned resolution adopted by the Academic Council/Management Council referred to in the above Circular and that no separate A.T.R. will be sent in this connection, Accounts Section, Vidyanagari, Kalina Campus (2 copies), Record Section (5 copies) Publication Section (5 copies), CONCOL (1 copy), A. R., Enrollment (2 copies), In-charge, Central Computing Facility (1 copy), D. R., I.D.E. (10 copies), D. R. Statistical Unit (2 copies), D.R.(P.R.O.) (2copies), Superintendent, Thesis Section (2 copies), Superintendent, P. G. Section (2 copies), BUCTU (1 copy), Secretary, MUASA (1 copy), Dy. Accts. (Unit V) (1 copy) Receptionist (1 copy), Telephone Operator (1 copy).

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A.C. Item No. 7.13 dt. 18/6/2004

UNIVERSITY OF MUMBAI

Syllabus
for
ADD–ON COURSE
IN
E-COMMERCE

Prepared by

Smt. M.M.K. College of Commerce and Economics
32nd Road, T.P.S III, Bandra (W), Mumbai – 400 050.

Tel No. : 2649 52 30 / 2648 29 65
Fax : 2649 45 10
Website : www.mmkcollege.com
Email : nanik@mmkcollege.com
skumar@mmkcollege.com

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E-COMMERCE

OUTLINE OF THE COURSE

YEAR I:

SEM I:

- FUNDAMENTALS OF COMPUTERS AND APPLICATIONS
- PRINCIPLES OF MANAGEMENT

SEM II:

- DEVELOPMENT OF PERSONAL SKILLS
- INTERNET PRACTICES AND APPLICATION

YEAR II:

SEM III:

- CONCEPTS OF E-COMMERCE
- NETWORKING

SEM IV:

- CYBER LAWS
- DATABASE MANAGEMENT SYSTEMS (DBMS) & RELATIONAL DATABASE MANAGEMENT SYSTEMS (RDBMS)

YEAR III:

SEM V:

- ADVANCED CONCEPTS OF WEB-DESIGNING
- JAVA PROGRAMMING

SEM VI:

- INTERNET MARKETING
- PROJECT

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Marking Scheme

Semester	Subject	Theory Per Semester	Practical Per Semester	Total
Sem I	Fundamentals of Computers and Applications	30	20	50
Sem II	Principles of Management	50	--	50
Sem III	Personal Skills Development	50	--	50
Sem IV	Internet Practices and Application	30	20	50
	Total	160	40	200

Duration of Examination: 2 Hours

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DETAILED SYLLABUS FOR FIRST YEAR FOR E-COMMERCE

SEMESTER – I

PAPER I

Subject : **Fundamentals of Computers and Applications**

Objectives : To enable students to be covenants with different aspects of computer systems and have working knowledge in WORD, EXCEL and POWERPOINT.

Syllabus Outline:

Fundamentals of Computer

- Understanding the Computer Systems and its components.
- Basic concepts of Hardware and Software, Generations of Computers
- Concepts of Computer Language (i.e. Binary Language)
- Concept of Random and Sequential access of data (Batch, Online and Real Time Processing)
- Input / Output Devices (Latest / Conventional)
- Application Software and System Software.
- Concepts of Operating System. (Function and Types)
- Concepts of Information System

Applications:

- Word Processing using MS-Word
- Electronic Spreadsheet using MS-Excel
- Interactive Presentation using MS-PowerPoint

Reference Books:

1. Donald H. Sanders, Computer Today, McGraw Hill International Editions, Singapore 1988.
2. Alexis Leon, Mathews Leon, Introduction to Computers with Office 2000, Tata McGraw-
Hill Publishing Company Ltd., New Delhi 2001
3. Deepak Bharihoke, Fundamentals of Information Technology, Excel Books, New Delhi
2000

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PAPER II

Subject : **Principles of Management**

Objectives : To acquaint students with the Fundamentals of Management

Syllabus Outline:

- Introduction to Indian Management Thought
- Evolution of Management Thought
- Planning and Decision Making
- Organizing
- Human Resource Management
- Motivation, Leadership and Communication
- Social Responsibility of Business

Reference Books:

1. Knootz, Harold and Weihrich, Heinz, Essentials of Management, Mc Graw-Hill, Singapore 1990.
2. Prasad, L.M., Principles and Practice of Mangement, Sultan Chand, New Delhi, 2002.
3. Ramasamy, T., Principles of Management, Himalaya, Mumbai, 2003

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SEMESTER – II
PAPER V

Subject : **Development Personal Skills**

Objectives : To enhance the students' processes and relational skill that they can work effectively in any organization.

Syllabus Outline:

- The individual and the Organization
- Groups, Teams and Leadership – Concepts and Applications
- Organization Culture
- Concepts and Components of effective communication
- Art of Speaking, Listening and Writing in Business
- Ethics in Business

Reference Books:

1. Robbins, Organization Behaviour
2. Ashawatthpa, Organization Behaviour
3. Thill and Bouvee, Effective Communication

PAPER VI

Subject : **Internet Practices and Application**

Objectives : To enable the students how to create and design their websites.

Syllabus Outline:

- History of Internets, Protocols and Services on the Internet
- Use of Search Engines, Domains
- Security Issues for systems connected to Internet.
- Internet as a Research Tool, Market Research on the Internet.
- Defining Goals using the internet in Business
- Intranets, Concepts and Role of Intranets in a Modern Enterprise
- Viruses, Different types of Viruses,, Features of Anti-virus application and methods of detection, Precaution and Safety Measures.
- Concepts of Web-Designing, Techniques and Layouts
- Designing the webpage using HTML.

Reference Books:

1. A. K. Nayak, Internet Technologies and Application, Dominant Publishers and Distributors, New Delhi, 2003
2. Rick Stout, The World Wide Web- The Complete Refernce, Tata McGraw-Hill, New Delhi, 1996.
3. Harley Hahn, The Internet- Complete Reference, Tata McGraw-Hill, New Delhi, 1996.

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DETAILED SYLLABUS FOR FOREIGN TRADE MANAGEMENT

SEMESTER – I
PAPER I

Subject : **Basics of Foreign Trade.**

Objectives : To familiarise the students with the basic principles of foreign trade and the environment in which foreign trade takes place.

Syllabus Outline:

- ✓ Why trade takes place? Theories of International trade- The classical theory of comparative advantage: Ricardo - Factor endornment and international trade: Heckscher-Ohlin theorem.
- ✓ Trade and Growth – International trade and economic growth –Trade between less developed and developed countries – unequal exchange – Prebisch Singer hypothesis.
- ✓ Instruments of trade policy – Tariffs and Quotas and other non-tariff measures.
- ✓ Foreign Trade market – Structure of the foreign exchange market – Types of transactions – Exchange rate quotation and arbitrage – interrelationship between exchange rate and interest rates.
- ✓ International economic institutions – WTO, IMF and World Bank.
- ✓ Economics of Integration – Types of integration – Theory of Customs Union-Working of EEC.
- A project on any emerging issue in foreign trade, followed by a presentation on viva.
- Mandatory On-job-training and a project on the job experience followed by viva. Jointly evaluated by the company and faculty.

Books for Reference:

1. Bhagwati, Jagdish (ed.), *International Trade*, Selected Readings.
2. Bo Sodersten, *International Economics*.
3. Chacholiades, Miltiades, *International Trade Theory and Policy*.
4. Ellsmorth, P.T., *International Economics*.
5. GOI, *Economic Survey*.
6. Haberler, G., *The Theory of International Trade*.
7. Hoekman, B.M, Kostecki, M.M., *The Political Economy of the World Trading System*.
8. Kenen, Peter, *The International Economy*.
9. Kindleberger, C.P., *International Economics*.
10. Meier, G.M., *The International Economics of Development*.
11. Ohlin, B., *Interregional and International Trade*.
12. RBI, *Report on Currency & Finance*.
13. UNCTAD, *Trade and Development*.

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SEM-I
BASIC OF FOREIGN TRADE
COMMUNICATION SKILLS

SEM II
PRINCIPLES OF MANAGEMENT
ANY ONE FOREIGN LANGUAGE

SEM III
INDIA'S FOREIGN TRADE
LIGISTICS AND SUPPLY CHAIN MANAGEMENT

SEM IV
INTERNATIONAL FINANCE
INTERNATIONAL INSTITUTES AND INTELLECTUAL PROPERTY

SEM V
INTERNATIONAL BUSINESS
DOCUMENTATIONS AND SHIPPING AND INSURANCE MANAMENT

SEM VI
INTERNATIONAL MARKETING
ENTREPRENURSHIP

SEMESTER-II

PAPER II

Subject : Principles of Management

Objectives : To acquaint students with the fundamentals of management

Syllabus Outline :

- Introduction to Management
- Introduction to Indian Management Thought
- Planning and Decision Making
- Organising
- Human Resource Management
- Motivation, Leadership and Communication
- Controlling
- Social Responsibility of Business

Books for Reference :

1. Knootz, Harold and Weihrich, Heinz, Essentials of Management, Mc Graw-Hill. Singapore, 1990
2. Prasad, L.M., Principles and Practice of Management, Sultan Chand, New Delhi, 2002.
3. Ramasamy T., Principles of Management, Himalaya, Mumbai, 2003.

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PAPER II

Subject : **Communication Skills**

Objectives : To develop the communication skills of the students.

Syllabus Outline:

- ✓ Concepts and importance of Effective Communication in Business
- ✓ Components and Barriers of Communication
- ✓ 7 'C's of Communication
- ✓ Appearance and Design of Business Communication
- ✓ The Art of speaking, listening and thinking.

Books for Reference:

1. Fisher, Dalmar, *Communication in Organisation*, Jaico, Mumbai, 1999.
2. Murphy, Herta A. and others, *Effective Business Communications*, McGraw-Hill, Singapore, 2000.
3. Rai, Urmila and Rai, S.M., *Effective Communication (for B.M.S.)*, Himalaya, Mumbai, 2001.

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FOR

UNIVERSITY OF MUMBAI

ADD-ON COURSE IN CUSTOMER RESOURCE MANAGEMENT

SYLLABUS

PREPARED BY

Anjuman-i-Islam's

Akbar Peerbhoy College of Commerce & Economics

NAAC Accredited College

M.S. Ali Road, Do Taki, Mumbai-400 008.

Tel: 2307 4122 / 2308 3587

Telefax-2306 3587

E-mail ID: apcollege.hathway.com

May 31, 2004

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Introduction

In view of the policies of LPG (Liberalisation, Privatisation and Globalisation) it is necessary to utilize and mange the Customers Resources. With that aim in mind, the course of Customer Resource Management (CRM) has been designed.

CRM is a study of effective customer service, public communication strategies, management of information about consumers needs, and management of resources to responsibly meet needs. This course provides students with opportunities to develop skills in leadership, co-operative teamwork, critical analysis of a real human problems, and in communication of project findings to different groups. They will be challenged to apply their knowledge of human behaviour in creative ways to respond to the tasks etc.

Objectives:

At the end of this course, students will be able to:

Understand and apply the concept of corporate social responsibility

Understand the relationship between consumer information, consumer satisfaction and profitability;

Analyse the principles and application of effective customer service;

Contribute to the development of specific industry consumer affairs policies;

Compare the effectiveness of communication strategies in of consumer oriented situations;

Undertake a consumer educator role and a consumer advocacy role;

Understand and interpret issues of importance to the consumer / trade relationship;

Understand customer information and complaint handling system.

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Customer Resource Management

Outline of the Course

Certificate Course:

First Year:

I. Principles of Management
II. Principles of Marketing
III. Personal Skills Development
IV. Customer Resource Management

Diploma Course:

Second Year:

I. Sales and Marketing Automation
II. Customer Relationship Management
III. Customer Resource Management –II
IV. Service Sector Management

Advance Diploma Course:

Third Year:

I. ERP: Enterprise Resource Planning
II. C-Resource M. – Case Study - III
III. Supply Chain Management
IV. Project Work

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Detailed Syllabus for First Year Certificate Course

Paper –I

Subject : Principles of Management

Objectives : To acquaint students with the fundamentals of management.

Syllabus Outline:

- Introduction to Management
- Evolution of Management Thought and Role of Scientific Management
- Planning and Decision Making
- Organising
- Human Resource Management
- Motivation, Leadership and Communication
- Controlling
- Social Responsibility of Business

Reference Books:

1. Knootz, Harold and Weihrich, Heinz, *Essentials of Management*, Mc Graw-Hill, Singapore, 1990.
2. Prasad, L.M., *Principles and Practice of Management*, Sultan Chand, New Delhi, 2002.
3. Ramasamy, T., *Principles of Management*, Himalaya, Mumbai, 2003.

Paper –II

Subject : Principles of Marketing.

Objectives : To provide the student with the basic understanding of marketing.

Syllabus Outline :

- Introduction to Marketing
- The Marketing Process
- Market Segmentation
- Consumer Behaviour
- Marketing Research
- Product
- Price
- Channels of Distribution
- Promotion
- Role of Electronic Commerce in Marketing

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Reference Books:

1. Kotler, Philips, *Marketing Management*, Prentice-Hall of India, New Delhi, 2003.
2. Ramaswamy, V.S. and Namakumari, S. *Marketing Management*, Macmillan, New Delhi, 1999.
3. Saxena Rajan, *Marketing Management*, Tata Mc Graw-Hill, New Delhi, 2002.

Paper –III

Subject : Professional Skills Development

Objective : To develop the Communication Skills of the students

Syllabus Outline :

- Concepts and Importance of Effective Communication in Business
- Components and Barriers of Communication – Principles of Communication
- 7 'C's of Communication
- Appearance and Design of Business Communication
- The Art of speaking, listening and thinking

Books for Reference:

1. Fisher, Dalmar, *Communication in Organisation*, Jaico, Mumbai, 1999.
2. Murphy, Herta A. and others, *Effective Business Communications*, McGraw-Hill, Singapore, 2000.
3. Rai, Urmila and Rai, S.M., *Effective Communication (For B.M.S.)*, Himalaya, Mumbai, 2001.

Paper –IV

Subject : Customer Resource Management-I

Objective : To realize the value of customers and manage them.

Syllabus Outline :

- Customer Resource Management
- Definition and Concepts
- Components of CRM
- Design and Style of CRM
- CRM Strategy
- CRM Solutions
- Advantages and Impact of the CRM Implementation
- Customer Relationship Management: Concepts and Need
- Customer–Facing Process and Management
- Importance of Knowledge Management
- An Overview of Business Process Outsourcing (BPO)

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Reference:

1. Greenberg, Paul, *Customer Relationship Management*, Tata, Mc Graw-Hill, New Delhi, 2003.
2. Sheth, Jagdish, N. and others, *Customer Relationship Management*, Tat Mc Graw-Hill, New Delhi, 2003.
3. WWW.xchange.com
4. WWW.crm-form.com

* * * * * *

Chetana's H.S. College of Commerce & Economics, and Smt. Kusumtai Chaudhari College **No. 03**

Career Oriented Add-On Course in Stock Market Operations

1.	**Name of the college**	Chetana College
2.	**Name of the course**	Stock Market Operations
3.	**Co-ordinating Dept.**	Accountancy
4.	**Name & Designation of the Course Co-Ordinator**	Mr. G. A. Waingankar.
5.	**Course Objectives**	1. To provide basic understanding about Capital Market and its operations
		2. To create for the students an additional avenue of self-employment.
		3. To provide to the students basic of financial services for taking up employment in financial sector
		4. To inculcate training and practical approach among the students by using modern technologies in the field of Capital Market

6. Course Duration		**Working days of each year**
Certificate Course	1st Year	200
Diploma Course	2nd Year	200
Advance Diploma Course	3rd Year	200

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7. Credit Allocation

First Year : CERTIFICATE COURSE IN STOCK MARKET OPERATIONS

Theory and Practical	Units	Credits	Workload in Hours
Units – 1	Overview of Indian Financial System and its constituents.	4	60
Units – 2	Various types of Financial Service	6	90
Units – 3	Regularatory and legal framework of Capital and Money Markets.	4	60
Units – 4	Introduction to Computers	3	45
Units – 5	Financial Accounting	3	45
	Total		300
Units – 6	Assignments and Practicals	10	150
	Grand Total	30	450

Second Year : DIPLOMA COURSE IN STOCK MARKET OPERATIONS

Theory and Practical	Units	Credits	Workload in Hours
Units – 1	Study of Financial Statements	3	45
Units – 2	Mutual Funds & Depository	3	45
Units – 3	Organization of Stock Exchange	2	30
Units – 4	Trading & Settlement Mechanism and Clearing Corporation	8	120
Units – 5	IPO, Book Building Process & Listening of Securities	4	60
	Total		300
Units – 6	Assignments and Practicals	10	150
	Grand Total	30	450

Third Year : ADVANCE DIPLOMA COURSE IN STOCK MARKET OPERATIONS

Theory and Practical	Units	Credits	Workload in Hours
Units – 1	Introduction to Derivatives	2	30
Units – 2	Futures	4	60
Units – 3	Options	4	60
Units – 4	Trading and Settlement Mechanism of Futures and Options	6	90
Units – 5	Accounts and Audits of Stock Brokers	4	60
	Total		300
Units – 6	Assignments and Practicals	10	150
	Grand Total	30	450

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DETAILS OF SYLLABUS:

First Year : CERTIFICATE COURSE

Unit – 1 Overview of Indian Financial System and its constituents		
1	-	Nature and Role of Financial System.
2	-	Indian Financial System.
3	-	Government Securities Market.
4	-	Industrial Securities Market.

Unit – 2 Various types of Financial Service		
1	-	Hire purchase Finance
2	-	Lease and Housing Finance
3	-	Capital Market Services
4	-	Merchant Banking
5	-	Credit Rating
Unit – 3 Regularatory and legal framework of Capital and Money Markets.		
1	-	Securities Contracts (Regulation Act – 1956)
2	-	Securities and Exchange Board of India
3	-	Stock Exchange and their Organization
4	-	National Securities and Depository Limited

Unit – 4 Introduction to Computers		
1	-	Computer Hardware
2	-	Computer Software
3	-	Internet
4	-	Electronic Commerce

Unit – 5 Financial Accounting		
1	-	Meaning and Scope of Accounting
2	-	Accounting Transactions
3	-	Basic Accounting Procedures
4	-	Preparation of Journal, Ledger and Trial Balances

Second Year : DIPLOMA COURSE

Unit – 1 Study of Financial Statements		
1	-	Income Statement and Balance sheet
2	-	Accounting ratios
3	-	Interpretation of Financial Statements
4	-	Cash Flow and Fund flow Statements

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Unit – 2 Mutual Funds & Depository		
1	-	Different Types of Mutual Funds
2	-	Recent Developments in Mutule Funds
3	-	Depository Participants
4	-	Different Depositories

Unit – 3 Organization of Stock Exchange		
1	-	Regional Stock Exchanges
2	-	National Stock Exchange
3	-	Role of Stock Exchanges
4	-	Membership of Stock Exchanges

Unit – 4 Trading & Settlement Mechanism and Clearing Corporation		
1	-	Trading Systems
2	-	Clearing Entities
3	-	Clearing Mechanism
4	-	Settlement Mechanism

Unit – 5 IPO, Book Building Process & Listening of Securities		
1	-	Issue of Securities
2	-	Book Building
3	-	Requirements regarding listing of securities
4	-	New issues market

Third Year : ADVANCE DIPLOMA COURSE

Unit – 1 Introduction to Derivatives		
1	-	Forward Contracts
2	-	Different types of Derivatives
3	-	Derivatives market in India
4	-	Different players in derivatives

Unit – 2 Futures		
1	-	Meaning and definition of Future contract
2	-	Futures on Index
3	-	Futures on individual stocks
4	-	Future Strategies

Unit – 3 Options		
1	-	Different types of Options
2	-	Pricing of Options
3	-	Option on Index And Individual Stocks
4	-	Option Strategies

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Unit – 4 Trading and Settlement Mechanism of Futures and Options		
1	-	Trading Systems
2	-	Clearing Entities
3	-	Clearing Mechanism
4	-	Settlement Mechanism

Unit – 5 Accounts and Audits of Stock Brokers		
1	-	Accounting books and Records
2	-	Service Tax
3	-	Audit Requirements
4	-	Client Record

9. Books Recommended

1. Indian Financial System – M.Y.Khan
2. Financial Institutions and Markets – L.M. Bhole
3. Financial Services in India – M.Y. Khan
4. Globalisation Indian Financial Markets – R. K. Tondon And S. L. Gupta
5. Capital Market in Planned Economy – NCAERT, Delhi
6. Modules of National Stock Exchange
7. Modules of Bombay Stock Exchange
8. Reports of BSE and NSE
9. Introduction to Accountancy – T. S. Grewal.
10. Double Entry Book Keeping – J.R. Botliboi.
11. Handbook on Service Tax – Taxman

10. Course Fees : Rs. 4000/- per student per year.

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H.R.COLLEGE OF COMMERCE & ECONOMICS

Add on Course
Syllabus for the
Certificate Course inTax procedure & Practice

Objectives
To provide to students the practical and theoritical knowledge of the subject to be competent in the job market.

PAPER – I

INCOME TAX LAW

Extent and application, definitions, previous years, residential status, Income which do not form part of total income ; Computation of total income, heads of income ; salaries ; Income from house property ; profit and gain from business and profession , capital gains ; income from other sources.

Income of other persons including assessees's total income, aggregation of income and set off and carry forward of lossess, deduction from Gross total income under chaper VIA, rebate of income tax (under section 88)

Ist Term :

1) Definition	2 Lectures
2) Residential Status	6 Lectures
3) Incomes which do not form part of total Income	6 Lectures
4) Heads of Income :	
a) Salaries	15 Lectures
b) Income from House property	15 Lectures

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IInd Term :

c)	Profits & Gains of Business & Profession	20 Lectures
d)	Capital Gain	20 Lectures
e)	Income from other sources	5 Lectures
5)	Income of other persons including assesses total income	6 Lectures
6)	Set off and carry forward of losses	5 Lectures
7)	Deduction from Gross total income	40 Lectures
8)	Section 88/ 88 /88 C (Rebate)	5 Lectures
9)	Computation of Tax Liability	5 Lectures

Paper Pattern

Examination **2 hrs.** **50 Marks**

Q1. is compulsory carrying 14 marks

Attempt any 3 out of 5 carrying 12 marks each.

Reference

Income Tax

1. Student guide to Income Tax — V.K.Singhani
2. Ready Recokner to Direct Tax — N.V.Mehta, V.K.Singhani
3. Income Tax Act & Rules — Taxmann

Journals

1. The journal of Institute of Chartered Accountant of India.
2. TheJournal of Bombay Chartered Accountant Society

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PAPER II

State Sales Tax Procedure and Practice

1. Salient features of State Sales Tax act and rules made there under.
2. Important terms and definitions.
3. Incidental and levy of tax-when, what and how the tax is paid.
4. Registration of dealers-Compulsory registration under the prescribed form and the requisite fee and security and surely for the purpose of registration and certificate of registration-amendment, canceling and obtaining duplicate registration certificate and procedure thereof.
5. Rates of taxes.

Concessional rates-when availed

Use of various kinds of forms for availing concessional rates under the respective state , sales tax procedure for apllying for such concessional form and maintenance of records and issue and receipt of such declaration form an maintenance of records thereto.

Return and procedure for recovery and refund of tax.

Deposit of sales tax and filling and filing of challan in the prescribed form. Filing of the returns in the prescribed form and procedure for claiming refund of tax.

Central Sales Tax-Procedures and Practice

1.Regulatory framework- An overview of central Sales tax, 1956 an overview of central sales tax act (Registration and turnover rules, 1957)

Important out terms and definitions:

Dealer, declared goods, goods, place of business, sale price, turnover, interstate sale. When a sale or purchase of goods takes place outside the state.

When the sale or purchase of goods is in the course of import or export.

Registration pf dealers and procedures thereof-filing and filing of application in form A for registration; relevant fees payable security/surity for registration.

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Grant of certificate of registration in Form.
Procedure for amendment, cancellation and obtaining duplicate certificate of registration.

2. Rates of Tax

Concessional rate when available, kinds of forms for availing the concessional rates and maintenance of records related thereto.

(A)Sales to the registered dealers against Form C

Purchasers obligations, procedure for obtaining Form C from Sales Tax authorities and issuing of Form C to dealer. Application under prescribed form with requisite fee for obtaining Form C. Maintenance of records for receipts and issue of Form C Form2.

Sellers obligations : Obtaining Form 'C' from purchasers.

Maintenance of records of 'C' form collected and submission of 'C' form at the time of assessment.

(B)Sales to Government against 'D' Form.

Form 'D' – use and custody of maintenance, etc. of records of certificates in Form 'D'.

(C)Subsequent sale in the course of inter-state sale and receipt and issue of form E-1 and E-2 in connection hereto.

Application for obtaining Form E-1 and E-2 and relevant fees to be paid therewith, maintenance of records E-1 and E-2 Forms for receipts.

3. Branch and consignment transfer

Inter state transfer of goods from one office to another or principal to agent or agent to principal and issue and receipt of Form F.

Application of obtaining Form F and the relevant fee, maintenance of records of such forma and matters incidental there to form No. 5.

1. Determination of turnover, deductions from turnover.
2. Return of sales tax payable under the Central Sales Tax Act, 1956. Form No. 1 – filling .

SALES TAX

Ist Term :

BOMBAY SALES TAX

1. Features	2 Lectures
2. Important terms and definition	15 Lectures
3. Incidental and levy of tax	15 Lectures

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4. Registration of dealers	6 Lectures
5. Rates of tax	6 Lectures
6. Concessional rates	6 Lectures
7. Various kinds of forms	9 Lectures
8. Return and procedure for recovery refund of tax	6 Lectures
9. Deposit of Sales tax and filing	10 Lectures

IInd Term :

CENTRAL SALES TAX

1. Overview of central sales tax	2 Lectures
2. Important terms and definition	15 Lectures
3. Principles for determining sales	15 Lectures
4. Registration of dealers and procedures thereof	6 Lectures
5. Concessional rate when available	6 Lectures
6. Branch and consignment transfer	6 Lectures
7. Determination of turnover, deduction from turnover	15 Lectures
8. Return of sales tax	10 Lectures

Paper Pattern

Examination **2 hrs.** **50 Marks**

Q1. is compulsory carrying 14 marks
Attempt any 3 out of 5 carrying 12 marks each.

Reference

Sales Tax

1. Bare Act
2. Indirect Tax V.S. Dattey

Journals

3. The journal of Institute of Chartered Accountant of India.
4. TheJournal of Bombay Chartered Accountant Society

Practical Training

1. On-the-job-training
2. Practical work
3. Preparing and filing returns

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Syllabus for the
Diploma Course in Tax Procedure & Practice
PAPER - III

Income Tax Procedure & Practice

Detailed Contents :

1. Regulatory Framework – An overview of Income – tax Act 1961 and income tax rules, 1962.
2. Income Tax authorities.
3. Basis of charge – who is liable to pay income – tax person, assessee, assessment of year, previous year, residential status and incidence to tax.
4. Permanent Account No. – Procedure for obtaining permanent Account No. (PAN) – filling and filling of application under form No. 49A
5. Computation of total income for filing of returns – Heads of income, deductions under chapter VIA, computation of Tax in case of individual, Hindu Undivided Family, Firm, Companies, Rebate of Income tax under section 88.
6. Payment of Tax : Tax deducted at source. Advance tax, Self Assessment Tax.

A. Tax deducted at source :

Filing and filing of applications form for obtaining TDS number under form No. 49 – B obligation of the person making payment, who and when the person is liable to deduct tax at source. Procedure and rate of tax deducted at source on various payments.

Employees Obligations :

Stage I : Certificate to be issued to the recipients - filing and issue of the various TDS forms (16, 16A, & 16B)

Stage II : Deposit of tax deducted at source – filling and filing of the challan and deposit of tax.

Stage III : Submission of returns of TDS under Form No. 24, Form No.26, 26A, 26K, 26C, 26D, 26E.

Recipients Obligations :

To obtain TDS certificate from payer, filling and filing of relevant certificate for lower or no deduction of tax a source. (Form No. 13C, 14, 14B, 15, 15A, 15AA, 15B, 15D, 15E, 15F, 15G, 15H, 15F)

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B. Advance Tax -:

Who is liable to pay advance tax, computation of advance tax, Installment and due date of advance Tax , interest payable by the assessee. Filing of Challan and deposit of Advance Tax.

C. Self Assessment Tax -:

Filing of the challan and depositing of the tax thereof; interest under self assessment

Return of Income : who is liable to file return of income , time limit, return of loss, Belated return , Revised Return, Defective Return, Return by whom to be signed, filling and filing of Return of income under :

Form No. 1 : In case of companies other than claiming exemption under section 11.
Form No.2 : For assesses (other than companies and those claiming exemption under section 11) Whose total income includes Profit and Gain from business and profession.
Form No. 3 A : For assesses including companies claiming exemption under section 11.
Note : practical Training on the Paper is essential.

Assessment Procedure : Inquiring before Assessment
Assesment under section 143 (1), Regular Assessment, issue of notice where income has escaped.
Assessment, Time limit for Notice, Time limit for completion of assessment and reassessment.

Post Assessment Procedures

A. Refund: who can claim refund. Form No.30 for refund. Time limit
   for claiming refund, Refund on appeal, interest on refunds.
B. Rectification of mistake(s).
C. Appeals and revisions: When an assessee can file appeal, appellate
   Authorities, procedure for filing appeal, filling and filing of Forms No.35, Form No.36, time limit for filing appeal, Revision by Income-Tax Commissioner.
D. Penalties & Procedure: Procedure for imposing penalties, waiver of

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Penalty, nature of default and penalties imposable.
Transfer of moveable property; Filling and Filing of Form No.37EE, Form No.37G, Form No.371.
Tax Clearance Certificate & exemption certificate procedure and
filling of Form No.31.

Ist Term :

1. Computation of Tax	40 Lectures
2. Deductions under chapter VIA	25 Lectures
3. Permanent account no.	05 Lectures

IInd Term :

4. Tax deducted at source	30 Lectures
5. Advance tax	10 Lectures
6. Return of Income	20 Lectures
7. Assessment procedure	20 Lectures

Paper Pattern

Examination **2 hrs.** **50 Marks**

Q1. is compulsory carrying 14 marks
Attempt any 3 out of 5 carrying 12 marks each.

Reference

Income Tax

3. Student guide to Income Tax	V.K.Singhani
4. Ready Recokner to Direct Tax	N.V.Mehta
	V.K.Singhani
3. Income Tax Act & Rules	Taxmann

Journals

1. The journal of Institute of Chartered Accountant of India
2. The journal of Bombay Chartered Accountant Society

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PAPER - IV
Income Tax Procedure & Practice

Procedure & Practice : Wealth Tax

1. Regulatory framework and overview of Wealth Tax Act, 1975 and Wealth Tax Rules, 1957.
2. Wealth Tax Authorities.
3. Important terms and definitions, Valuation date, Assessment Year, meaning of assets, net wealth, debt, deemed asset, exempted assets.
4. Exempted Assets, Valuation of invaluable property, & jewellery, computation of Net Wealth, Computation of Wealth Tax, Limit for filing of Wealth under Form A & B.

Procedures and Practice : Customs

Details of Contents :

1. Role of customs in international trade.
2. Organisation of customs in India administrative and operation authorities.
3. Regulatory framework – An overview of Customs Act, 1961; An overview of Customs Tariff Act, 1975.

Important terms and definitions :

Assessable value baggage, bill of entry, suitable goods, duty exporter foreign going vessels, aircraft goods, import manifest, importer, prohibited goods, shopping bill, stores, bill of lading, export manifest DOE, FAS, CIF, GATT, Letter of Credit.

4. Kinds of Duties – basic auxiliary, additional or countervailing : Basis of Levy – advelorem, specific duties.
5. Prohibition of exportation and importation of goods and provisions Regarding notified and specific goods.
6. Import of goods – free import and restricted import, Types of restricted imports – prohibited goods, canalised goods, import against licensing, types of import of cargo, import of personal baggage, import of software, import cargo

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(a) Import by land, sea or air route
(b) By post clearance procedure – for home consumption for warehousing exbond clearance.

Steps and documents to be prepared and filed, via. Bill of Entry I

Form No. 22 bill of entry for home consumption
Form No. 23 bill of entry for warehouse
Form No 24 Shipping bill for exbond clearance for home consumption and other accompanying documents.

Clearance Procedure for import by post.

Clearance of Baggage-import of Beggage - meaning and kinds of baggage, rules and procedure of import thereof – general passenger,tourist passenger and transfer of residence passenger (Form No. 37 – Form of baggage declaration)

7. Export of goods-free export and restricted exports;
   Types if restricted exports – prohibited exports, canalized experts, exports against licensing;
   Types if exports – Export of Cargo; export of baggage
   Types of exporters – Manufacturer Exporter and Mercant exporter;
   Export of cargo – (a) by land,sea and air route (b) by post clearance procedure – procedure and filling and filling of relavant documents.

   - Form No. 94 – Shipping bill for Export of suitable goods
   - Form No. 95 – Shipping bill for Export of duty free goods.
   - Form No. 96 – Shipping Bill for Export of duty free goods exbond
   - Form No.98 – Bill for Export dutiable goods
   - Form No. 99 – Bill for Export of duty – free goods
   - Form No 100 – Bill for Export of duty – free goods exbond

Duty drawback - Meaning / Scheme, Procedure and documentation thereof.
Form No. 93 – Shipping bill for export of goods under claim for duty drawback.

-Form no. 97 – Shiping bill for export of goods under claim for duty drawback.

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Ist Term :

Wealth Tax

1. Overview of Wealth Tax	2 Lectures
2. Wealth Tax Authorities	1 Lectures
3. Important terms and definition	3 Lectures
4. Exempted Assets	7 Lectures
5. Return of wealth	2 Lectures

Customs

1. Role of Customs in international trade	5 Lectures
2. Organisation of customs in India administrative and operation authorities	5 Lectures
3. Overview of customs act	2 Lectures
4. Important terms and definition	15 Lectures
5. Kinds of duties	15 Lectures
6. Prohibition of exportation and importation to goods	5 Lectures
7. Import of goods	5 Lectures

IInd Term :

Customs

8. Steps and documents to be prepared and filed	10 Lectures
9. Export of goods – free export and restricted exports	5 Lectures

Service Tax

1.Overview of the Act	2 Lectures
2. Important Terms and Definition	15 Lectures
3. Services liable for Tax	20 Lectures
4. Rates	2 Lectures
5. Steps and documents to be prepared and filed	15 Lectures
6. Registration	5 Lectures
7. Returns	9 Lectures

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Paper Pattern

Examination **2 hrs.** **50 Marks**

Q1. is compulsory carrying 14 marks
Attempt any 3 out of 5 carrying 12 marks each.

Reference

Income Tax

5. Student guide to Income Tax	V.K.Singhani
6. Ready Recokner to Direct Tax	N.V.Mehta V.K.Singhani
3. Income Tax Act & Rules	Taxmann

Sales Tax

3. Bare Act	
4. Indirect Tax	V.S. Dattey

Journals

1. The journal of Institute of Chartered Accountant of India
2. The journal of Bombay Chartered Accountant Society

Practical Training

1. On-the-job-training
2. Practical work
3. Preparing and filing returns

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Family Business Management

Objectives

The Course addresses aspects of managing an established family business, on a day-to-day basis, and of planning for succession to the next generation: values, life cycles, marketing strategies, succession, conflict resolution, communications legal and financial aspects, estate planning, governance and philanthropy. The horizon of family business has a wider scope that includes Business, Profession Skill, Services & Political legacy.

It is a tradition of Indian Culture to initiate the process of transferring of family skills and knowledge to the next generation at very early age within family itself Every family desires to pass the baton of its Business/Profession to the Scion of its family and it becomes two fold efforts to achieve that first, to generate interest in the next generations for Family Business/Profession and then to transfer the knowledge/skills to them.

Student will have opportunities to

- Learn the characteristics that differentiate family businesses from other businesses.
- Examine the life cycles of family businesses and of their founders.
- Identify, comprehend, and develop solutions for challenges faced by family businesses.
- Practice communication with family business owners, managers, family members, and students of the field.
- Explore the dynamics and practices of real family businesses, in the India and globally.
- Consider the impact that family businesses may have on your leadership potential and career path.

Year	Semester	Paper	No of Period per Week		Examination Scheme			
			Theory	Practical	Theory		Assignment/ Tutorial/Class Work	
					Hours	Marks	Hours	Marks
First Year Certificate	Ist	I	03	03	02	60	03	40
		II	03	03	02	60	03	40
	2nd	I	03	03	02	60	03	40
		II	03	03	02	60	03	40
			12	12				

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FIRST YEAR
Subject: DYNAMICS OF FAMILY BUSINESS

Total Lectures : 50

Chapter 1: The Performance, Problems, and Paradoxes of Family Enterprises.

- Business, Skills & Profession : Definitions
- What is family business?
- Why family firms outperform the market.
- How family firms dominate the economy.
- The family business paradigm.

Chapter 2: Family business models

- Resolving the family versus business paradox.
- Evaluating "family first" versus "business first"orientation.

Chapter 3: Family Dynamics

- Understanding how families work.
- Systems analysis and systems intervention.
- Family code.
- Genograms.

Chapter 4: Generational Evolution of Business Families

- The life cycle of the business, the family, the individual.
- Forms and structures of ownership.
- Critical issues for continuity.

Chapter 5: Family Business Strategy and Competitive Advantage

- How strategy is different for family firms.
- How family factors shape business strategy.
- Competitive advantage and unconventional strategy.

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Chapter 6: Succession

- "Letting go" and "taking charge."
- Dilemmas for successors.
- Negotiating entry.
- Succession/continuity task force.
- Education, relevance to Family Business.

Chapter 7: Family Continuity Planning

- Family planning process.
- Gaining family unity and commitment.
- Family constitution/protocol.
- 'Fair process" and trust.
- Transfer of Skills

Chapter 8: Leading Tradition and Change.

- Indian Family Traditions and Values
- Cultural contradictions to growth.
- Creating culture of change.
- Joint Family System.

Chapter 9: Women in Family

- Role of Women in General Family Business (Wife & Daughter)
- Widows in family Business.
- Other relations

Chapter 10: The Enterprising Family

- Family offices, family foundations and family investment companies.
- "Best practices" of long lasting families-in-business—a course summary.

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Books for Reference

1. Entrepreneurs Are Made Not Born by Lioyd E. Shefsky; McGraw-Hill, Inc.
2. Family Business Ownership: How to be an Effective Shareholder by Craig E. Aronoff, Ph.D. and John L. Ward, Ph.D.
3. Make Change Your Family Business Tradition by Craig E. . Aronoff, Ph.D. and John L. Ward, Ph.D.
4. Family Business Values: How to Assure a Legacy of Continuity and Success by Craig E. Aronoff, Ph.D. and John L. Ward, Ph.D.
5. Family Business Policies: Definitions by John L. Ward.

Projects

1) Preparing a project report of a individual who have inherited a business/ profession / services/ skill. The report should be in-depth study on family dynamics of the business, the individual have inherited (10 hours).
2) Fortnight / Monthly Group meting of all the student on Current topical issue of family dynamic / The meeting will be video-recorded and the performance of student will be analysed and assessed (15 hours)

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2 **Subject: Entrepreneurship Development & Economics**

Section I Course Title: Entrepreneurship: Practice and Principles

Total Lectures: 40 Hrs.

2.1 Entrepreneurship Profession / Skill : Definitions, Theory & Process

Role of Entrepreneurs, Sources of Entrepreneurial Opportunity. Economic and Behavioural Aspects of Entrepreneurship.

Development of Entrepreneurial Theoy. Notions, Concepts, Definitions. Factors Contributing to Entrepreneurial Success. Entrepreneurial as Capitalists. Human And Economic Capital.

2.2 Intrapreneurship

Factor That Promote or Inhibit Entrepreneurial and Entrepreneurial Activity. "Going It Alone" Phenomenon. Resources and Risks.

2.3 Issues to Contend within Entrepreneurship

Small **Business** and Entrepreneurship. Conflicts That Plague **Family Business**. Professional Executive versus the Entrepreneur.

2.4 Entrepreneurship and Corporate Development

Adapting Organisation Design. Stages of **Development.** **Development** Appropriate Climates. The Indian Situation.

2.5 Management Functions and Entrepreneurship

Planning, Organisation, Leading and controlling in New Ventures. Crises along the Entrepreneurship Road.

2.6 Indian Entrepreneurhip

Patterns, Strategies, Performance.

2.7 The Entrepreneurial Manager

Challenges in the Various **Business** Functions in the Context of Globalisation..

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Books for Reference.

1. Entrepreneurship – Robert D. Hisrich & Michael P. Peters – Tata Mc Graw–Hill-New Delhi.
2. Entrepreneurship Development – Indo-German Technical Co-Operation Project- (Bhopal) – Tata Mc Graw Hill – New Delhi.
3. Developing New Entrepreneurs – Entrepreneurship Development Institute of India, Ahmedabad.
4. Manual on Developing Entrepreneura Motivation – National Institute for Entrepreneurship & small Business Development-New Delhi.
5. Entrepreneurship Development – Principles, Policies & Programmes- Sara naval P – Ess Peekay Publishing House..
6. Developing Entrepreneurship – National Institute of small Industry Extension. Training, Hydra bad (sarma S.V.S.)
7. Modern Small Industry in India; Problems & Prospectus – Ram K. Vepa, Saga Publication, New Delhi.
8. Small scale entrepreneurs on Industrial Development – The India Experience – Suri K.B. Sage Publication, New Delhi.
9. Entrepreneurship in India's small scale Industries – Taub, P.T.Riichard Taub & L.Doris – Manohar Publications; New Delhi.
10. The woman Entrepreneur: Starting, financing & managing a Successful New Business – R.D.Hisrich & C.G.Brush.

2 Section – II Business Economics

Total Lectures :10 Hrs.

Introduction to Micro Economics
Demand & Supply
Cost & Revenue Analysis
Market Structure

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Books for Reference

1. Dobbd lan, (2000) Managerial Economics, Oxford University Press
2. Stiglits, Principles of Microeconomics
3. Anindya Sen – (1999) Micro Economic Theory, Oxford University Press
4. Da Costa G.C. 1980 Production, Prices & Distribution.Tata McGraw Hill, New Delhi.
5. Lipsey – An introduction to Positive Economics
6. Dolakia, R & Oza. A Micro Economics for Management Students
7. Ahuja H.L. Business Economics Micro.

(30 Hrs.)

Projects

Submit a total business plan and organisation structure & dynamics for your family business or of a family know to you.

(20 Hrs.)

Fortnightly meeting of student will be organised to discuss current economic news item and their effect on their family business

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THE KET'S V.G.VAZE COLLEGE OF ARTS, SCI. AND COM., MULUND, MUMBAI – 81.

Career Oriented Course in International Business (Export management)

1. Name of the Course: **International Business (Export Management)**

2. Course Objectives: **To provide a career oriented programme to students in the B.A., B.Sc and B.Com. degree course, which runs parallel to the conventional course.**

3. Eligibility : **A candidate shall have passed Std. XII examination of the Maharashtra State Board of Secondary and Higher Secondary Education or its equivalent or undergraduate student of any faculty.**

4. Duration: **The course shall be a part-time course. The duration of course shall be one year.**
   a) **Certificate Course :One Year – 180 working days**
   b) **Diploma Course :One Year – 180 working days**
   c) **Advanced Diploma Course :One Year – 180 working days**

5. Scheme of Examination: i) **There will be two papers of 2 ½ hours duration carrying 70 marks each at the end of academic year.**
   ii) **There will be projects / Field Work / continuous evaluation carrying 30 marks for each paper.**

6. Passing standard: **Minimum marks required for passing is 40% of aggregate of theory and Projects taken together. Students completing 30 credits will be awarded certificate in that course.**

7. Syllabi for First Year Certificate Course

Units	*Credits*	*Programme Details – First Year*	*Workload (in Hours)*
I	02	Globalisation	30
II	04	EXIM Policy	60
III	04	Starting a new export / import organization	60
IV	04	Exports – Procedure	60
V	04	Imports – procedure	60
VI	02	Career Opportunities	30
VII	10	Assignments and Practicals	150
Grand Total	**30**		**450**

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Units I : **Introduction to International Business**

a) Globalization of World Economy
b) Globalization of Business – Meaning and Dimensions
c) Features of current globalization – Role of MNC's
d) Foreign Market Entry strategies
e) Pros and cons of globalization
f) Globalization of Indian business
g) India's International Economics Policy
a) Composition of India's International Trade
b) Major Markets

Units II : **EXIM Policy**

a) Meaning, objectives and Role of EXIM Policy
b) Highlights / Broad features of EXIM Policy 2002-2007
c) Implications of EXIM Policy 2002-2007
d) Revisions to the EXIM Policy 2002-2007
e) Mid-Term Export strategy
f) Export promotion organizations
g) Export assistance and incentives

Units III : **Starting a new export / import organization**

a) Form of organization
b) Organization structure
c) Policy Formulation
i) Capital ii) Distribution channels iii) Countries
iv) Broad objectives v) Number of staff
d) Market research
e) Role of Internet
f) Product development
g) Registrations / memberships (IEC, EPC, etc.)

Units IV : **Exports Procedures and Documentation**

a) Processing of export orders
b) Payment terms
c) Incoterms and UCPDC
d) Costing and Pricing
e) Practical exercises on Letter of Credit Transaction
f) Credit facilities from Banks for purchasing exportable goods
g) Foreign Bill discounting
h) Export inspection and quality control
i) Reserve Bank procedure
j) Customs procedure
k) Shipment of the goods by sea and air
l) Payment risk management

Units V : **Imports Procedure and Documentation**

a) Free imports
b) Imports for own use and trade
c) High sea sales

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d) Re-export of freely imported goods for sales or repairs / replacement
e) Import of raw materials and components
f) Import of new and second-hand capital goods

Units VI : **Career Opportunities**

a) Exporter / Importer Entrepreneur
b) Executive exports – Marketing, Financing, Logistics, Procedures and Documentation
c) Support functions – Language skills, cross culture and Communications, Computer IT Applications, Research, Travel and Tourism / Exhibitions
d) Specialization – Market, product, policies, logistics

8. **Course Fees recommended**: Rs 3000/- per year per student.

9. **Books Recommended**

1. Indian Financial System- M.Y. Khan]
2. Financial Institutions and Markets – L.M.Bhole
3. Financial Services in India – M.Y.Khan

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Career Oriented Course in Stock Market Operations

1. Name of the course: **Stock Market Operations**

2. Course Objectives :
   - i) To provide basic understanding about Capital Market and its operations.
   - ii) To create for the students an additional avenue of self-employment.
   - iii) To provide to the students basic of financial services for taking up employment in financial sector.
   - iv) To inculcate training and practical approach among the students by using modern technologies in the field of Capital Market.

3. Eligibility : **A candidate shall have passed Std. XII examination of the Maharashtra State Board of Secondary and Higher Secondary Education or its equivalent or undergraduate student of any faculty.**

4. Duration: **The course shall be a part-time course. The duration of course shall be one year.**
   - **a) Certificate Course : One Year – 180 working day**
   - **b) Diploma Course : One Year – 180 working days**
   - **c) Advanced Diploma Course :One Year – 180 working days**

5. Scheme of Examination: **i) There will be two papers of 2 ½ hours duration carrying 70 marks each at the end of academic year.**
   ii) There will be projects / Field Work / continuous evaluation carrying 30 marks for each paper.

6. Passing standard: **Minimum marks required for passing is 40% of aggregate of theory and Projects taken together. Students completing 30 credits will be awarded certificate in that course.**

7. Syllabi for First Year Certificate Course

Theory and Practical	Units	Credits	Workload in Hours
Units – 1	Overview of Indian Financial System and its constituents.	4	60
Units – 2	Various types of Financial Services.	6	90
Units – 3	Regulatory and legal framework of Capital and Money Markets.	4	60
Units – 4	Introduction to Computers	3	45
Units – 5	Financial Accounting	3	45

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	Total		300
Units – 6	Assignments and Practicals	10	150
	Grand Total	30	450

UNIT – 1 – Overview of Indian Financial System and its Constituents.

An overview of financial system – constituents of financial system

Financial markets ; money market, capital market and securities market

Financial institutions and intermediaries ; development financial institutions, commercial banks, non-banking finance companies and insurance companies

Financial products; equity shares – preference shares – debentures – secured premium notes – sweat equity – equity shares with detachable warrants

Money market instruments; treasury bills, commercial bills, certificate of deposits, commercial paper, call money

UNIT – 2 – Various types of Financial Services.

Origin & development of Indian banking – Present Structure : Central Banking, Commercial Banking, co-op. Banking, & Development Banking

Insurance - Branches of insurance - Life & General - Different Schemes

Hire Purchase Finance - Lease and Housing Finance - Capital Market Services- Issue Management- Investing & Broking - Demat of Shares- Merchant Banking- Credit Rating

UNIT – 3 – Regulatory and legal framework of Capital and Money Markets.

Securities Contracts (Regulation Act-1956) – Objectives and Provisions

Securities and Exchange Board of India ; Introduction – SEBI Act, 1992 – powers and Functions of SEBI – registration of intermediaries with SEBI – penalties for defaults

Stock Exchange- Different type of Stock Exchanges – Setup, Role, and Control

National Securities and Depository Limited and Depository Participants; introduction – Depository Act, 1996 – working of depository participant – advantages to investors

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UNIT – 4 – Introduction to Computers

Computer Hardware - Input Devices - Output Devices - Different types of Computers

Computer Software – System Software & Application Software - Operating system - Common Functions – Windows, Programming Languages, Database Management System

Internet. – Meaning TCP/IP, Internet addressing scheme, Domains and Sub-domains, URL, E-mail

Electronic Commerce – Multi stage Model – e-commerce applications in Investment and Finance.

UNIT – 5 – Financial Accounting

Meaning and Scope of Accounting - Need for Accounting - Persons interested in Accounting - Branches of Accounting

Accounting principles and standards - Accounting Transactions - Rules for Debit and Credit - Journal Entries & Contra Entries - Rules regarding posting and Trial Balance

Capital & Revenue, Classification of Income & Expenditure – Deferred Revenue Expenditure.

Depreciation & different methods of depreciation

Final accounts, Manufacturing Accounts, Trading Accounts, Profit & Loss Accounts and Balance Sheet, and Adjustment Entries.

Computer applications in accountancy.

8. **Course Fees recommended**: Rs 3000/- per year per student.

9. Books Recommended

1. Indian Financial System- M.Y. Khan
2. Financial Institutions and Markets – L.M.Bhole
3. Financial Services in India – M.Y.Khan
4. Globalisation Indian Financial Markets – R.K.Tondon And S.L.Gupta
5. Capital Market in Planned Economy – NCAERT, Delhi.
6. Modules of National Stock Exchange
7. Modules of Bombay Stock Exchange
8. Reports of BSE and NSE.
9. Introduction to Accountancy – T.S. Grewal.
10. Double Entry Book Keeping – J.R. Botliboi.
11. Handbook on Service Tax. - Taxman

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\THE KET'S V.G.VAZE COLLEGE OF ARTS, SCI. AND COM., MULUND, MUMBAI – 81.

Career Oriented Course in Management of Retail Business

1. Name of the course: **Management of Retail Business**

2. Course Objectives :
   i. Provide avenues for self employment
   ii. Enhance existing family business
   iii. Cater specially to students from business communities

3. Eligibility : **A candidate shall have passed Std. XII examination of the Maharashtra State Board of Secondary and Higher Secondary Education or its equivalent or undergraduate student of any faculty.**

4. Duration: **The course shall be a part-time course. The duration of course shall be one year.**
   a) Certificate Course :One Year – 180 working days
   b) Diploma Course :One Year – 180 working days
   c) Advanced Diploma Course :One Year – 180 working days

5. Scheme of Examination: **i) There will be two papers of 2 ½ hours duration carrying 70 marks each at the end of academic year.**
   ii) There will be projects / Field Work / continuous evaluation carrying 30 marks for each paper.

6. Passing standard: **Minimum marks required for passing is 40% of aggregate of theory and Projects taken together. Students completing 30 credits will be awarded certificate in that course.**

7. Syllabi for First Year Certificate Course

Module I

Units	Credits	Course content	Workload (hrs)
1	4	Forms of business organization	60
2	3	Types of Trade	45
3.	3	Product and supply lines	45
4.	3	Local laws governing business	45
5.	3	Taxation	45
6.	4	Business Finance	60
Total			300
7	10	Field work/ training	150
	30	**Grand Total**	450

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Unit	1	*Forms of business organization* (principles, practice and law) Nature, formation, relative advantages, legal formalities of Sole trading, partnership, Joint stock companies, Cooperatives, Malls 60 lectures
Unit	2	*Types of Trade* National and international, Foreign trade, National and regional, local, nature of merchandise, services, chain 45 lectures
Unit	3.	*Product and supply lines* (Theory and practice) Distribution, distribution lines, types of agencies, dealerships, franchisee, and other retail contracts 45 lectures
Unit	4.	*Local laws governing business* (Procedures and agencies) Registration, licensing and laws specific to trade in specific goods 45 lectures
Unit	5.	*Taxation* (legal and procedural practices) Sales tax, Central levies and local taxes, tax specific to commodities, Direct tax 45 lectures
Unit	6.	*Business Finance* (Theory and practice) Elements of Banking, Finances for small business, Working capital finance, bills of exchange and other short term finances, other institutions financing small business 60 lectures
Unit	7	Field work

8. **Course Fees recommended**: Rs 3000/- per year per student.

9. **Indicative References**

A. Academic references

1. Business studies — CB Gupta, Tata McGrawhill, New Delhi
2. Business studies — RK Sharma,Shashi Gupta, Kalyani Publishers
3. Business studies — MX George, Biji Jams, Bethany Publications
4. Principles and practice of management — CM Prasad, Sultan Chand
5. Maharashtra Sales Tax Act
6. Direct and indirect Tax, Singhvi and others — Seth publishers, Mumbai
7. A Systematic approach to accost accounting — Nair KGC, Chand Publications
8. Oganisation of commerce — Kale & Karnavat, Vipul Prakashan, Mumbai
9. Towards Entrepreneurship — Dr MR Kurup, KET Publication, Mumbai
10. Bank pamphlets and info broachers on finance to small business

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B. Sources of un-published information

1. Regional Traders association
2. Regional Sales tax and Excise offices
3. Commercial banks
4. Small industries development organisations

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H.R.College of Commerce & Economics, Churchgate, Mumbai

Syllabus for the Certificate Course in Advertising, Sales Promotion & Sales Management (F.Y.B.Com)

Paper – I

(Marketing Communications)

Sr.No.	Topics	No.of Lectures
1.	Nature and importance of Communication, communication process in marketing, Elements of communication process, Application of communication process in marketing, Steps in developing effective marketing communication	10
2.	Methods of marketing communications – Advertising, Personal selling, Public relations and Sales promotion (Meaning, Characteristics & importance)	10
3.	Marketing – Definition, Marketing concepts & tools.	10
4.	Building customer satisfaction, value and retention – Defining customer value and satisfaction, Nature of high performance businesses, Delivering customer value and satisfaction, Attracting and retaining customers.	10
5.	Market-oriented strategic planning – Corporate strategic planning, Business strategic planning, Marketing process, Product planning.	10

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6.	Gathering information and measuring market demand – Components of a modern marketing information system (internal record system, marketing intelligence system, marketing research system, marketing decision support system), An overview of forecasting and demand measurement.	15
7	Scanning the marketing environment – Analyzing needs and trends in the macro environment, Identifying and responding to the major macro environment forces.	5
8	Consumer behavior- Major factors influencing consumer behavior, Buying decision process, Stages of the buying decision process.	10
9	Dealing with the competition – Identifying competitors, Analyzing competitors, Designing the competitive intelligence system, Designing competitive strategies	10
10	Identifying market segments and selecting target markets – Levels and patterns of market segmentation, segmenting consumer and business markets, Market targeting.	10
11	Market positioning – Differentiation tools (Product, services, personnel, channel & image), Developing & communicating a Positioning strategy, Product Life-Cycle marketing strategies, Market evolution.	10
12	Managing product Lines and Brands – The product and the product mix, Product Line decisions, Brand decisions, Packaging & Labelling	10
13.	Managing Marketing channels – Work performed by Marketing channels, Channel design decisions, Channel Management decisions, Channel dynamics.	10

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14.	Managing Direct and on-line marketing – Growth and benefits of Direct Marketing, Customer data basis & indirect marketing, Major channels for Direct Marketing, Marketing in the 21st Century : Electronic Commerce, Public & Ethical issues in Direct Marketing	10
15	Managing the total marketing effort – Marketing Organization, Marketing implementation, evaluation & control.	10
	TOTAL	150

Note : Topics 1 to 8 will be covered in the 1st term.
Topics 9 to 15 will be covered in the 2nd term.

Suggested Books of Reference

1) Marketing Management - V.S.Ramaswamy & S.Namakumari

2) Marketing Management - Philip Kotler

3) Marketing Management - Rajan Saxena

4) Marketing Management - Sherlekar, S.A.

5) Marketing Research - David Aaker, V.Kumar & George Day

6) Marketing Research - Ramanuj Mujumdar (Text Application & Case Studies)

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Paper Pattern

1) Total Marks of 50 will be allotted for the paper for each term.
2) Question No.One will be Compulsory and will carry 14 Marks.
3) From the remaining five questions, students will have to attempt any three, each carrying 12 Marks.

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Paper – II
(Advertising – 1)

Sr.No.	Topics	No.of Lectures
1	Overview of Advertising- Definition, Characteristics, Nature, Active participants, origin & Growth, Advertising as a communication process, Advertising & IMC	10
2	Role of Advertising- Need, Benefits of Advertising (Manufacturers, Retailers, Consumers & sales people), conditions conducive to use of Advertising, Forms of Advertising, Limitations & Criticism	25
3	Economic Effects- Economic justification of advertising, Influence of advertising in the Economy, Effects of advertising in different cost (Production, distribution & Consumer prices), advertising and creation of monopolies, advertising & expansion of consumer demand (Consumers primary demand, Selective Consumer demand), waste in advertising	15
4.	Social & Ethical Issues – Importance of advertising as a societal force(Advertising and Cultural values, Standard of living, Positive & Negative societal force), Ethical issues in Advertising(Advertising to children, controversial products), Unethical forms of advertising, regulatory aspects of advertising (Regulatory agents : Government, Media, Industry, Consumers), ASCI code	15
5	Advertising Agencies – Definition, evolution, functions, importance, structure, types of agencies, How to select an agency?, Agency media relationship, Agency – client relationship, Advertising agencies in India	05
6	Advertising Departments – Definition, Duties & functions, structure and position in a Corporate	15

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	Hierarchy, Differences between Advertising agencies & Advertising Departments.	
7	Planning an Advertising Campaign – Meaning, importance and process.	05
8	Creative Visualization – Meaning, importance, process, methods of stimulating creativity (Brain Storming, task force), Creative team, Quality of a creative person	10
9	Copy Writing – Definition, importance, methods, Elements of copy (Headline, sub-headlines, body copy. Slogans, logo and illustrations)	10
10	Lay out Designs for Advertising – Meaning, functions, stages, steps, qualities, types, use of color, designing posters.	10
11	Media Mix – Print, Broadcast, Outdoor, Direct Marketing, Other Media	10
12	Psychology in Advertising – Meaning, Buying motives, Selling points, Identifying an appeal, Consumer purchase behavior models (AIDA model), DAGMAR model, Linking buying motives with selling points	10
13	Writing TV scripts and Radio Ads. – Types & Methods	10
	TOTAL	150

Note : Topics 1 to 6 will be covered in the 1st term.
Topics 7 to 13 will be covered in the 2nd term.

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Suggested Books of Reference

1) Advertising - Thomas Guinn, Chris Allen & Richard Semenik

2) Essentials of Advertising - Amita Shankar

4) Ogilvy on Advertising - David Ogilvy

5)

Paper Pattern

1) Total Marks of 50 will be allotted for the paper for each term.
2) Question No.One will be Compulsory and will carry 14 Marks.
3) From the remaining five questions, students will have to attempt any three, each carrying 12 Marks.

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Syllabus for the Diploma Course in Advertising, Sales Promotion & Sales Management (S.Y.B.Com)

Paper – I

(Advertising – 2)

Sr.No.	Topics	No.of Lectures
1.	Advertising Media- Types, Characteristics, Merits & limitations, Media scene in India	15
2.	Media Planning-Meaning & process, Media mix, Selecting media, Creativity in Media planning, Media reach, frequency and impact, cost of media, Factors influencing the choice of media	10
3.	Media Scheduling- Meaning, Steps , Types, Importance	10
4.	Evaluation of Advertising effectiveness- Meaning of advertising Testing, Reason for testing advertising campaigns, What to test? Methods of measuring advertising effectiveness, Pre-testing of communication effects, Post-testing of communication effects, Sales effects, Advertising tracking program (ATP): Meaning, Methodology & Benefits	10
5.	Rural Marketing – Rural market environment, Rural consumer (A detailed profile), Characteristics of rural consumer, Micro prospective rural families.	10

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6.	Rural Market- in economic Context (Wealth cycle, role of enterprise, rural mindsets) – Rural demand, Factors leading to rural growth, Rural market demand becomes attractive to corporates (Opportunity, Competitions, Companies in rural market), Segmentation & targeting	10
7.	Product Strategy for Rural India – Specifically designed products, package design & pack size, logos, symbols & mnemonics, Brand decisions, Physical distribution (Types, problems, cost service dilemma), Channel Management (Types, Problems & solutions)	10
8.	Sales Force Management- Types, Problems & Managing Rural Sales force management, Marketing Communications-Types, problems & Managing Rural communication	5
9.	Rural Marketing v/s. Urban Marketing – On the basis of size, goods, price sensitiveness, literacy , occupation, advertising, Brand loyalty, Marketing problems, location of buyers.	10
10.	Retailing- Advent of retailing, Functions of retailing, Influence on retail, Franchising in retail, International retail scenario, Technology in retail	10
11.	Retailing in India- Present scenario, Factors affecting retailing in India, Region wise analysis of Indian retailing, Benefits of organizing retailing, Retailing opportunities in India	10

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12.	Retail planning process – Advantages & Disadvantages, characteristics, Retail plan & strategy, Risk analysis, Top 10 retailing rules	20
13.	Retail Marketing & Advertising – Establishing Marketing strategies, Pricing and profitability, Promoting the merchandise, Implementing an advertising plan	10
14.	Retail Operation – Controlling store operation, Store layout and visual merchandising, Customer service	10
	TOTAL	150

Note : Topics 1 to 7 will be covered in the 1st term.
Topics 8 to 14 will be covered in the 2nd term.

Suggested Books of Reference

1) Essentials of Advertising – Amita Shankar

2) Marketing Management – Philip Kotler

3) Marketing Management – V.S.Ramaswamy & S.Namakumari

4) The Art of Retailing – A.J.Lamba

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Paper Pattern

1) Total Marks of 50 will be allotted for the paper for each term.
2) Question No.One will be Compulsory and will carry 14 Marks.
3) From the remaining five questions, students will have to attempt any three, each carrying 12 Marks.

Paper – II

(Personal Selling, Salesmanship & Sales Force Management)

Sr.No.	Topics	No.of Lectures
1.	Nature and importance of Personal selling & Salesmanship, Where Personal selling is more effective than advertising, Cost of advertising V/s. Cost of Personal Selling	10
2.	Types of Sales persons and selling situations, AIDA model of selling, Buying motives, Qualities of successful salesman with reference to consumer services	10
3.	Product knowledge and sizing up the customers	10
4.	Types of Markets- Consumer & Industrial markets	5
5.	Process of effective selling – Prospecting, pre-approach, approach, presentation and demonstration, handling objections, closing the sale and post-sale activities	15
6.	Selling as a Career – Advantages and difficulties in this career, Measures for making selling an attractive career	10
7.	Reports and Documents – Sales manual, Order book, Cash memo, Tour diary, Periodical report	5
8.	Nature and importance of Sales force Management	5

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9.	Sales force organization – Nature, Strategic planning, Characteristics, Basic Types (Specialization within a sales department)	5
10.	Profiling and recruiting Sales people – Sales force selection and strategic planning, Importance of a good selection program, Scope of sales force staffing process , Establishing responsibility for Recruiting, Selection and Assimilation, , Recruiting and its importance, Sources for recruiting Sales Representatives, Recruiting Evaluation, Selecting and hiring applicants	10
11.	Developing, delivering and reinforcing a sales training program – Value of sales training, Sales training & Strategic Planning, Training Assessment, Program Design, Reinforcement, Training Evaluation	10
12.	Motivating a Sales force – Meaning, Importance, Behavioral Concepts in motivation, Selecting Effective combinations of Motivational tools	10
13.	Sales force Compensation – Objectives of a compensation plan, Designing a sales compensation plan, Establishing the level of compensation, Developing the method of Compensation, Indirect Monetary Compensation, Final steps in the Development of the Plan (Pretest, Introduce & Evaluate it periodically)	5
14.	Sales force expenses & transportation – Internal Revenue Service Regulations, Legitimate Travel and Business Expenses, Characteristics of a Sound Expense Plan, Methods of Controlling Expenses, Control of Sales Force Transportation, Other Method of Expense Control	10
15.	Sales planning – Sales forecasting and developing budget, Sales territories	10
16.	Evaluating Sales Performance – Analysis of Sales Volume, Marketing Cost & Profitability Analysis, Evaluating a Salesperson's	10

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	Performance	
17.	Ethical and Legal responsibilities of Sales management – Business Ethics & Sales Management, Public Regulation & Sales Managers	10
	TOTAL	150

Note : Topics 1 to 8 will be covered in the 1st term.
Topics 9 to 17 will be covered in the 2nd term.

Suggested Books of Reference

1) ABC's of Selling – Charles Futrell

2) Sales Management – Robert. J. Calvin

3) Sales Management – Still Richard, Cundiff Edward & Norman A.P.

4) Management of a Sales Force – Spiro, Stanton & Rich

5) Sales Force Management – Carter Tony

6) Sales Management (Concepts & Cases) - Dalrymple Douglas. J

Paper Pattern

1) Total Marks of 50 will be allotted for the paper for each term.
2) Question No. One will be Compulsory and will carry 14 Marks.
3) From the remaining five questions, students will have to attempt any three, each carrying 12 Marks.

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Add on Course

"SECRETARIAL PRACTICE AND OFFICE MANAGEMENT"

SYLLABUS DESIGNED BY

DEPARTMENT OF COMMERCE

BIRLA COLLEGE OF ARTS, SCIENCE & COMMERCE, KALYAN.

&

SMT. CHANDIBAI HIMMATMAL MANSUKHANI COLLEGE, ULHASNAGAR.

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Secretarial Practice and Office Management

I year : Certificate Course

Paper 1	Fundamentals of Secretarial Practice	Lectures 50 hours
Paper 2	Fundamentals of Office Management	Lectures 50 hours

Tuition Fee Rs. 2,000/- per candidate

II year

Paper 3	Role of Secretary	Lectures 50 hours
Paper 4	Correspondence and Filing	Lectures 50 hours

Tuition Fee Rs. 2,500/- per candidate

III year

Paper 5	Secretary and Related Laws	Lectures 50 hours
Paper 6	Office Management Field Work and Project (Viva Voce) applicable	Lectures 50 hours

Tuition Fee Rs. 3,000/- per candidate

I. OBJECTIVES

1) To learn basic of Secretarial Practice and Office Management.
2) To seek information on opportunities in these areas.
3) To impart necessary information regarding Correspondence and Office Management.
4) To sensitize students about the practical working of Secretarial and Office Administration.
5) To acquaint students with current scenario and dynamics Office Administration and Challenges and opportunities as a secretary.
6) To seek employment opportunities in various offices in urban and rural areas.
7) To improve the status and image of Secretary and Working in any office.

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II. ELIGIBILITY

a) A candidate for being eligible for admission to the certificate course of Secretarial Practice and Office Management, shall have passed XII Std. Examination of Maharashtra Board of Higher Secondary Education or its equivalent.

b) A candidate for being eligible for admission to the Diploma Course of Secretarial Practice and Office Management shall have passed the certificate course.

c) A candidate for being eligible for admission to the Advance Diploma Course of Secretarial Practice and Office Management shall have passed the Diploma Course.

III. DURATION (Three years)

I year	Certificate Course
II year	Diploma Course
III year	Advance Diploma Course

IV. SCHEME OF EXAMINATION

The responsibility of Examination and evaluation of certificate course and Diploma Course shall rest with the college where in the students are admitted for course.

The University shall conduct the examination of Advance Diploma Course. The Scheme of Examination of each paper shall be divided into two parts.

A) Internal Assessment 40@ i.e. 40 marks.
B) End Examination 60% i.e. 60 marks.

Performance Grading

Marks Scored	Grade
75% and above	O
60% to 74%	A
50% to 59%	B
40% to 49%	C
Below 40%	Fail

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V. REQUIREMENTS

A) Faculty	:	Visiting faculty drawn from Experts / Professional from the field of Secretarial Practice and Office Management
B) Library	:	The college shall spend initially Rs. 25,000/- for purchase of Books related to Secretarial Practice and Office Management.
C) Teaching Aids	:	T.V., V.C.D., Computer with Printer, O.H.P., L.C.D. Projector and necessary software and operating systems related to Office Management.

VI. FEES STRUCTURE

i)	Tuition Fees	:	Rs. 2000/- for Certificate Course Rs. 2500/- for Diploma Course Rs. 3000/- for Advance Diploma
ii)	Examination Fee	:	Rs. 300/- + Rs. 35/-
iii)	Visit Fee	:	Rs. 150/-
iv)	Computer Practicals (20 practicals per candidate)	:	Rs. 500/-

VII TITLE OF COURSE - Certificate Course in Secretarial Practice and Office Management

FIRST YEAR - Paper I - Fundamentals of Secretarial Practice

Course Curriculum

Topic No. 1 The Secretary - Meaning, Definition, Qualities, Types (10 Lectures)
Topic No. 2 Functions and Responsibility of Secretary - various functions, duties and responsibilities of Secretary (10 Lectures)
Topic No. 3 Role of Secretary (10 Lectures)
Topic No. 4 Secretary Correspondence - Insiders and Outsiders (10 Lectures)
Topic No. 5 Documentation - Coding, Classification and Filing Indexing (10 Lectures)

References

Company Law and Secretarial Practice, Acharya Govekar
Company Law, Avtar Singh
Journal of ICS.

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FIRST YEAR - Paper I I- Fundamentals of Office Management

Course Curriculum

Topic No. 1 Function of Office - Basic Function - Administrative Management Function (05 Lectures)
Topic No. 2 Organization Structure - Principles of good organization - organisation charts Organization schedule - organisation manual - delegation (10 Lectures)
Topic No. 3 Departmentation - Basic - Types - Office Accommodation (8 Lectures)
Topic No. 4 Use of Computer in Office (MS-Office) (7 Lectures & Practicals)
Topic No. 5 Typing and Shorthand - Basic and Lower Level (20 Lectures)

References

1. Business Organization - Secretarial Practice - Jain.
2. Management of Organization - Herbert G.
3. Principles of Management N. G. Kale
4. Pitman Hand Book of Typing and Shorthand.

SECOND YEAR - Paper III - The role of Secretary

Course Curriculum

Topic No. 1 Meeting - Types - Requirements - proper conduct (10 Lectures)
Topic No. 2 Secretarial procedure related to Meeting - Notice, Agenda, Explanatory Statements, Resolutions and Minutes (20 Lectures).
Topic No. 3 Secretarial Procedure related to Finance (10 Lectures)
Topic No. 4 Secretarial Correspondence - Appointment Termination, Show Cause Notice, enquiries (10 Lectures)

SECOND YEAR - Paper IV - Correspondence and Filling

Course Curriculum

Topic No. 1 Organization of mail department - Routine for handling mail inward and outward mail (7 Lectures)
Topic No. 2 Mechanizing mail service - Devices - Typing - methods of Reproduction (8 Lectures)

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Topic No. 3 Record Management - Objectives - Principles (7 Lectures)
Topic No. 4 Filling Organization - Arrangements - Methods Indexing (10 Lectures)
Topic No. 5 Typing and Shorthand - Middle Level (10 Lectures)
Topic No. 6 Data Base Management (8 Lectures + Practicals)

References

1. Administrative Office Management - Webster Johnson
2. Business Administration - L. Hall
3. The Management of Organization
4. Pitman Book of Typing and Shorthand.

THIRD YEAR - Paper V - Secretary and Related Law

Course Curriculum

Topic No. 1 General, Commercial Laws (10 Lectures)
Topic No. 2 Company Law Procedure related to Management and Meetings (20 Lectures)
Topic No. 3 Secretarial Practice relates to Economic laws drafting and conveyancing (10 Lectures)
Topic No. 4 Role of Company Secretary in HRD (10 Lectures)

References

1. General Laws and procedure - Kapoor and Rajni
2. Relevant Bare Acts.
3. Company Law and Practice - Majumbad
4. Company Law and Practice - Shanbhag

THIRD YEAR - Paper VI - Functioning of Office Personnel

Course Curriculum

Topic No. 1 Functions of Office Management (10 Lectures)
Topic No. 2 Office Personnel and Mechanism (10 Lectures)
Topic No. 3 Preparation of Reports (10 Lectures)
Topic No. 4 Management Information Systems (5 Lectures)
Topic No. 5 D.T.P. and other uses of Computer (5 Lectures & Practicals)
Topic No. 6 Typing and Shorthand Higher Level (10 Lectures)

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References

1. The Management of Organization Herbert G. Hacks.
2. Business Administration L. Hall
3. Pitman's Hand Book of Typing and Shorthand.

Year	Paper	Title	No. of Periods		Examination Scheme				
			Theory	Field Work	Year End		Internal		Total
							Theory	Field Work	
					Hours	Marks	Marks	Marks	Marks
F.Y.	I	Fundamentals of Secretarial Practice	06	01 Unit	02	60	20	20	100
	II	Basic Elements of Office Organization	06	01 Unit	02	60	20	20	100
S.Y.	III	Role of Company Secretary	06	01 Unit	02	60	20	20	100
	IV	Correspondence & Filling	06	01 Unit	02	60	20	20	100
T.Y.	V	Secretary & Company Law	06	01 Unit	02	60	20	20	100
	VI	Functioning of Office Personnel	06	01 Unit	02	60	20	20	100

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FOREIGN TRADE MANAGEMENT

SEM-I
BASICS OF FOREIGN TRADE
COMMUNICATION SKILLS

SEM-II
PRINCIPLES OF MANAGEMENT
ANY ONE FOREIGN LANGUAGE

SEM-III
INDIA'S FOREIGN TRADE
LOGISITICS AND SUPPLY CHAIN MANAGEMENT

SEM-IV
INTERNATIONAL FINANCE
INTERNATIONAL INSTIUTIONS AND INTELLECTUAL PROPERTY

SEM-V
INTERNATIONAL BUSINESS
DOCUMENTATIONS AND SHIPPING AND INSURANCE MANAGEMENT

SEM VI
INTERNATIONAL MARKETING
ENTREPRENURSHIP

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SEMESTER – I
PAPER I

Subject : **Basics of Foreign Trade.**

Objectives : To familiarise the students with the basic principles of foreign trade and the environment in which foreign trade takes place.

Syllabus Outline:

- ✓ Why trade takes place? Theories of International trade- The classical theory of comparative advantage: Ricardo - Factor endornment and international trade: Heckscher-Ohlin theorem.
- ✓ Trade and Growth – International trade and economic growth –Trade between less developed and developed countries – unequal exchange – Prebisch Singer hypothesis.
- ✓ Instruments of trade policy – Tariffs and Quotas and other non-tariff measures.
- ✓ Foreign Trade market – Structure of the foreign exchange market – Types of transactions – Exchange rate quotation and arbitrage – interrelationship between exchange rate and interest rates.
- ✓ International economic institutions – WTO, IMF and World Bank.
- ✓ Economics of Integration – Types of integration – Theory of Customs Union-Working of EEC.
- A project on any emerging issue in foreign trade, followed by a presentation on viva.
- Mandatory On-job-training and a project on the job experience followed by viva. Jointly evaluated by the company and faculty.

Books for Reference:

14. Bhagwati, Jagdish (ed.), *International Trade*, Selected Readings.
15. Bo Sodersten, *International Economics*.
16. Chacholiades, Miltiades, *International Trade Theory and Policy*.
17. Ellsmorth, P.T., *International Economics*.
18. GOI, *Economic Survey*.
19. Haberler, G., *The Theory of International Trade*.
20. Hoekman, B.M, Kostecki, M.M., *The Political Economy of the World Trading System*.
21. Kenen, Peter, *The International Economy*.
22. Kindleberger, C.P., *International Economics*.
23. Meier, G.M., *The International Economics of Development*.
24. Ohlin, B., *Interregional and International Trade*.
25. RBI, *Report on Currency & Finance*.
26. UNCTAD, *Trade and Development*.

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PAPER II

Subject : **Communication Skills**

Objectives : To develop the communication skills of the students.

Syllabus Outline:

- ✓ Concepts and importance of Effective Communication in Business
- ✓ Components and Barriers of Communication
- ✓ 7 'C's of Communication
- ✓ Appearance and Design of Business Communication
- ✓ The Art of speaking, listening and thinking.

Books for Reference:

4. Fisher, Dalmar, *Communication in Organisation*, Jaico, Mumbai, 1999.
5. Murphy, Herta A. and others, *Effective Business Communications*, McGraw-Hill, Singapore, 2000.
6. Rai, Urmila and Rai, S.M., *Effective Communication (for B.M.S.)*, Himalaya, Mumbai, 2001.

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SEMESTER – II

PAPER I

Subject : **Principles of Management.**

Objectives : To acquaint students with the fundamentals of management.

Syllabus Outline:

- ✓ Introduction to Management
- ✓ Introduction to Indian Management Thought
- ✓ Planning and Decision Making
- ✓ Organising
- ✓ Human Resource Management
- ✓ Motivation, Leadership and Communication
- ✓ Controlling
- ✓ Social Responsibility of Business

Books for Reference:

1. Knootz, Harold and Weihrich, Heinz, *Essentials of Management*, Mc Graw-Hill, Singapore, 1990.
2. Prasad, L.M., *Principles and Practice of Management*, Sultan Chand, New Delhi, 2002.
3. Ramasamy. T., *Principles of Management*, Himalaya, Mumbai, 2003.

PAPER II

Subject : **Any Foreign Language.**

B.N.N. College **No. 16**

UGC SPONSORED "ADD ON" COURSES TO BE INTRODUCED

CERTIFICATE COURSE IN BIODIVERSITY

Course Structure		**Total Credit Points 30**		
Paper I	75 hrs	Practical I	75 hrs	10 Credit Points
Paper II	75 hrs	Practical II	75 hrs	10 Credit Points
Project Work	150 hrs			10 Credit Points

PAPER – I

(20 Lectures)

BIODIVERSITY:
Importance,
Concept,
Need for conservation,
Present status and future prospects,

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Causes of damages,
Brief outline about benefits of biodiversity to mankind.

PLANT TAXONOMY: **(15 Lectures)**
Plant classification up to class level (Thallophyta, Bryophyta, Pteridophyta, Gymnosperms, Angiosperms)

PLANT MORPHOLOGY: **(15 Lectures)**
Habits: Herbs, shrubs, trees, climbers, runners, and trailers.
Modifications:
Roots: Basic types, conical, tuberous, fusiform, parasitic, epiphytic etc.
Leaves: (modifications)
Inflorescence: Basic types.
Flower morphology:(Calyx, Corolla)

PHYSIOLOGICAL ASPECT OF BIODIVERSITY: **(05 Lectures)**
Transpiration,
Absorption,
Germination of Seeds.

ECOLOGICAL DIVERSITY: **(20 Lectures)**
Brief introduction to environmental factors, flora and fauna of -
Fresh water ecosystem,
Estuarine ecosystem,
Marine ecosystem
Terrestrial ecosystems.

PAPER – II

ANIMAL TAXONOMY: (30 Lectures)
General characters, broad classification and representative types of following phyla and classes giving emphasis on biodiversity.
Protista (unicellular organisms), Parazoa (Porifera)
Metazoa
Coelenterata, Platyhelminthes, Aschelminthes, Annelida, Arthropoda, Mollusca, Echinodermata, Hemichordata, Urochordata, Cephalochordata, Cyclostomata, Pisces, Amphibia, Reptilia, Aves and Mammalia.

BIODIVERSITY IN BIOMES AND ECOSYSTEMS **(15 Lectures)**
Brief outline of zoogeographical diversity all over the world and in India.

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POPULATION DYNAMICS: **(10 Lectures)**

Natality, Mortality, Density, Age structure, Sex ratio, Population growth.

BIOGEOGRAPHY : **(10 Lectures)**

Origin and Development of Earth,
Geological time scale and development of life.
Atmospheric and edaphic factors
Light, temperature and humidity, soil types and its role in biosphere.
Factors influencing distribution of plants and animal life

BIOSTATISTICS AND COMPUTER AIDED TAXONOMY **(10 Lectures)**

Classification of data
Tabulation
Graphical presentation

PRACTICAL I **75 hrs.**

PLANT TAXONOMY:

Thallophyta:	algae (Spirogyra)
Bryophyta:	Moss
Pteridophyta:	Fern
Gymnosperm:	Cycas
Angiosperm:	dicot (Hibiscus), monocot (Maize)

PLANT MORPHOLOGY:

Herbs:	Sunflower
Shrubs:	Hibiscus
Tree:	Gulmohar
Climber:	Clitoria
Runner:	grass
Trailer:	Basella, Hydrocotyle
Roots types:	tap root, adventitious root.
Modifications in root	(conical, tuberous, parasitic)
Modifications in leaf	(spines, hooks, tendrils)
Inflorescence types:	racemose, cymose.
Flower morphology:	calyx (Mussaenda), Corolla – polypetalous, gamopetalous,

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PLANT PHYSIOLOGY:

Transpiration: Four leaf experiment, bell jar experiment,
Absorption: Ascent of sap,

PRACTICAL II

75hrs.

ANIMAL TAXONOMY:

General characters and representative types of following phyla and classes:

Protozoa: Amoeba, Paramoecium, Opalina, Noctiluca, Volvox.
Porifera: Leucosolenia, Euplectella, Spongilla.
Coelenterata: Hydra, Obelia, Jellyfish, Sea Anemone, Zooanthus colony.
Platyhelminthes: Planaria, Liverfluke, Tapeworm.
Aschelminthes: Free living and parasitic Nematodes.
Annelida: Earthworm, Nereis, Leech, Sabella, Tubifex.
Arthropoda: Prawns, Crabs, Balanus, Copepodes, Scorpion, Tick, Mite, Spider, Lepisma, Butterflies, Moths, Beetles, Wasps, Dragonflies, Mantids, Bugs, Millipedes, Centipedes.
Mollusca: Chiton, Snails, Gastropods, and Bivalves.
Echinodermata: Starfish, Sea Cucumber, Sea Urchin, Sea Lily.
Hemichordata: Balanoglossus.
Urochordata: Ascidian.
Cephalochordata: Amphioxus.
Pisces: Cartilagenous fishes and bony fishes.
Amphibia: Frog, Toad, Salamander, Ichthyophis.
Reptilia: Lizards, Snakes, Turtles, Tortoises, and Crocodiles.
Aves: Fruit eating, Seed eating, Predatory, Wading birds.
Mammals: Shrew, Bat, Rabbit.

ECOLOGY:

Estimation of physico - chemical parameters of water using standard methods.
Temperature
Light penetration
Suspended solids, dissolved solids and total solids
pH
Dissolved Oxygen
Carbon dioxide

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Salinity
Hardness
Study of terrestrial parameters (Temp., humidity and soil pH).

FIELD VISITS TO STUDY BIODIVERSITY:
Demonstration of collection, preservation and analysis of sample using statistical methods.

PROJECT WORK: **150hrs.**
Study of environmental factors, flora and fauna of one terrestrial and one aquatic ecosystem. Preparation of report and submission.

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U.G.C. SPONSORED "ADD ON ' COURSES TO BE INTRODUCED

FROM 2004 – 2005

CERTIFICATE COURSE IN HORTICULTURE

COURSE STRUCTURE		TOTAL CREDIT POINTS 30 +2
		Based on respective theory papers
PAPER - I	75 HRS	PRACTICAL 75HRS 10 CREDIT POINTS
PAPER – II	75 HRS	PRACTICAL 75 HRS 10 CREDIT POINTS
PROJECT WORK – IN THE JOB TRAINING	150 HRS	10 CREDIT POINTS
PERSONALITY DEVELOPMENT	15 HRS	1 CREDIT POINT
ENTREPRENEURSHIP DEVELOPMENT	30 HRS	2 CREDIT POINT

PAPER - I

Nature and Scope of Horticulture (2 lectures)

Unit – I (3 lectures)

Definition and objective of Horticulture. Importance of Horticulture in rural and Urban parts. Job potentials, business, Horticulture in Social life. Horticulture in balancing the nvironment.

Unit - II (15 lectures)

All about the green plant related to Horticulture. External characters of typical Dicot and Monocot. External morphology, types and modifications of root, stem, leaf, Inflorescence, Flower and Fruit

Unit – III (8 lectures)

Seed, their types, mode of germination. Conditions required, factors affecting, % germination, preparation of seedbeds, transplanting of seedlings, seed dormancy.

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Unit - IV (7 lectures)

External features and horticultural importance's of different types of ferns and Gymnosperms.

Unit - V (7 lectures)

Palms, their types, Mode of cultivation and importance

Unit - VI (8 lectures)

Soil required for plant growth. Formation of soil, physical characters, types, Porosity, Moisture holding, pH, Soil reclamation, plants suitable for acdic and alkaline soils, humus, mulching. Water and its importance to the plant. Water requirement, water conservation, and wilting, different methods of watering. Methods to use water economically.

Unit - VII (25 lectures)

Techniques in Horticulture.
Instruments required.
Grafting and budding: objectives, principles, limits, union between stock and scion, factors affecting the healing of graft or bud union, graft incompatibility.
Grafting : Types- stem grafting (detached scion-splice, whip/tongue, side, vaneer, cleft, bark, attached scion, approach, inarching, bridge, bracing) , top grafting and frame working, root grafting, stone grafting, cutting grafts, double working.

Budding : 'T' budding, inverted 'T' budding, patch, Flute, ring, angular, I, forkert, chip, skin budding, budding in situe, use of growth subs, bud selection, forcing bud to grow, after care.

PAPER – II

Unit- I (15 lectures)

Propagation practices :
Propagation by specialized vegetative structures, bulbs, tubers, corms, rhizomes, root stocks, runners, offsets, suckers.
Propagation on its own root system - cuttings, root cuttings, stem cuttings, herbaceous, softwood, green wood, semi hard wood, hard wood, leaf cuttings, leaf bud cuttings.
Layering : Types : simple, tip, compound or serpentine, trench, air, mound or stool layering Hormons used in propagation.

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Unit - II (15 lectures)

Garden operations.
Digging, seed bed, soil selection and preparation of soils for gardens/ cultivation of horticultural plants, sterilization, sowing, top dressing, blanching, weeding, hoeing, planting. Potting, pots of different types, size and materials,
Procedure: Potting and repotting,
Use of plant growth regulators.

Unit – III (15 lectures)

Manures and fertilizers :
Manures : What is Manure ? Role of manure's in soil fertility, Important Manures – Farmyard Manure (FYM), Compost, oil cakes, green manures, methods of applications.

Fertilizers:
What are fertilizers? Why fertilizers? straight, compound and mixed fertilizers. Different types of nitrogenous, phosphatic and potash fertilizers, bonemeal, multinutrient and micronutrient, liquid fertilizers, slow release fertilizers, properties, handling, application methods, storage.

Biofertilizers : Blue green algae, vermiculture, Bacterial.

Unit IV

Weed (5 lectures)
What are weeds, their classification, common garden and nursery weeds, and harmful effect of weeds. Their control majors.

Unit - V

Garden features (15 lectures)

Paths and Avenue, Hedges and Edges, Plants used, designs, lawns, their types, plantation, cutting, fertilizers, pest, preparation of flower beds, Arches, pergolas, screens, wall covers, ponds, fountains.
Study of the following in relation to the purpose, general plan, requirements and plants suitable for them :

Public garden and parks, Terrarium, soilless garden, Bottle and dish garden, terrace garden, indoor plants and indoor garden. Hanging baskets.
Introduction to landscape.

History of Gardens : (10 lectures)

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Hindu Buddhist Garden, Persian and Mughal Garden, English Garden, Japanese Gardens, Botanical Gardens : National Botanical Garden, Lucknow, Indian Botanical Garden, Calcutta, Botanical Garden, Ooty Vrindaven Garden, Mysore.

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Design & Maintenance of Domestic & Industrial (Electrical & Electronic Appliances)

PREFACE

This course is designed to fulfill the needs and requirements of the job providers in the local markets and industries. It is for the freshers without any experience in electricity and electronics.

Experience of many experts indicate that it is appropriate to first learn basic principles of any subject, get familiar with it and after having strong base learn the various applications in diversified fields. Keeping this in view the course is designed.

The full course is of three years but the students will get certificate after the completion of each year as below :

Completion of first year	----	Certificate.
Completion of second year	----	Diploma
Completion of third year	----	Advance Diploma

Three years are split in to six semesters. - The scheme of teaching and examination in detail is attached herewith.

First year syllabus is formulated to study basic concepts of electricity and electronics. Sufficient lab sessions are designed to enable the students to identify the components, their applications. Care is also taken to improve the communication skills.

Second year syllabus gives necessary and sufficient knowledge of analog and digital circuits and their applications. In addition to the graduation this course enhances the job opportunities of the students.

Third year includes theoretical knowledge of widely used appliances, project work, and enriches the confidence of the students in the practical applications. The use of electrical and electronic

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appliances is increasing day by day. Hence this course will find increasing demand in future course. This course is strong job supporting course.

OBJECTIVS

1. To make the approach of the students more practical and job oriented.

2. To assist our conventional basic degree course.

3. To mould the students for entrepreneurship.

4. To enable the students to be self dependant and enhance the prospects of self employment.

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Scheme for Teaching and Examination

Year	Semester	Paper	No. of hours per week			Examination scheme					
			Theory	Practical	Field Work/ Training	Theory		Practical		Field Work/ Training	
						Hrs	Marks	Hrs	Marks	Hrs	Marks
F.Y.	I	I	03	03	03	02	60	03	40	02	50
		II	03	03	03	02	60	03	40	02	50
	II	I	03	03	03	02	60	03	40	02	50
		II	03	03	03	02	60	03	40	02	50
S.Y.	III	I	03	03	03	02	60	03	40	02	50
		II	03	03	03	02	60	03	40	02	50
	IV	I	03	03	03	02	60	03	40	02	50
		II	03	03	03	02	60	03	40	02	50
T.Y	V	I	03	03	03	02	60	03	40	02	50
		II	03	03	03	02	60	03	40	02	50
	VI	I	02	03	03	02	60	03	40	02	50
		II	02	04	03	02	50	03	50	02	50

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FIRST YEAR

SEMESTER I
PAPER-I

PRINCIPLES OF ANALOG ELECTRONICS

A) Electronic Materials: Classification of Materials
1) Conducting Materials
Copper, Aluminium, Tungsten (coin-age metals)
2) Insulating materials
Mica, ceramic, glass, paper, rubber, resins
Dielectric properties of insulating materials
3) Semiconducting Materials
Silicon, germanium, gallium, arsenide etc.
4) Magnetic materials
Iron, nickel, alloys, ferrites and oxides 4L

B) Passive Components
1) Resistor: Characteristics viz Tolerance, wattage, temp.coeff. Maximum working voltage etc. specification and types of resistors Types: Fixed - carbon and wire wound resistors. Variable resistors: linear, logarithmic potentiometer, rheostats, trimmers Non-linear thermistors, varistors LDR(Construction & application) 4L
2) Capacitors: Construction, types, specifications and application of fixed capacitors, variable capacitors. 4L
3) Inductors & transformers: Construction, types, specifications and application of inductor and transformers, cores. Transformer losses and shielding of transformer. 4L

C) Cable connectors and wires.
1) Wires: Bare and shielded. Cable: Co-axial, twisted pair cable, flat ribbon cable, Fibre optic cable. Study of SWG wire table and conversion of AWG to SWG. 4L
2) Switches, Relay and Displays.
3) Switches Specifications and applications of different switches. SPDT, DPDT, Toggle switch, Rocker switch, Rotary slide switch, micro switch, DIP switch, proximity switch. 2L

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4) Relays: Specification and application of general purpose electromagnetic relays, reed relays, ferreed relays and solid state relays. 6L

5) Display Devices LED, seven segment display, LCD and LED alphanumeric display. 6L

) Microphone, speaker and batteries:

a) Microphone: Carbon, Capacitor, moving coil crystal and ribbon

b) Loudspeaker: Cone type, Horn type speakers, Woofers, Tweeters

c) Batteries: Cells and battery fundamentals, charging and discharging,
primary and secondary cells, Lead acid battery, Ni-Cd battery, Maintenance free battery 8L

Reference:

	Name of the book	Author
1.	Basic Electronics	Bernard Grob
2.	Electrical engineering materials	N. Alagappan & N.T. Kumar. 2nd Ed. TMH
3.	Electronic components	D.K Padmanabhan Laxmi Publications
4.	Electronic components and materials.	S.M. Dhir. 1st Edition

Practicals

SEMESTER - I PAPER-I

1) Study of symbols of passive components colour coding, wattage.
2) Study of variable resistor including rheostat (finding their values on multimeter).
3) Analysis of Data sheet of various passive components and table of standard values.
4) Identification of cables and connectors.
5) Study of types of cores, Iron, ferrite, etc.
6) Temperature coefficient of copper.
7) Study and testing of switches.
8) Study and testing of relays.
9) Study of loudspeaker and microphones.
10) Battery maintenance.
11) Charge/Discharge of a capacitor.
12) Temperature coefficient of thermistor.

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SEMESTER I

PAPER II

MEASURING INSTRUMENTS AND MEASUREMENT TECHNIQUES

A. Fundamentals of measurements:

a) Concept of instruments:
(i) Accuracy (ii) Precision (iii) Sensitivity iv)linearity

b) Methods of measurements.
(i) Indirect (ii) Direct

c) Errors.
(i) Gross (ii) Systematic (iii) Random

d) Concept of standards:
(i) International (ii) Primary (iii) Secondary (iv)Working

e) Grounding, Shielding and Isolation. 6L

B) Measuring instruments

1) A.C. / D.C. meters:__Sensitivity, range, applications of PMMC voltmeters,ammeters, ohm meters, power meters, analog multimeter -Sanwa/Simpson 6L

2) Signal generator Concept of oscillator, frequency range, power impedance, stability and distortion characteristics, A.F. generator: Block diagram and study of front panel. 8L

3) Basic C.R.O. operation, block diagram of single trace and dual trace CRO, study of front panel, C.R.O. probes. Use of C.R.O. For frequency, time and phase measurement. 8L

C) Digital instruments:

1) Display, $3^{1/2}$, $3^{3/4}$ concept w.r.t. panel meter.
2) Digital voltmeter, D.C. current meter, Ohm meter.
3) A.C. measurement, voltage and current, average, true, r.m.s. measurement.
4) Digital multimeter, front panel study, A.C., D.C., voltage and current measurement, resistance, capacitance & frequency measurement. 8L

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Reference books:

Name of book	Author	Publisher
1.Electronic instrumentation and measurement techniques.	W.D. Cooper-2nd Edition.	Prentice Hall India Ltd. Publication.
2.Electronic measurements.	F.E. Terman and J.M. Pettite-2nd Edition.	McGraw Hill Publication.
3.Instumentation and measurements.	Oliver and Cage	----------
4.Electronic instruments.	Kalsi 3rd Edition	Tata McGraw Hill.

PRACTICALS
SEMESTER-I PAPER-II

1) Identification and use of different tools - cutters, nose pliers, wire strippers, screwdrivers.
2) Identification and use of different tools - lead straightners, extractors, soldering iron, desoldering pump.
3) Study and use of A.C., D.C. voltmeters to measure A.C. and D.C. voltage.
4) Study and use of D.C. and A.C. ammeters to measure A.C. and D.C. currents.
5) Study and use of analog multimeter to measure A.C. , D.C. voltage, A.C. and D.C. current, differential resistors and continuity testing.
6) Study and use of digital multimeter to measure A.C. , D.C. voltage, A.C. and D.C. current, different resistors and continuity testing.
7) Study of signal generator- front panel controls and uses (frequency & amplitude).
8) Study of C.R.O. –front panel control and functions.
9) Study of C.R.O. for observing different waveforms and testing of components.
10) Measurement of amplitude and frequency on C.R.O.
11) Study of different display devices - L.E.D. and seven segment.
12) Soldering and de-soldering on lug boards.

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Semester II
Paper I
Principles of Digital Electronics

1) Number systems and Interconversions: Decimal, Binary, Octal and Hexadecimal 4L
2) Code: BCD, Excess – 3, ASCII, Hollerith, EBCDIC, Baudot code, Gray code. 5L
3) Logic Gates, Basic Logic Gates, Universal and Derived gates, Symbols, Truth tables and pin configurations. 4L
4) Boolean Algebra & identities, De Morgan's theorem, Universal building blocks. 4L
5) Arithmetic operations, Rules of binary addition, subtraction, one's complement and two's complement. 4L
6) Half Adder, Full Adder, Half Subtractor, Full Subtractor. 2L
7) 4- bit adder/ subtractor using 7483 4L
8) Comparator: Bit comparators. 4L
9) Flip Flops: types – RS, clocked RS, J.K., Master slave, D and T flip flops. 5L

References :

1. Digital Principles and applications — Malvino- Leach. — TMH
2. Digital Fundamentals — T.L. Floyd — Universal Publications
3. Modern Digital Electronics — R.P.Jain — TMH
4. T.T.L. Data Manual
5. Digital Electronics — Somnathan Nair

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Semester II
Paper I
Practicals

1) Study of Logic Gates
2) Half Adder, Full Adder
3) Half Subtractor, Full Subtractor:
4) 4 - Bit Adder
5) Two's complement: Adder / Subtractor
6) Study of Flip Flops: RS, JK,Master Slave
7) Conversion of clocked RS and JK Flip Flops to Data and Toggle flipflops
8) Concepts of frequency division using JK flip flop (Toggle mode)
9) Conversion of Gray – Binary and Binary – Gray codes
10) Use of EX OR gate to generate gray code , parity checker.
11) De Morgan's Law
12) NAND / NOR Universal Building Blocks

Semester II
Paper II
Communication Skills and Generic Skills

A) Communication Skills: Basic Concept of communication, communication cycle, barriers in communication. Techniques of Communication: Oral, Written, Non- verbal [body language, chronemics and artifacts], Graphic communication. 8L

B) Using the communication skills: Writing answers by defining, describing, explaining and illustrating. Letter, Memorandum and short reports. 8L

C) Generic Skills: Information and Learning, Types of information sources, information center and procedure for information search. Concept of learning, memory and cognition, organization of knowledge, learning on job, learning practical skills, testing of acquired skills. 12L

D) Self Development, Areas of self development, time planning and management, stress physiology and health, stress management, Basics of Ethics, motivation theories . 4L

E) Task Management: Introduction, task identification, task customer, Task planning, execution and control, task evolution and feedback. 4L

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References :

1. Developing Communication skills 1994	Krishna Mohan & Meera Bannerji	Macmillan
2. Communication skills	B.V.Pathak	Nirali Prakashan
3. Basic managerial skills for all	E.H.Megrath	
4. Human Learning	E.O. Jeanne	
5. Trainer's Guide Project Management	Trevor L. Young	

Semester II
Paper II
Practicals

1) Identification of communication events
2) Analyzing communication events
3) Formal written communication
4) Understanding body language
5) Understanding Graphics
6) Writing Reports
7) Group formation and collaboration
8) Listening skills: Relating views of different persons and analyzing
9) Time management skills in completing a project
10) SWOT analysis in a given project

Semester – I/II
Field Work/Training

1) Visit to electrical and electronic appliances shops and showrooms (market survey)
2) Visit to I.T.I. Laboratories.
3) Visit to small industries

Inductors,Choke,Transformerwinding)

4) Small Projects (Electronics and Electrical circuits)

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Second Year

Semester –III Paper-I

ANALOG CIRCUITS AND APPLICATIONS

A) Working principles, specifications, types and applications of solid state devices.

1) Diodes, P-N junction, Zener, Schotkky, varacter, pin, L.E.D, Tunnel.
2) Transistors: B.J.T, JFET, MOSFET, UJT
3) Diacs and Triacs, SCR 12L

B) Power Supplies:

1) Necessities of block diagram of power supply: Definition of Line regulation & efficiency.
2) Bridge Rectifier: Capacitor filter, Zener regulator (shunt),Transistor series regulator (series and shunt).
3) I.C. Regulators. Block diagram, Pin configurations and working of 78XX, 79XX & 723, LM 317 10L

C) Printed Circuit Boards:

1) Introduction, Advantages, Types of P.C.B, Types of cladding – Copper, Phenolic & Glass Epoxy.
2) Manual P.C.B. design & Fabrication (Single clad) : Layout, Art work Etching, Drilling & mounting.
3) Photographic method of P.C.B layout, scale Art work, materials for art Work,(tapes, pads puppets), conductor width and current carrying capacity for Vcc, ground & signal component assembly.
4) Printing and Etching by screen printing & photo resist method, Drilling operations and Soldering techniques: basics of soldering materials & tools used. Testing of trouble shooting of P.C.B. 14L

Reference Books:

1) P.C.B Design and Techniques Walter C. Boshart. CEDT series
2) Printed Circuit Design: Gerald Ginsberg Mc-Graw Hill
3) Transistor circuit Approximations A. Malvino
4) Electronic Principles: A. Malvino 6th ed. TMH
5) Applied Electronics: R.S. Sedha 1st ed. S. Chand
6) Electronic devices and circuits: Allen Mottorshed

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Semester –III Paper-I

Practicals:

1) Study of characteristics of diodes.
2) Study of characteristics of transistors
3) Study of characteristics of FET.
4) Study of characteristics of UJT.
5) Study of characteristics of DIAC.
6) Study of characteristics of TRIAC.
7) Study of regulator circuits using 74XX / 79XX.
8) Study of variable regulator using IC 723.
9) Study of LM 317 as a voltage source.
10) Preparation of Layout and Art work from electronic circuit design.
11) PCB design for small circuit using integrated circuit (IC), and passive and active components. (Design using manual method).
12) Visit to a PCB manufacturing company.

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Semester –III Paper-II

DIGITAL CIRCUITS AND APPLICATIONS

A) Introduction to logic families.

1) Characteristics of IC logic gates.
2) IC logic families. TTL, ECL CMOS, 7400, 7402, 7404 7406, 7408, 7430,7432,74864001,4011,40106.
3) Comparative study of logic families.
4) Performance, advantages and disadvantages. 6L

B) Registers:

Introduction, definition and types, -SISO,SIPO,PISO,PIPO, Universal, Bidirectional shift register. (ckt diagrams, working principles, truth tables & timing diagrams).

C) Counters:

Types of counters, asynchronous counters, synchronous counters, ripple counter, Mod counters, up-down counters, decade counters using IC 7490,7493 - Mod counter, Ring counter, Application of counters, Comparison between counters and registers. 10L

D) a) Encoders and decoders:

Definition, decimal to BCD encoder, octal to binary encoder. Display decoder, 7447, 7446, and 7442.

b) Multiplexers-demultiplexers:

Definition, types of multiplexers, 2:1, 4:1, 8:1, 16:1 (Block diagram, operating (principles and applications)

Study of ICs, 74150, 74151, 74252, 74153, 74157 multiplexer tree.

c) Definition-demultiplexer, (block diagram) types of demultiplexer 1:2, 1:4, 1:8, 1:16, (block diagram, operating principles and applications). Study of ICs, 74138, 74139, 74154, 74155 Demux tree. Demux- to decoder conversion. 12L

E) a) ADC Analog to digital converter

b) Characteristics and types - staircase, Ramp, single slope dual slope, successive approximation.

c) DAC digital to analog converter R-2R, ladder network and weighted resistor. 8L

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References :

1. Digital Principles and applications	Malvino- Leach.	TMH
2. Digital Fundamentals	T.L. Floyd	
Universal Publications		
3. Modern Digital Electronics by	R.P.Jain	TMH
4. T.T.L. Data Manual		
5. Digital Electronics	Somnathan Nair	

Semester –III Paper-II

PRACTICALS

1) TTL, CMOS characteristics, and I/P, O/P profiles.
2) Study of bidirectional register
3) Study of shift registers, shift left, shift right
4) Study of 4-bit ripple counter
5) Study of decade counter
6) Study of IC 7490 and 7493
7) Study of ring counter
8) Study of seven segment decoder driver
9) Study of multiplexer and its application
10) Study of de-multiplexer
11) D to A converter weighted register
12) D to A converter R- 2 R ladder

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SEMESTER IV
PAPER I
APPLIED ELECTRONICS I

a) Introduction to Network Analysis,KVL, KCL, Thevenin's theorem,
Norton's ,Superposition Theorem, Maximum Power theorem.

b) Study of L-R, C-R circuits, L-C-R series & parallel resonance, Power factor, dielectric loss in ac circuits. Bandwidth of Resonant circuit, Q-factor of LCR- parallel circuit. Comparison of series & parallel resonance & its applications. 8L

2. DC motors: Principle of operation, significance of back EMF.types of DC Motor, Torque equation (only formulae),DC series motor ,DC shunt motors(schematic diagram,charchteristics & applications) necessity of stator & rotor, three-point stator diagram & working ,speed control of DC motor - series & shunt. 12L

AC motors: - a) classification of AC motors

b) 3 phase inductor motor.

i) Principle of operation
ii) Synchronous speed, slip speed.
iii) Step, rotor frequency.
iv) Torque speed, Torque slip characteristics, induction motors
v) Necessity of starter & different types of starter (only names & Applications).
vi) Speed control of induction motors

c) Single phase induction motor-

i) Principle of operation
ii) Types of single phase, C –split phase
iii) R-split phase-split phase
iv) Schematic diagram, vector diagram
v) Torque speed characteristics, reversal of rotation
vi) Single phase a.c. series motor

d) Introduction of servo motors & stepper motors 16L

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References:

(i)	A textbook of electrical technology	B.L.Thereja VOL I & VOL II
(ii)	Electrical Machines combined	Bhattacharya TTTI Chandigarh.
(iii)	Theory and practice of electrical machines	(Nagrath & Kothari) TPMH Edition)
(iv)	Circuit Analysis Soni and Gupta	(Dhanpatri Sons Publications)
(v)	Circuit and networks .P.Shammohan (Analysis and Synthesis)	A.Sudhakar and XI th Edi. T.M.H. Publ.

SEMESTER IV –PAPER-I
PRACTICALS

(i) Designing of low power step down transformer.
(ii) Study of transformer materials (components, wires, core insulations and bobbins)
(iii) L.C.R series, parallel resonance,
(iv) Transformer core losses.
(v) Determination of voltage ratio, current ratio of transformers.
(vi) Study of Dc motor, construction and parts.
(vii) Speed control of Dc shunt motor.
(viii) To observe 1 phase induction motor and identify their parts.
(ix) To study 3 phase I.M motor, construction and identification of parts.
(x) Study of L.R & C.R circuits.

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SEMESTER IV
PAPER – II
APPLIED ELECTRONICS II

A) **Amplifiers, Oscillators and Timers:**

(i) Transistor Amplifiers:
CE amplifier, Biasing (voltage divider),

ii) OPAMP amplifiers,
Block Diagram-OPAMP characteristics (Ideal & practical), 741-IC, OPAMP Applications: inverting, non-inverting, difference amplifier, adder, and subtractor 8L

(iii) Oscillators:
Basic concept, Breakdown Conditions, Types of oscillators: RC phase shift oscillators, Heartly oscillator, colpitts oscillators. Introduction to relaxation oscillators. 4L

(iv) Multivibrators: Astable, Monostable, Bistable.Using Transistor. 3L

(v) Timers: Introduction to IC 555,timing concept. Monostable, Astable & Schmit trigger, voltage controlled oscillator. 4L

B) Study, Testing & Trouble shooting of SMPS , UPS.

(i) Switching regulators & SMPS –Brief working of Switching Regulators IC's, Merit, Demerit & applications of SMPS. 8L

(ii)Needs of UPS, Classification of UPS, continuos & continuous back up, transfer & transfer back up. Merits, Demerits & applications. 8L

REFERNENCE:

1. Industrial Electronics: G.K Mittal & RAVI Mittal 15th ed. Khanna publication.
2. Power Electronics: P.C. Sen XIth ed Tata McGraw hill
3. Power electronics : Munammad Rashid ,II Ed. PHI
4. Integrated circuits : K.R.Botkar, Khanna publications.
5 Digital logic Design: Godse and Godse.
6. Linear integrated circuits & applications: Ramakant Gaikwad, PHL
7. Linear integrated circuits and applications : K. R. Botkar, Khanna publications.
8. Linear Data book: National semiconductor.

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SEMESTER IV
PAPER – II
PRACTICALS

1. Study of Astable Multivibrator
2. Study of Monostable Multivibrator
3. Study of Bistable Multivibrator
4. Collpit's Oscillator.
5. Operational amplifier- Adder, substractor.
6. Hartley's Oscillator.
7. Phase shift using operational amplifier.
8. Timer 555 - V to P.
9. Timer 555 - V to F

Semester- III/IV
Field Work/Training

1. Visit to battery maintenance and repair workshops/shops.
2. Visit to UPS manufacturing industry.
3. Visit to WRIC (Western Regional Instrumentation Center)
4. Visit to APLAB industry.

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THIRD YEAR

SEMESTER –V.

PAPER –I

COMMUNICATION APPLIANCES

A) HI-FI Audio amplifier :

Introduction to Amplifier : mono ,stereo , public address .Difference between stereo amplifier & HI-FI amplifier . HI-FI amplifier: block diagram, controls & facility available (Micin,Aux.in, earphone in) . Graphic equalizer, Dobly system, crossover network ckt & its function. Speakers, woofer, Mindrange, Tweeter. 12L

B) CD- player-

CD-player principle & working, Components used for CD mechanism: CD pickup assembly, gear system, drive motors ,CD lens, cusion CD mechanism.

CD player block diagram, controls.

Parts and function of remote control : transmitter & receiver units,Amplifier circuit operation .Introduction to VCD player (Block diagram) 12L

C) Cable Television : working principle & specification of : Dish antenna, LNA (Low Noise amplifier), Multiplexer, Attenuator, Connectors(two way ,three way) , Amplifier ,cable Design concept for cable TV N/m Block diagram & working principle of dB meter. 12L

References :

1) Servicing –Audio & HI-FI equipments.(I-Ed) –Nickbeer,TMH.
2) Modern CD players servicing manual (Revised ed)- Lotia BPB.
3) Compact Disk CD player – John D Lenk –PHI international.
4) Modern TV practice (I-Ed)- R.R. Gulati,WEL, London.
5) Television & video Engineering II-Ed –Dhake-TMH

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SEMESTER –V.
PAPER –I
PRACTICALS

1) Study of component layout of HI-FI system.
2) Trace the output stage of given HI-FI amplifier system.
3- 4) Fault finding in a HI-FI Audio amplifier
5) To plot frequency response of graphic equalizer
6) Study of drive mechanism layout of CD player.
7) Study of layout diagram for distribution of cable connection for master antenna TV.
8-10) Visit to Local cable TV network & preparing report..

SEMESTER –V.
PAPER-II
REFRIGERATION & AIR – CONDITIONING.

REFRIGERATION: Introduction to Refrigeration, methods of refrigeration as Ice refrigeration. Steam jet refrigeration, concepts of heat pump Refrigerator .Concept of COP refrigerating effect, Units of refrigeration. Refrigeration cycles (Reversed Carnot cycle and multistage vapour compression cycle)
Principle /components & working of vapour Absorption system.
Types of Refrigerants; primary, secondary.
Vapour compression system components.
Refrigeration system controls; LP/HP controls .Thermostat overload protector, below pressure controllers, Diaphragm controllers & relays.

18L

AIR-CONDITIONING: Definition ,Necessity of Air-conditioning .Load Estimation, concepts of heat load ,Heat sources ,types of cooling loads, electrical equipments. Calculation of total heating & cooling load estimation & determination of refrigeration capacity.-Air distribution system; Elements of air distribution system, Air distribution outlets.
Insulation: Types of insulating materials used, method & procedures of insulating the equipments.
Air-conditioning system: construction, working, type of refrigeration system used, and capacity of window air-conditioning unit. 18L

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REFERENCES:

1) Principles of refrigeration	Roy & J Dosat	Wiley Eastern
2) Refrigeration and air-condititioning	P. Ananth Nanarayan	TMH
3) Practical refrigeration and air-condititioning	M. Adhithon & S.C Laroiya	
4) Principles of air-conditioning	V. Paul Lang	
5) Audel Practical air-condititioning and refrigeration	D.B. Tarapurwala	
6) Basic air-conditioning Vol-I & Vol –II	Gerald Schwietzer & A.Ebling	
7) Refrigeration and air-condititioning	S.Domgundwar	
8) Modern airconditioning Practice	Harris	
9) Refrigeration and air-condititioning	C.P. Aurora	TMH
10 Refrigeration and air-condititioning	Ghavale	

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SEMESTER –V.

PAPER –II

Practicals

1) Study of refrigeration system in view of following- Identification of parts & their functions. Collection of information of compressor manufacturers, specifications of each model.
2) Study of typical Evaporator, condenser, Thermostatic switch.
3) Study of LP/HP cutouts & solenoid valve.
4) Demonstration of various tools used in refrigeration systems such as –Tube cutter, bending tools, Flaring tools, swaging tools, Brazing tools, Blow lamps etc.
5) Study of wirings for thermostat & fault finding of Domestic Refrigerator
6) Study of window air conditioning system .Introduction to parts, path of refrigerant, refrigerant cycle capacity (assembling & dismantling if possible)

SEMESTER – V.

Field Work/Training.

1. Visit to cold storage plant.
2. Visit to Local Domestic refrigerator repairing shops and preparing report.
3. Visit to Air-conditioning & Refrigeration industry and preparing reports.
4. Visit to Local cable TV network & preparing report..

SEMESTER VI

PAPER – I

Introduction to Microprocessor and Microcontrollers

A) Microprocesor basic concepts ,8085 microprocessor architecture Instrumentation set, addressing modes, stacks and subroutines, Interrupts. Introduction to I/O data transfer techniques & peripherals. 12L

B) Microcontroller 8051:

i) Features, Block diagram, Timers / counters, serial interface, Interrupts, Addressing.
ii) Modes ,Instruction set, CPU timings , 8051-A Boolean processor, Power saving Options. 10L

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iii) Memory & Interfacing Theory of 8051 Memory structure & type of memory timing diagram & Interfacing I/O Expansion using 8255 single chip solution 8L

iv) Topics on MCS 51 based system .
Study of 8051 & derivatives

Study of AT89C51/52
Study of AT89C2051/105. 6L

SEMESTER VI
PAPER 1
PRACTICALS

1) Study of Microprocessor kit & commands.
2 to 5) Microprocessor programming
(i) Addition (ii) Substraction (iii) Multiplication (iv) Division (v)Decimal addition and substraction (vi) Multiplication by shifting methods .
6) Arithmetic operations (using 8051) (Add, Multiply, Divide, Subtract)
7) Packing, unpacking & masking 8 bit data.
8) Ascending & Descending order of the given numbers.
9) Finding seven segment code using look up table.
10) Square wave generation using internal timer.
11) Transmission of character using RS232 to PC
12) Level Control
13) Light Sensing

REFERERANCE:-

1) Microprocessor Architecture , Programming & Applications, (3rd Ed) by R.S Gaonkar. Penram International Publishing Co.
2) Introduction to Microprocessor (3rd Ed) PHI by Lance.A.Leventhal
3) Microprocessor Principles & Applications (2nd Ed) by Gilmore TMH
4) Programming & Customizing the 8051 Microcontroller by Myke Predko TMH
5) The 8051 Microcontroller (2nd Ed) by Kenneth.J.Ajala Penram International Publishing .Co
6) Microprocessor & Microcomputer by A.P.Godse (1st Ed) Technical Publication.

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SEMESTER VI
PAPER-II
Entrepreneurship & Project.

A) 1) Entrepreneurship & qualities of entrepreneur
2) Role of Government-Subsidies, Selection of product Services (with reference to Maharashtra state)
3) Entrepreneurship project report
4) Business project report. 12L

B) 1) Choice of technology-Quality & Man Power Management
2)Sources uses & management of finance.
3) Sales & Marketing-import-Export Management
4) Office accounts & Tax Management. 12L

References:-

1) Trainer's manual on developing Enterprenuership Motivation By MMP Akhontri, DR S p Mishra & Rita Sengupta.
2) A handbook for new Enterprenuership by Enterprenuership institute of India
3) Business planning By YK Bhushan & GLTyag
4) Principles & Practices of cost Accounting. By N K Prashant
5) Principle of management accounting By Manmohan & Goyal.

Project

Project group size: Max 2 students

Rationale:

The project should enable the students to combine the theoretical and practical concepts studied into useful applications. The work should enable the students to exhibit their ability to work in a team, develop planning and execution skills and perform analyzing and trouble shooting of their respective projects. The project report should be neatly documented without errors and should provide information related to principal, working circuit diagram, PCB layout design, trouble shooting, costing, application and the scope for future development.

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THE APPROACH

Project selection

The Course Co-ordinator / In charge should make sure that the project groups are formed with in a week of the beginning of semester and assign a faculty as project guide.

The project group should interact with the guide, who in turn advice the group in selecting a project based on the group-potential.

The brief synopsis of the project should be submitted to the guide. The synopsis should include project title, aim, and block diagram, list of components required and brief working. The students should make sure that all the components are available in the local market.

The group should work every week in project duration and appraise the guide about their work progress. Guide should closely monitor the work and help the students from time to time. The guide should also maintain a record of continuous assessment of project work progress on weekly basis.

The total work may be performed as per the given schedule.

	Weeks
Formation of the team, Selection of project and Synopsis submission	03
Procuring components, Component Testing and circuit testing	02
PCB making and onboard testing	03
Trouble shooting and cabinet making	03
Documentation	04

The guide should maintain the record of continuous assessment of each member of the group on weekly basic and submit the same to the internal examiner before the final examination.

Subject assessment:

Term work	Final Exam Seminar/ oral / Viva	Total
20	30	50

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ECONOMICS OF THE COURSE (PHYSICS)

Recurring	Rs/-	Non-Recurring	Rs/-
1.Honarariam: i) Teachers ii) Visiting faculty. iii) Lab-Assistant iv) Lab-Attendant.	1,00,000	1. Furniture	30,000
2. Library Books	15,000	2. Library Books	10,000
3.Journals and Magazines	5,000	3. Computer	45,000
4.Laboratory Work	50,000	4.Software packages	20,000
5. Project work	30,000		
6. Office Assistance	5,000		
7. Examination Expenses	10,000		
8. Industrial Visits	10,000		
9. Other Expenses	5,000		
Total-	2,30,000	Total-	1,05,000

Total Expenses ---------- 2,30,000
+ 1,05,000

3,35,000
Seed Money - 2,00,000

1,35,000

Number of Students – 40
Fees per student – 3500/-

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EXISTING FACILITIES:

LABORATORY EQUIPMENTS:-	Quantity
1) Signal Generators	10
2) Power Supplies	30
3) Digital Millimeters Panel Meters, etc.	20
4) Microprocessor Kits	03
5) Computer	01
6) Over Head Projector	01
7) Electronics Components	Sufficient in number
8) Training Kits	10
9) Demonstration Kits	10
10) Cathode Ray Oscilloscope	10

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EXISTING FACILITIES:

LABORATORY EQUIPMENTS:-	Quantity
1) Signal Generators	10
2) Power Supplies	30
3) Digital Millimeters Panel Meters, etc.	20
4) Microprocessor Kits	03
5) Computer	01
6) Over Head Projector	01
7) Electronics Components	Sufficient in number
8) Training Kits	10
9) Demonstration Kits	10
10) Cathode Ray Oscilloscope	10

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Sophia College **Arts Faculty**

UGC-sponsored CAREER-ORIENTED ADD-ON CERTIFICATE COURSE IN FOOD AND NUTRITION

Duration of Theory:	**300 hours**
Duration of Practical Work:	**150 hours**
Number of Students per batch:	**40-45**
Fees:	**Rs. 2000/- (plus laboratory fees)**
Eligibility:	**H.S.C. (or equivalent)**

Scheme of Evaluation:

1.	**Theory: Examination (2 hours)**	**100 marks**
2.	**Practical Work and Project:**	**100 marks**
The passing mark in each case is		**50 marks**

Nature of the Course:

Theory (100 marks)

1. Basic Nutrient Components of Diet (carbohydrates, proteins, fats, vitamins, minerals) their use, deficiency syndromes and recommended dietary allowances; food choices and selection; meal planning (40 hours)
2. Calculation of caloric requirements and ideal body weights of normal adults (male and female); problems related to weight-related fitness and health (10 hours)
3. Nutritional requirements in the life cycle: infancy, childhood, adolescence, pregnancy and lactation, old age. (40 hours)
4. Physiology of the human body (digestive system, blood and circulatory system, excretory system, hormonal system) and nutrition-related/deficiency-related diseases of the systems (60 hours)
5. Fad diets, the principles involved and their shortcomings (40 hours)

Field trips to hospital kitchens and food industry kitchens will be organised. (80 hours) The remaining 30 hours will be reserved for library research and preparation of the project.

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The question paper will comprise of two questions (each with internal choice) on each of the above areas. All questions are compulsory. Each question will carry 10 marks.

Practicals: (50 marks)
Planning and Cooking therapeutic diets for obesity and overweight, underweight, diabetes, hepatitis, gastrointestinal disorders, kidney diseases, dental and bone health, anaemia. tube-feeding, restrictive diets. (150 hours)

Project (50 marks):
Students will carry out research and prepare a project on a topic relevant to the course, with guidance from the instructor. The project will be presented in the form of a lecture/presentation to the rest of the class, and both the hard copy and the presentation will be assessed.

Select Bibliography:

Joshi, Shubhangini. *Nutrition and Dietetics*
Roday, S. *Food Hygiene and Sanitation*
Srilakshmi, B. *Nutrition Science*

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CHM COLLEGE

Add-on Course

Actuarial Science

1. What is an actuary? And career opportunities
2. Educational background and Pattern
3. Syllabus
4. Scheme of teaching and examination
5. Project and Internship (define later)

Smt. C.H.M. College, Ulhasnagar, 421 003.

What is an Actuary?

Actuaries are experts in assessing the financial impact of tomorrow's uncertain events. They enable financial decisions to be made with more confidence by;

- Analyzing the past
- Modelling the future
- Assessing the risks involved, and
- Communicating what the results mean in financial terms.

The actuary's skills in analysis and modelling of problems in finance, risk management and product design are used extensively in the areas of insurance, pensions, investment and more recently in wider fields such as project management, banking and health care.
The duty of Actuaries to consider the public interest is illustrated by their legal responsibility for protecting the benefits promised by insurance companies and pension schemes.

What is an actuary?

The future is full of uncertainty. Some of the events that can happen are undesirable. "Risk" is the possibility that an undesirable event will occur. Actuaries are experts in :

- evaluating the likelihood of future events.
- designing creative ways to reduce the likelihood of undesirable events
- decreasing the impact of undesirable events that do occur.

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Actuaries are the leading professionals in finding ways to manage risk. It takes a combination of strong analytical skills, business knowledge and understanding of human behavior to design and manage programs that control risk.

Their work is intellectually challenging and they are very well-paid. Actuaries are key players in the management team of the companies that employ them. In a fast-changing world, with new risks and the need for ever-more creative ways to tackle them, there is the constant opportunity for personal and professional growth in an actuarial career, and the pleasure of life-long learning.

Career Opportunities

The actuaries work in wide range of areas which include the following
Life insurance
General insurance
Health insurance
Reinsurance Companies
Pension funds
Consultants
Investments
Government
Academics
Risk Management

This is why the actuarial profession has consistently been rated as one of the top five jobs in the United States according to Jobs Rated Almanac.

An actuary working for an insurance company might calculate how much a company would charge for a new type of car, homeowners, or health insurance. He or she may have to figure out how much money needs to be invested in a pension fund today so that years from now, when the employees retires, there will be funds to pay them benefits. Or, an actuary might calculate how much damage an earthquake or hurricane could cause. Besides insurance, actuaries work in many other fields. That's because their skills are readily transferable to any business that deals with risk. **An actuary could work in finance, marketing, manufacturing, or in the development of new products**. For example, an actuary might determine how a company should invest its money based on risk and potential return. An actuary might determine potential profit gains when a business enters a

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new international market or forecast the return on investment to develop a new product.

Some actuaries do technical work. Others are in the business of creating innovative financial products for the insurance, banking, and investments sector. Many actuaries move on to become senior executives of major companies or partners in consulting firms. Some go into business for themselves.

Opportunities for actuaries range from education to research to government agencies such as Social Security. Still other actuaries choose careers in investments or banking, or work for companies that write computer software with financial applications. Because of the importance of the work, actuarial science is a profession that's respected throughout the business community.

Actuaries make good money even when they're just beginning their careers.

Just like doctors, lawyers and accountants, actuaries need to pass professional exams that test their professional knowledge and skill. Some people take the early exams while still in school. The later exams are taken after a course of self-study.

Actuarial Society of India(ASI) is the governing body catering to the advancement of actuarial profession in India. ASI prescribes 16 subjects on clearing which a student is awarded the **Fellowship of ASI**.

The Add on course on Actuarial Science is designed in such a way that a student can appear for 6 papers prescribed by the ASI on completion of three years.

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Certificate Course

Semester I

Unit 11 Statistical Modelling-I

i) Summaries as appropriate the main features of a set of data. Frequency distribution, graphical display, central tendencies, variance, standard deviation, meaning of symmetry and skew ness for distribution.

ii) Explain the concepts of random variable, probability distribution, distribution function, expected value, variance and higher moments, and calculate expected values and probabilities associated with the distributions of random variables.

iii) Define a probability generating function, a moment generating function, a cumulant generating function and cumulants, derive them in simple cases, and use them to evaluate moments.

iv) Explain the concepts of independence and convolution, and use generating functions to establish the distribution of linear combinations of independent random variables.

v) State the central limit theorem, and apply it.

Around 40 lectures and 10 practical.

Reference : Mathematical Statistics-John E Freund, Prentice Hall, International edition.

List of Practical

1. Central tendencies, variance.
2. Probability distribution.
3. Generating function.
4. Convolution and Distribution of linear combination of independent random variable.
5. Central limit Theorem.

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i) Describe how to use a generalized cash-flow model to describe financial transactions, making allowance for the probability of payment.
ii) Describe how to take into account the time value of money using the concepts of compound interest and discounting.
iii) Show how interest rates or discount rates may be expressed in terms of different time periods.
iv) Calculate the present value and the accumulated value of a stream of equal or unequal payments using specified rates of interest and the net present value at a real rate of interest, assuming a constant rate of inflation.
v) Define and use the more important compound interest functions.
vi) Define an equation of value.

Around 40 lectures and 10 practical
Reference : Mathematics of Finance J J McCutcheon and W F Scott

List of Practical
1. Cash Flow models
2. Time value and money
3. Interest rates
4. Discounting and accumulating
5. Level annuities
6. Deferred and increasing annuities
7. Equations of value

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Semester II

Unit 12 Statistical Modelling-II

vi) Explain the concepts of random sampling, statistical inference and sampling distribution, and state and use basic sampling distributions.

vii) Describe the main methods of estimation and the main properties of estimators, and apply them.

viii) Construct confidence intervals for unknown parameters.

ix) Test hypotheses.

x) Investigate linear relationships between two or more variables using correlation analysis and regression analysis.

xi) Explain the concepts of analysis of variance and use them.

xii) Explain the concepts of conditional expectation and compound distribution, and apply them.

Around 40 lectures and 10 practical

Reference : Mathematical Statistics - John E Freund, Prentice Hall, International edition.

List of practical

1. Sampling distribution
2. Methods and properties of estimation
3. Confidence intervals
4. Correlation and regression analysis
5. Analysis of Variance
6. Conditional expectation and compound distribution

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vii) Describe how a loan may be repaid by regular installments of interest and capital.

viii) Show how discounted cash flow techniques can be used in investment project appraisal.

ix) Describe the investment and risk characteristics of the following types of asset available for investment purposes:

- Fixed-interest Government borrowings
- Fixed-interest borrowing by other bodies
- Shares and other equity-type finance
- Derivatives

x) Analyse simple compound interest problems.

xi) Calculate the delivery price and the value of a forward contract using arbitrage free pricing methods.

xii) Show an understanding of the term structure of interest rates.

xiii) Show an understanding of simple stochastic interest rate models.

Around 40 lectures and 10 practical

Reference : Mathematics of Finance J J McCutcheon and W F Scott

List of practical

1. Loan schedules
2. Project appraisal
3. Investments
4. Simple, compound interest problems
5. Arbitrage and forward contracts
6. Term structure of interest rates
7. Stochastic interest rate models

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Scheme of Teaching and Examination

Course	Semester	Unit	Title	No.of periods per week		Examination scheme			
				Theory	Practical	Theory		Practical	
						Hours	Marks	Hours	Marks
Certificate	I	11	Statistical Modelling-I	3	2	2	60	2	40
		21	Financial Mathematics-I	3	2	2	60	2	40
		12	Statistical Modelling-II	3	2	2	60	2	40
		22	Financial Mathematics-II	3	2	2	60	2	40
Diploma	I	31	Introduction to Property and Casualty Insurance and Ratemaking	3	2	2	60	2	40
		41	Economics	3	2	2	60	2	40
	II	32	Stochastic Modelling and Survival model	3	2	2	60	2	40
		42	Accounts	3	2	2	60	2	40
Advanced Diploma	I	51	Actuarial Mathematics-I	3	3	2	60	3	50
		61	Life Insurance, General Insurance, Pensions and other employee benefits	3	3	2	60	3	50
					Projects		80		
	II	52	Actuarial Mathematics-II	3	3	2	60	3	50
		62	Investment and Asset Management	3	3	2	60	3	50
					Projects		80		

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R. D. National College
Linking Road, Bandra (West) 400050

Career Oriented Add on Courses – "UGC"
Syllabus

HINDUSTANI CLASSICAL MUSIC
Certificate Course

Duration of the course : 1 year
No. of modules : 2
- Module 1 : June – October
- Module 2 : November – May

Each module will include
- Theory : 150 hours
- Practical : 150 hours

No. of classes per week : 2-3 days
No. of periods per class : 3 periods of 50 minutes each

Timming : 6 p.m. onwards

Details of the course :

Module 1

Theory
- Induction to Hindustani Classical Music
- History of Hindustani Classical Music
- Introduction to Sound, Noise , Notes – Ahat & Anahat – Naad
- Pitch, Amplitude, Quality or Timber, Resonance
- Sangeet notes and signs – Sangeet leepi and chinha
- Matras and Taals , Taal chinha
- Octave notes, Sharp and Flat notes
- Ascending and descending notes- Aroha & Abaroha

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Practical

- Basic raags - their compositions in different taals.
- Introduction to Vadi, Samvadi, Pakaad, Raag chalan and Viram Swar
- The exercises will include ascending & descending notes, Simple aalaps, Taans, Bol taans with brief theory

Raags for Module 1

Morning : Bhairavi,
Afternoon : Sarang
Evening : Kaphi & Bhim palasi
Night : Yaman

Module 2

Theory

- Varna , Alankar
- Elevation of the notes – Uthao or Arambha
- Nuances of Notes , Khas tukdas, Swar Samooha
- Grouping of Raag, Raag jatis
- Laya and Taal matra , Avartan, Theka, Saam, Tali, Khali

Practical

- Basic raags - their compositions in different taals.
- Introduction to Vadi, Samvadi, Pakaad, Raag chalan and Viram Swar
- The excercises will include ascending & descending notes, Simple aalaps, Taans, Bol taans with brief theory

Raagas for Module 2

Morning : Lalit and Bhoop
Afternoon : Khamaaj
Evening : Bageshri
Night : Durga

- Besides the above mentioned theory and practical classes there will be regular workshop, Lecture cum demonstration and at least one concert at the end of each module.

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Time schedule for the certificate course in Hindustani Classical Music

Months	No. of Hours
July	20
August	20
September	20
October	40
November	30
December	30
January	20
February	20
March	20
April	40
May	40

Total : 300 hours

Instruments :

String Tanpura	1 No.
Electronic tanpura	1 No.
Sets of Tabla	2 Nos.
Harmonium	1 No.

Miscellaneous requirements :

Darri – Large size – 2 Nos.
Bed sheets – Large size – 2 Nos.
Swaraswati & Ganesh Idols – 1 Each
Agarbatti Stand – 2 Nos.
A set of small Brass Lamps

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Syllabus outline for MODULE II - INDIAN CLASSICAL ARTS
Subject title: ODISSI DANCE

ODISSI DANCE is a 150-hour class taught as an optional module to the As-on degree course in INDIAN CLASSICAL ARTS, Bachelor of Arts, National College.
This is a practical training course that will be given as an option to the practical course in Hindustani Classical Music. The practical courses are compulsory and the student has the choice to chose between 2 performing art forms in Indian music and dance.

The course will be taught by and under full guidance of Smt. Jhelum Paranjape, director of SMITALAY, Bombay's premier odissi dance institution.

The three-year course is structured around the standard 5-year training period for classical dance, both theory and practice.

This will include talks, lec-dem, reference work writing of projects and research papers, thorough and rigorous training of the dance form, field trips, viewing archival performances, guest lectures, dance criticism etc.

The first year course will offer basic theory about the history of Indian classical dance and odissi in particular. The history of the odissi revival and its elevation to one of India's most complex and beautiful classcial dance forms.

The practical training will be intensive and would involve (timing pl insert)

In the first semester the student will learn:

The basic odissi body movements and terminolgy:
Hasta bhed (mudras and hand gestures) and their viniyog(usage and meaning)
Pada bhed (foot positions) and their viniyog (usage and meaning
Thanakas (body postures)
Shiro bhed(head movements)
Griva bhed(neck movements)
10 Basic steps in:
Chauka and tribhangga

This will be followed by the items in the following semester.

Items:

Mangalacharan:	invocation item and the start of any odissi performance.
Vasant Pallavi:	nrutta. Pure dance item of the odissi repertoire
Battu nrutya:	The hallmark of oddisi dance and the completion of basic training and graduation to level II.

Reference book and basic text: ODISSI DANCE by DR. Dhiren Patnaik and others.

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Birla College No. 22

UGC SPONSORED CAREER ORIENTED "ADD ON" COURSE
2003-2004
CERTIFICATE COURSE ON FUNCTIONAL ENGLISH

Course Structure

Paper I –
Study of Language and Basic English

Paper II –
Effective Communication in English

Course	Theory	Internal Assessment	Practical or Project	Total Marks
Certificate in Functional English	50	10	40	100
	50	10	40	100

Paper I
Study of Language and Basic English

Duration : 1 year
Objective

a) To clear the fundamentals of the English Language
b) To help students acquire proficiency in the use of English at the written as well as spoken level.

Theoretical Module :

I. Language
A) What is Language ?
B) Use of English as a Second Language in different situations of life.
C) Importance of the study of English Language.

II. Revision of some of the Functional items:
A) Articles
B) Prepositions
C) Verbs
D) Adverbs
E) Conjunctions
F) Interjections

IIII. Uses of :
A) Tense and Aspect
B) Concord- Subject and Verb, Person and Number
C) Active and Passive Voice
D) Spelling and Punctuation

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IV. **Sentence making-Structure**

A) Negatives
B) Affirmatives
C) Exclamatory
D) Interrogatives
E) Imperatives etc.

Practical Module

i) Introductions
ii) Narration
iii) Practice Sessions with Linguaphone

Paper II

Effective Communication in English

Objective : To develop advanced communication skills

Theoretical Module

I. **Developing Reading Skills**

A) Comprehension : Oral, Aural and Reading.
B) Understanding the meaning of words, phrases and sentences in context.
C) Summarizing the main ideas of a given passage.

II. **Developing Speaking Skills**

A) Stress in works, Intonation patterns, Acquisition of proper accents and Phonetic Skill.
B) Conversation

III. **Vocabulary building**

A) Applying word formation rules
B) Use of idioms, action words and description words
C) Using one word substitutes.
D) Completing incomplete sentences / filling the blanks in sentences through correct choice of grammatical structures / vocabulary.

IV. **Writing Skills**

A) Reordering jumbled words to form a meaningful sentence
B) Reordering jumbled sentences to form a coherent paragraph
C) Developing compositions.
D) Writing summary / précis.

V. **Personality Development**

A) Personality Development and Effective Public Speaking.

Practical Module

Picture Talk
Word Talk
Dialogues
Presentations

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DIPLOMA COURSE IN FUNCTIONAL ENGLISH

Course Structure

Paper III
Communication : Theory and Practice

Paper IV
Use of English Language in Journalism

Course	Theory	Internal Assessment	Practical or Project	Total Marks
Diploma in Functional English	**50**	**10**	**40**	**100**
	50	**10**	**40**	**100**

Paper III
Communication : Theory and Practice
Duration : 1 year

Objective
a) To develop reading skills in English as a Second Language.
b) To impart spoken skills to deal with various situations.
c) To develop skills of listening.

I. Communicative Aspects :
How to express :
A) Denials and affirmations
B) Agreement and disagreement
C) Likelihood
D) Possibility and probability
E) Doubts and uncertainties
F) Emphasis
G) Hope and regret
H) Approval and disapproval
I) Surprise
J) Willingness, wish, intention
K) Commands and requests
L) Advice, suggestions
M) Warnings, promises, threats.

II. Meaning and Process of Communication :
A) Verbal and Non-verbal Communication
B) Formal and Informal Communication
C) Media and Channels of Communication
D) Barriers to Communication.
E) Essentials of effective communication

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III. Speaking and Listening Skills

A) Conversation
B) Speeches
C) Note Taking
D) Skimming, Scanning, Skipping and Close reading.

Practice Sessions with Linguaphone
Presentations
Group discussions

Paper IV

Use of English Language in Journalism

Objectives

i) To acquaint students with the important elements of Journalism
ii) To train them to take up jobs of Reporters/Journalists/Editors

Duration : 1 year

Theoretical Module

I. What is Journalism
Role of a Journalist
Duties of a reporter
Challenges faced in the field by reporters/journalists
II. Elements of Newspaper report
Structure of a Press Report
Newspaper Headlines in English
III. Role of a Sub Editor
IV. Role of a Chief Editor
V. English Dailies and English Reading Public
VI. Role and responsibilities of Press
VII. Freedom of the Press
VIII. English used in Newspapers and Magazines
International News/National News/Letters to the Editor/Articles/Profiles/War/Sports/Humour/Editorial
IX. Creative writing, Language as a medium of creative sensibility.
Exercises in composing poems, short stories etc.
X. Translation : Basic rules of translation. Transfer of meaning from source Language to Target Language etc.

Practical Module

Editing and Publishing a College Magazine
Field Visit to a Newspapers Office/Press
Holding workshops in creative writing.

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ADVANCED DIPLOMA COURSE

Course Structure

Paper V
Advanced Communication : Theory & Practice

Paper VI
Communication and Mass Media

Course	Theory	Internal Assessment	Practical or Project	Total Marks
Advanced Diploma Course in Functional English	**50**	**10**	**40**	**100**
	50	**10**	**40**	**100**

Duration : 1 year

Paper V

Advanced Communication :

Objective

i) To provide Knowledge and training to develop further competence in Functional English at Spoken as well as written level.

ii) To equip students with the skills needed for gainful employment in communication related fields.

I. i) Interpersonal Communication and Mass Communication.

ii) Group Communication, Interviews, Seminars, Meetings, Conferences, Speeches Group Discussions and Written work based on them.

iii) Communication in various situations in life :

a) Meeting and greeting people in day-to-day life.

b) Meeting and greeting people in social situations like journeys, parties, domestic, social and official functions etc.

c) Meeting friends in the street, Hotels, Restaurants etc

d) Making enquiries at the counters of banks, Railway Station, Bus Stands, Air Terminals, Tourists, Shops, Hospitals, Police Station etc.

iv) Written Communication :

a) Expanding ideas

b) Paragraph making

c) Summarizing

d) Report Writing

e) Job Application Letters

f) Requesting and Writing Certificates and Testimonials

g) Drafting notices for meetings and different kinds of business letters

i) Complaints, Claims and Adjustment

ii) Agency letters

iii) Enquiries and Replies, Collection letters

iv) Sales letters

v) Press reports

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II. **Grammar and Vocabulary**

A) Error correction
B) Synonyms and Antonyms
C) Applying Spelling rules
D) Using Compressed expressions (one word for many)
E) Reading a passage correctly, identifying attitudes, views, bias of the characters involved

Paper VI

Communication and Mass Media

Objectives:

1. To make the students aware of the difference in the use of language in different types of Communication.
2. To prepare them to take up jobs in the field of Print Media / Advertising / Electronic Journalism

Duration : 1 year

Theoretical Module

I. Journalism
Language of Print Media

II. T.V. / Film
Language of Electronic Journalism
Problems and Aspects of Electronic Journalism
T.V. Communication
Features of T.V. News
Other T.V. Programmes

III. Advertising
Drafting Advertisements
Messages sent by Ads
Impact of Advertisements on Public
Language of Advertisements
Skill of Drafting Ads

IV. Personality Development
Need for Personality Development
Ways of development personality
The Factors responsible for success and failure of various kinds of personalities.
Concept of a leader

V. Online Communication

VI. Public Relations : Role of PRO
Qualities of an ideal PRO;
Communicative ability required for a PRO

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Practical Module

Skit Writing
Performing Skits
Panel Discussion
Composing Advertisements

Field Visits

Visit to T.V.

Project Writing

Course	Theory	Internal Assessment	Practical (Project / OJT / Field Visit)	Total Marks
Certificate in Functional Eng.	**30**	**Test (10+10)**	**40 + 10**	**100**
	30	**Test (10+10)**	**40 + 10**	**100**

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Career Oriented Add-On Courses in Child Care and Child Development

Objectives :

The objective of this course is to introduce skill enhancing, market-oriented employment facilitating or self-employable career oriented add-on course for the undergraduate students along with the studies in the regular conventional degree in Arts / Science / Commerce. At the end of the I, II, III year, the students will be equipped with a Certificate / Diploma / Advanced Diploma in Child Care and Child Development.

Eligibility :

A bonafide student of the institution / college of any stream shall be eligible to take admission to this course for the first year. On completion of the First Year Certificate Course, a candidate can seek admission to Second Year for Diploma Course. Every candidate seeking admission to Third Year, i.e. for Advanced Diploma in the respective Course, must have completed Certificate and Diploma Courses.

Duration of the Course :

a)	Certificate Course	:	One Year	: 30 Credits
b)	Diploma Course	:	Two Years	: 30 Credits of First Year & 30 Credits of Second Year
c)	Advanced Diploma	:	Three Years	: 30 Credits of First Year, 30 Credits of Second Year & 30 Credits of Third Year

Number of students shall not be more than 40 in any of the Course.

Course content with credit allocation and allocation of approximate hours of teaching.

First Year : Certificate In Child Care And Development

UNITS NO.	TERM	PROGRAMME DETAILS	CREDITS	Workload (in Hours)
1.1	I	Foundations Of Human	5	75
	II	Behavior	5	75
1.2	I	Child Development -I	5	75
	II		5	75
1.3	I	Practicum	5	75
	II		5	75
		Grand Total	**30**	450

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Second Year : Diploma in Child Care & Development

UNITS NO.	TERM	PROGRAMME DETAILS	CREDITS	Workload (in Hours)
2.1	I II	Child Development - II	5 5	75 75
2.2	I II	Child And The Society.	5 5	75 75
2.3	I II	Practicum	5 5	75 75
		Grand Total	**30**	450

Third Year : Advanced Diploma In Child Care And Development

UNITS NO.	TERM	PROGRAMME DETAILS	CREDITS	Workload (in Hours)
3.1	I II	Psychopathology And Children With Special Needs	5 5	75 75
3.2	**I** II	**Child Counseling And Testing**	**5** 5	75 75
3.3	I II	Practicum	5 5	75 75
		Grand Total	**30**	450
		TOTAL CREDITS	90	1350

EXAMINATION SCHEME

First Year: Certificate In Child Care And Child Development

UNIT NO.	SUBJECT	THEORY		INTERNAL ASSESSMENT	TOTAL
		TERM - I	TERM - I I		
1.1	Foundations Of Human Behavior	50	50	50	150
1.2	Child Development -I	50	50	50	150
1.3	Practicum				100
		Grand Total			400

- Student shall obtain 40% of the total in each paper for the successful completion of the course and to award the certificate

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Second Year : Diploma in Child Care & Child Development

UNIT NO.	SUBJECT	THEORY		INTERNAL ASSESSMENT	TOTAL
		TERM - I	TERM - I I		
2.1	Child Development - II	50	50	50	150
2.2	Child And The Society.	50	50	50	150
2.3	Practicum				100
		Grand Total			400

- Student shall obtain 40% of the total in each paper for the successful completion of the course and to award the Diploma

Third Year: Advanced Diploma In Child Care And Child Development

UNIT NO.	SUBJECT	THEORY		INTERNAL ASSESSMENT	TOTAL
		TERM - I	TERM - I I		
3.1	Psychopathology And Children With Special Needs	50	50	50	150
3.2	Child Counseling And Testing	50	50	50	150
3.3	Practicum				100
		Grand Total			400

- Student shall obtain 40% of the total in each paper for the successful completion of the course and to award the Advanced Diploma

Award of Certificate / Diploma / Advanced Diploma :

Certificate shall be awarded to a student on successful completion of 1st year.

Diploma shall be awarded to a student who has already been awarded certificate for the first year and on successful completion of the 2nd year.

Advanced Diploma shall be awarded to a student who has already been awarded Diploma in 2nd year and on successful completion of the 3rd year.

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FIRST YEAR: CERTIFICATE IN CHILD CARE AND DEVELOPMENT

UNIT 1.1 : FOUNDATIONS OF HUMAN BEHAVIOR

Objectives:

1. To provide students the basic knowledge of psychology for understanding human development.
2. To promote in the students, an understanding of various areas in psychology such as learning, cognition, motivation, emotion, personality, as well as the application in these areas.
3. To introduce the students to the concept of abnormal psychology and it's content.

SECTION-I (TERM-I)

1. Introduction To Psychology.
    a) Psyche and Science.
    b) The many viewpoints in psychology and their origins.
    c) Contemporary perspectives in psychology.
    d) Speciality areas of modern psychology.
    e) Scientific methods: How we can learn about behaviors and mental processes?
    f) What we know about behavior? Some starting points.

2. Learning.
    a) Definition of learning.
    b) Classical Conditioning: Learning by association.
    c) Operant Conditioning: Learning from thr consequence of your behaviour.
    d) Extinction: Learning when to quit.
    e) Theoretical Interpretations of Learning.

3. Memory.
    a) Three stage of memory: An information processing view.
    b) Forgetting and why it occurs.
    c) Biological basis of memory.

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4. Motivations & Emotion.
    a) Definition of Motivation and Emotion.
    b) Primary Motives.
    c) Psychological Motives.
    d) Emotions.
    e) Aggression: Emotional and Motivational aspects.

SECTION-II (TERM – II)

1. Personality.
    a) Definitions.
    b) Factor influencing development of personality.
    c) Theories of personality.
    d) Personality Assessment.

2. Stress and Coping.
    a) Stress: Challenges to coping.
    b) Stress reactions.
    c) Factor that influence reactions to stress.
    d) Changing health-related behavior patterns.
3. Communications & Interpersonal Skills.
    a) Definitions.
    b) Process of Communications.
    c) Types of Communications.
    d) Barriers to Communications.
    e) Effective Communications.
4. Basics of Statistics.
    a) Scores.
    b) Continuous and Discrete series.
    c) Frequency Distribution.
    d) Histogram and Frequency Polygon.
    e) Measures of central tendency.

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Reference Books:

1) Baron, R. A. (2000) Psychology. (5th Ed.) Prentice Hall of India.
2) Lahey, B. (1998) Psychology. (6th Ed.) New Delhi. Tata – McGraw: Hill.
3) Shultz, D. P., & Schultz, S. E. (2000) A history of modern psychology. (7th Ed.) Harcourt College Publishers.

UNIT 1.2 : CHILD DEVELOPMENT -I

Objectives:

1. To give students knowledge of the needs of children and the pattern of growth and development from conception to the end of late childhood (i.e. 12 years).
2. To create in students an awareness of the various factors that influence growth and development during this period.
3. To encourage in students healthy attitude which will enable them to provide for the all round development of the child.

SECTION – I (TERM – I)

1. Concept of development

   a) Periods of life span
   b) Aspects of Development
   c) Individual Differences
   d) Influences on Development
   e) The Role of Culture

2. Child Development : Nature and Scope

   a) Why study children
   b) Some Contemporary Concerns.
   c) Historical Accounts of Childhood.
   d) The Modern Study of Child Development
   e) Social Policy and Children's Development

   II The Nature of Delopment

   a) Biological, Cognitive, and Socio emotional Processes
   b) Periods of Development
   c) Developmental issues

   III Careers in Child Development

3. Theories of Child Development
   a) Erikson : Psychological development
   b) Freud : Psychosexual development
   c) Piaget : Congitive development
   d) Kohlberg : Moral development

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4. Principles of Development
   a) Development involves change
   b) Early Development is More Critical than later development
   c) Development is the product of maturation and learning
   d) The developmental pattern is predictable
   e) The developmental pattern has predictable characteristics
   f) There are individual differences in development
   g) There are periods in the development pattern
   h) There are social expectations for every developmental pattern
   i) Every area of Development has potential hazards
   j) Happiness varies as different periods in development

SECTION-II (TERM – II)

1. Heredity and Environment
   a) The process of genetic Transmission
   b) Genetic Influences on Development
   c) Genetic Counseling and Genetic Engineering
   d) Heredity-Environment Interactions

2. Maternal Health and Nutrition
   a) Maternal Diet
   b) Maternal Illnesses
   c) Mothers metal health

3. Birth Processes
   a) Stages of child birth
   b) Methods of development
   c) Settings for child birth

4. Effects of birth on development
   a) Scientific interest in birth
   b) Adjustments to postnatal development
   c) How birth affects postnatal development
   d) Influence of time of birth on development
   e) Level of development present birth
   f) Hazard associated with birth

References Books

Berk, L. (1996). Infants, children and adolescents. (2nd Ed.). Boston: Allyn and Bacon.

Kail. R., & Cavasaugh, J. (2000). Human development-Alife-span view. (2nd Ed.). New York: Wadsworth.

Kitzinger, S. (1980). Pregnancy and childbirth. London: Michael Joseph.

Minett, P. (1985), Child care and Development. London: John Murnay.

Paplia, D.E. & Olds, S.W. Human Development (7th Ed.) Mc.Graw Hill.

Santrock, J. (1997). Children (5th Ed.). WI: Brown and Benchmark.

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UNIT 1.3 : PRACTICUM

TERM I:

EFFECTIVE COMMUNICATION

I. Concept of Communication

Definition, need and importance of Communication
Process of Communication
Objectives of Communication e.g. Information, education, training, order and instruction, motivation, persuasion, suggestion, counseling and advice.
Characteristics of effective communication.

II. Communication Skills with reference to Child Development

Listening
Reading
Writing

III Modes of Communication with reference to Child Development
Verbal and Nonverbal
Verbal – Oral and written Communication
Face to face communication

Non-verbal – Facial expressions, gestures, signs, symbols, signals, sketches, graphs, maps, charts, posters.

TERM II :

1. **Computer Hardware**
2. **Computer Software**
3. **Web Based Applications.**
4. **Presentation Skills in Computer**

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SECOND YEAR: DIPLOMA IN CHILD CARE AND CHILD DEVELOPMENT

UNIT 2.1 : CHILD DEVELOPMENT - II

Objectives:

1. Students comprehend the nature of physical, social, emotional, cognitive, language and moral development from birth to puberty.
2. Students understand the environmental factors, which affect the development of the above-mentioned aspect from birth to puberty.
3. Students recognize the dynamics of behavior from infancy to puberty.
4. Students apply knowledge gained to channelise energies during growth.

SECTION – I (TERM – I)

1. Physical Development In Infancy & Toddlers
   - A) The Newborn
   - C) Survival And Health During Infancy
   - D) Early Physical Development

2. Cognitive Development In Infancy & Toddlerhood.
   - A) Studying Cognitive Development: Four Approaches
   - B) Language Development
   - C) Development Of Competence

3. Psychosocial Development In Infancy & Toddlerhood
   - A) Foundations Of Psychosocial Development
   - B) Developmental Issues In Infancy
   - C) Developmental Issues In Toddlerhood
   - D) Contact With Other Children

4. Physical And Cognitive Development In Early Childhood
   - A) Aspects Of Physical Development
   - B) Health And Safety
   - C) The Preoperational Child
   - D) Aspects Of Cognitive Development
   - E) Early Childhood Education

SECTION – II (TERM – IV)

1. Psychosocial Development In Early Childhood

   - A) The Developing Self
   - B) Play: The Business Of Early Childhood
   - C) Gender
   - D) Child Rearing Practices
   - E) Specific Developmental Issues
   - F) Relationships With Other Children

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2. Physical And Cognitive Development In Middle Childhood
   A) Aspects Of Physical Development
   B) Fitness, Health, And Safety
   C) The Concrete Operational Child
   D) Aspects Of Cognitive Development.
   E) Influence On School Achievement
   F) Children With Special Educational Need And Strengths.

3. Psychosocial Development In Middle Childhood
   A) The Developing Self
   B) The Child In The Family
   C) The Child In The Peer Group
   D) Mental Health

4. Adolescence:
   A) Puberty
   B) Specific For Identity
   C) Relationships With Family, Peers, And Adult Society

References Books

Berk, L. (1996). Infants, children and adolescents. (2nd Ed.). Boston: Allyn and Bacon.
Kail. R., & Cavasaugh, J. (2000). Human development-Alife-span view. (2nd Ed.). New York: Wadsworth.
Kitzinger, S. (1980). Pregnancy and childbirth. London: Michael Joseph.
Minett, P. (1985), Child care and Development. London: John Murnay.
Paplia, D.E. & Olds, S.W. Human Development (7th Ed.) Mc.Graw Hill.
Santrock, J. (1997). Children (5th Ed.). WI: Brown and Benchmark.

UNIT 2.2 : CHILD AND THE SOCIETY.

SECTION –I (TERM – I)

Objectives

1. To encourage students to practically apply the knowledge of child behavior in their day-to-day lives.
2. To help students understand the concept of social welfare in relationship with child services.
3. To create in students awareness about the various problems and the services offered to alleviate these problems.
4. To create awareness in students about human rights including the rights of the child.

1. The Family And The Child.

   A) The Nature Of Family Processes.

   B) The Parental Role & Parenting Styles.

   C) Sibling Relationship & Birth Of Date.

   D) The Changing Family In A Changing Social World.

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2. Peers And The Child.

A) Early Peer Interactions.

B) The Role Of Peers In Children Socialization.

C) Play And Its Functions.

D) Peer Acceptance.

E) Developing Friendship.

F) Peer And Adult Influence On The Child.

G) Peer Groups In Different Cultures.

3. School And The Child.

A) The School's Role In Learning And Socialization.

B) School Environments.

C) Teachers: Their Impact On Children's Development.

D) Teaching Methods And Techniques As Punishments.

4.Children & The Mass Media.

A) Impact Mass Media On Children.

B) Computers And Children.

SECTION –II (TERM – II)

1. Child Abuse And Neglect.

A) Perspectives On Child – Rearing And Maltreatment.

B) Physical Abuse

C) Neglect

D) Sexual Abuse

E) Emotional Abuse

F) Prevention Of Incidence Of Abuse And Neglect

2. Child And The Law.

A) Children's Right In India.

B) UN Declarations Of Children's Right.

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3. Child And Welfare Services.
   A) Child Guidance Clinics.
   B) Counseling Services.
   C) N. G.Os
   D) Rehabilitation Centers.
4. Child Heath & Care.
   a) Diet & Nutrition.
   b) Emotional Health.

Reference Books:

Lausdown, R & Walker, M. Your child's development from birth through adolescence : A complete guide for parents (1991) Alfred A. Knool New York
Mark, a. Sociological Theory: An introduction to Concepts, Issues and Research. PrEntice – Hall Inc.
Chakravarty, Modhumita. Child Psychology (2000). Commonwealth Publishers. From Early Child Development to Human Development
Sharma, S.R. Psychology and Child Development (2003). Pointer Publishers (India)

UNIT 2.3:PRACTICUM

TERM I:

a) Written Communication
b) Internal Communication
c) External Communication
d) Field Visits and Observations
e) Visits to orphanages Schools & Nurseries

TERM II:

a) Child observation in Nurseries & schools.
b) Report Writing based on visits and observations.

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THIRD YEAR: ADVANCED DIPLOMA IN CHILD CARE AND CHILD DEVELOPMENT

UNIT 3.1: PSYCHOPATHOLOGY AND CHILDREN WITH SPECIAL NEEDS

Objectives:

1. To help students develop an awareness and concern for exceptional children, their needs and problems.
2. To help students gain knowledge about the different categories of exceptionality, their prevalence, causes and prevention.
3. To give information to the students regarding education, assessment and rehabilitation of exceptional children, with special reference to the Indian context.

SECTION-I (TERM-I)

1. Mental Retardation
   - A) Definition And Classification
   - B) Prevalence, Causation, Identification, Assessment, Rehabilitation
   - C) Legislation And Services
   - D) Teaching Children Who Are Mentally Challenged
   - E) Parent Involvement

2.Learning Disability
   - A) Definition, Characteristics And Types
   - B) Prevalence, Causation, Identification, Assessment
   - C) Legislation And Services (Example, Medical, Psychological)
   - D) Teaching Children With Learning Disabilities
   - E) Parent Involvement

3. Children With Impairment
   - A) Hearing Impairment
   - B) Visual Impairment
   - C) Physical Disabilities

4. Gifted Children
   - A) Definition, Concepts And Characteristics
   - B) Identification, Assessment
   - C) Teaching Gifted Children
   - D) Parent Involvement
   - E) Working With Parents Of Exceptional Children And The Community

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SECTION-II (TERM-II)

1. Autism And Childhood Onser Schizophrenia
   A) Historical Background Of Autism
   B) DSM-IV: Defining Features Of Autism, Autism Across The Spectrum
   C) Core Characteristics
   D) Associated Characteristics Of Autism
   E) Causes Of Autism
   F) Treatment 401

2. Attention – Deficit / Hyperactivity Disorder
   A) Historical Background Of ADHD
   B) Core Characteristics
   C) Associated Characteristics Of ADHD
   D) Theories Of ADHD
   E) Causes Of ADHD
   F) Treatment

3. Anxiety Disorders
   A) An Overview Of DSM – IVAnxiety Disorders
   B) Panic Attacks And Panic Disorder.
   C) Acute Stress Disorder
   D) Associated Characteristics Of Anxiety Disorders And Outcome
   E) Gender, Ethnicity, Disorders And Symptoms
   F) Theories And Causes
   G) Treatment

4. Conduct Problems
   A) The Significance And Cost Of Conduct Problems
   B) Antisocial Behavior And Normal Development
   C) Perspectives On Conduct Problems
   D) DSM-IV: Defining Features Of Conduct Problems
   E) Oppositional Defiant Disorder
   F) Associated Characteristics Of Conduct Problems

Reference Books:

Graham, P;Turk, J&Verhulst, F.C. Child Psychiatry: A Developmental Approach (3rd Ed.)
Howard, W.L. & Oransky, M.D. (1992) Exceptional Children. Columbus : Meriall Fishing Co. Hardman,
M. L. Drew, C. J. & Egan, M. W. (1999). Human Exceptionality. Boston : Allyn & Bacon
Mash, E.J &Wolfe, D.A. (1999). Wadsworth Publishing House
Pirto J (1999) Talented Children And Adults, Their Development And Education, New Jersey : Merrill
Sharma, U (1996) Child Development In India, Jaipur : Printwell
Wenar, C. Dvelopmental Psychopathalogy: From Infancy Through Adolescence (3rd Ed.). McGraw Hill Inc.

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Yesseldyde, J. E. & Algozine, B.C. (1998) Special Education : A Practice Approach For Teachers, New Delhi : Kanishka Publications.

UNIT 3.2: CHILD COUNSELING AND TESTING.

Objectives:

1. Introduce the concepts of counseling and guidance to the student.
2. To understand the role, scope, function and characteristics of school counselors.
3. To understand the essentials of the counselling process.
4. To introduce the concepts of group work and counseling families.
5. To understand the essentials of vocational guidance.
6. To sensitize students to legal and ethical issues in counseling.

SECTION-I (TERM-I)

1. Counselling for children.
   - A) The Child and in today's world
   - B) Developmental perspectives
   - C) Treatment settings for Counselling.

2.Counselling and guidance in school setting
   - A) Concepts of guidance and counseling.
   - B) Understanding the nature of counseling
   - C) The principles of counseling
   - D) The physical set-up required for counseling

3.The school counselor
   - A) Characteristics of school counselor.
   - B) Preparation of school counselor
   - C) Roll and function of school counselor
   - D) Problems that school counselors face regarding their role.

4.Orientation to counseling
   - A) Basic schools of counseling
   - B) Basic skills for effective counseling
   - C) Phases of counseling
   - D) Decisions about psychological testing,special education.

SECTION-II (TERM-II)

1. Intervention strategies for typical problems of school – going children.
   - A) Interpersonal problems: Relationships with peers, parents, teachers.
   - B) Academic stress
   - C) Emotional problems
   - D) Problems common to a school setting

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2. Working with groups
   A) Counselling students in groups
   B) Counselling parents and childrens in families

3. Effective counseling, programmes in school
   A) Effective programmes and resources
   B) Evaluation and improvement
   C) Ethical and legal issues

4. Status of school counseling
   A) In the world
   B) In India

Reference Books:

Aggrawal, J.C. (1985). Development and planning of modern education. New Delhi. Vikash
Capuzzi, D., & Gross, D. (1999). Counselling and psycho therapy, Theories and interventions. New Jessey: Merrill
Gibson, R.L. & Mitchell, M.H. (1999). Introduction to counseling and guidance: New Jerssey: Merill.
Nayak A.K. (1997). Guidance and couselling. New Delhi: APH Publishing.
Rao, S.N. (1992). Councelling and Guidance. New Delhi: Tata McGiraw Hill. Delhi; Dhanpat.
P.D. (1988). The new education policy in India. New Delhi. Sterling.

UNIT 3.3: PRACTICUM

I. Application Of Psychological Tests
   A) Wechsler's Intelligence Scale For Children.
   B) Children's Apperception Test.
   C) Draw A Person Test.
   D) Vinear's Social Maturity Scale.
   E) Seguine Form Board Test

II. Project Report On Case Study.

III. Field Visits To Mental Hospitals And Institutions For Children With Special Needs.

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ENVIRONMENT AUDITING

Objective of course: To provide Training Environment management system audit against the requirements of the standard (ISO-14001) enabling the students to compete with the current requirements of industry.

Course Name	Theory Duration	Practical Duration	Objective
Certificate in Environment Auditing	300 hrs	150 hrs	To learn about basics of Quality, ISO and QMS standards, Statistical tools in Quality measurements, Computer skills for documentation and presentations. Environmental Issues and Legal regimes, The management systems approach to managing environmental impacts. The requirements of ISO 14001
Diploma in Environment Auditing	300 hrs	150 hrs.	To learn about Law relating to Environment and Industry, Environmental Management system, Documentation, computer skills for statistical analysis and documentation. Planning of an EMS and reporting of an EMS audit
Advance Diploma in Environment Auditing	300 hrs	150 hrs.	To learn about International Environmental Law, EMS criteria in details, Accreditation, Occupational Health and Safety management.

Evaluation System	Theory Examination	200 Marks
	Tutorial/Practical	100 Marks

Certificate in Environment Auditing **Duration: 300 hrs.**

UNIT 1 **[75 hrs]**

1.Quality –Definitions, View Points and Dimensions:

Introduction, Defintions, Comprehensive Definition of Quality, Quality view points, Quality-customers views, Quality Management- Producers view, Quality Management-Holistic View.

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Total involvement in quality and Quality costs. Principles and techniques of total quality management (TQM).

UNIT 2 **[75 hrs]**

ISO and QMS Standards: Introduction, consensus, scope, decentralized management, selection and use of ISO 9000:2000 Family of standards, The ISO 9000 Family, Implementing the ISO 9001:2000 Quality Management System.

Standardising organizations: Company, industry and national. Product certifcate procedures.

UNIT 3 **[75 hrs]**

Environmental Issues and Legal Regimes: Pollution control under common law, criminal law, Water Pollution and Air Pollution. Specific Legislation for control of water and air pollution, Environment protection Act, Hazardous Wastes : Management and Handling

Environmental Issues: Depletion of Ozone layer, global warming depletion of natural resources, quality of life

UNIT 4 **[75 hrs]**

Statistical tools in quality measurements: Central tendency, Dispersion, Variance, Normal distribution, Z test.

Environmental management system: Legislative framework of EMS, purpose and intent of ISO 14001 series of standards and its requirements.

MS-Office: Introduction to MS-Office, Introduction to Word, Excel, Power point and Access, Internet search engines.

Books and References:

1. Bicehno, John, The Quality 75, Picsie Books, 2002.
2. Oakland, John and Les Porter, Total Quality Mangement, Butterworth-Hienmann, 1999.
3. Reeves, Richard and Elaine Pritchard, Quality Assurance and the Law, Butterworth-Hienmann, 1999.
4. Summers, Donna CS, Quality, Prentice Hall, 1999.
5. Dr R G Chaturvedi and Dr M M Chaturvedi. Law of Protection of Environment and Prevention of Pollution. The Law Book Co. (p) Ltd. Allahabad.

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List of Practical for Certificate in Environment Auditing [150 hrs]

1. MS-Word
2. MS-Excel
3. MS-Power point
4. Ms-Access
5. Internet usage
6. Project on site visits to study environmental impact analysis and preparation of project reports at least two one on Quality standards and one on Environment Management System in an Industry.

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Diploma in Environment Auditing **Duration: 300 hrs**

UNIT 1 **[75 hrs]**

Managemnet strategy: Principles of management, culture, climate, communication and feedback. Accountability and delegation.
Total quality management. ISO: 2000 series

UNIT 2 **[75 hrs]**

Statistical process control: Process capability studies, statistical process control charts, calculation and use of decision lines. Variability, continuous and discrete random variables, probability distributions binomial and poissson distributions. Application of acceptance sampling by attributes. Construction and interpretation of operating characteristic curves. Computer usage for statistical analysis of data

UNIT 3 **[75 hrs]**

Quality Audit, Process improvement: Kaizen, 5S methodology, value analysis, failure mode and effect analysis, process capability.
Improvement techniques: Quality circles.

UNIT 4 **[75 hrs]**

Understanding Bio Diversity Law: Introduction, International Law relating to Biodiversity Bio-diversity , Indian Legal Regime-Biological Diversity and Intellectual Property Rights.
Cerification of Environment Management systems: The certification process, accredited certification, planning stages in audit, Implementation and operation.

Books and References:

1.Montagamery, Douglas C. Introduction to statistical quality control. 4th Edition, Wiley Press 2001.
2.Murdach J and Barnes JA Statistical tables for students. 4th Edition, MacMillan Press, 1998.
3. Mears Peter, Quality Improvement Tools and Techniques. McBrawHill, London, 1995.

Practical: **150 hours**

Use of statistical package like MiniTab for data analysis
On Site visits and Two Projects for Diploma in Environment Auditing.

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UNIT 1 **[75 hrs]**

Development of environmental management: Regulator pressure, green marketing, consumer awareness, stakeholder analysis, Environmental reporting and business, local, national and international level.

The principles of environmental management applied in a quality assurance function. Documentation and control strategy, determination of significance of environmental effects. Environment audit. Emissions monitoring.

UNIT 2 **[75 hrs]**

International, Regional and National Law: The Law of the Sea and Marine Pollution, Hazardous waste, Nuclear Energy, Atmospheric Pollution, Biodiversity and depletion of natural resources, Conservation issues,
Environmental Impact Assessment: Air Quality, Air Quality Framework Directive, Waste disposa.l

UNIT 3 **[75 hrs]**

Good laboratory practices and Inspection and verification of GLP, Genetically modified organisms. Regulatory agencies, penalties, Environmental agencies. Indian Environmental law and policy.

UNIT 4 **[75 hrs]**

Occupational Health and Safety Management system: Introduction approach, some important definition, standards for the occupational health and safety management system.

Books and References:

1. Beaumont John, Brian Whitaker and Lene Pederson. Managing the Environment. Butterworth-Heinemann, 993.
2. Cleaver BA. Environmental Management Systems for SME's. JL Publishing Ltd. 1999.
3. Humphrey N and M Hadley. Environmental Auditing . Poole, Palladian Law Publishing 2000.
4. Roberts, Hewitt and Gray Robinson ISO 14001. EMS Implementation Handbook. Butterworth-Heinemann, 1998.

Practical for Advance Diploma in Environment Audit: 150 hours
Use of Computer Skills in audit report preparation.
On site visits and two projects

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University of Mumbai

Syllabus for

UGC Career Oriented Course

Web Designing and Office Automation

- **Certificate**
- **Diploma**
- **Advance Diploma**

2004-2005

(Proposal Draft Document)

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Web Designing and Office Automation

(Proposed Syllabus)

Course Name	Theory Duration	Practical Duration
Certificate in Web Designing and Office Automation	300 hrs	150 hrs
Diploma in Web Designing and Office Automation	300 hrs	150 hrs.
Advance Diploma in Web Designing and Office Automation	300 hrs	150 hrs.

Evaluation System	**Theory**	**200 Marks**
	Practicals and Project	**100 Marks**

Certificate in Web designing and Office Automation **300 hrs.**

Unit 1 **[75 hrs]**

Principles of Web Design :

Introduction : Internet Fundamentals: History of Internet, Text based browsers : Gopher. DNS, WWW, Web servers, Email : Creating an Account, Sending Receiving Email, Address Books. Telnet, FTP : Uploading and downloading files, Use of FTP tools. Net-etiquette, Discussion Boards : Groups, Messaging, Privacy on the Internet.

What is web design? Building Web-sites, User perspective and Content Focus, Evaluation of a website.

Process of web design, Goals and Problems, Audience and User Profiling, Site plan, Web Design Process Model : Design, Implementation, Testing, Release and Maintenance.

Design Considerations : Utility and Usability, User characteristics, Response and Reaction time, GUI : Concepts and Conventions, Web Conventions, Accessibilty and related issues.

Unit 2 **[75 hrs]**

Site types and Architectures : Types of web sites, Site structure, Interactive and Static web sites, Dynamic web sites, Organization Models, Hierarchy, Deep vs Shallow websites.

Navigation : URLs, Page and site style, Location of links and elements within a page, History, Navigation links : Placement within the web page, Frames and Sub-windows, Cookies, Book marking, Sitemaps, Indexes, and other navigational aids. Linking : Text, Buttons, Icons and graphics, Search : Search Engines and their working, Optimizing for Search Engines.

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Page Design Considerations : Types and Layouts, Size, Margins, Splash pages, Exit Pages, Entrance Pages, Browsers : Netscape, Opera, Internet Explorer, Tables, Backgrounds, Images, GUI oriented design considerations : Text and Color, Text and Graphics, Fonts : Styles, Dynamic Fonts, Downloadable Fonts. Interactivity with the user.

Unit 3: **[75 hrs]**

Office Automation

Windows:

MS Windows Basic: Difference between DOS and MS Windows interface, The desktop, changing the background, screen saver, settings and appearance, the password dialog box, the task bar, repositioning the task bar, changing the taskbar properties

MS Windows standard items: My computer, recycle bin, My briefcase, network components.

MS Windows Navigation: Different parts of window, minimizing, maximizing, restore and closing a window, moving and sizing windows, opening multiple windows, changing between windows, cascading and tiling windows, scroll bars.

Start menu: running programs, opening previously used documents, finding files and folders, using MS Windows help.

Managing files: Using My computer & explorer, file naming conventions, navigating the MS Windows hierarchies, moving, copying, renaming, deleting and recovering files, Undo and redo operations, creating a new folder, creating shortcuts to files, folders and drives on the desktop, checking the properties of a drive, creating new files, opening an existing file deleting.

Unit 4: **[75 hrs]**

Microsoft Office:

Introduction: Installation of MS Office Suite, Need for office automation tools, Introduction to the different components of the MS Office Suite, Office Assistant, Standard Toolbars and conventions : Toolbars, Menus and Help Features.

MS Word : Documents : Creating a new document, Using wizards, Using the Tool bar and short cuts, Text Editing : Cursors and Pointers, Selecting, Editing, Replacing, Deleting, Drag and Drop, Search and Replace, and Formatting Text. Bullets and Numbering, Page Borders, Formatting Paragraphs. Setting up a page : Adding Page margins, Headers and footers, Page Breaks, Columns, Shading. Managing Documents : Saving, Naming, Organizing Files, Finding and Printing. Page Layouts : Normal, Outline, Print Views. Printing Documents, Tabs and Setting options, Styles and Templates : Style gallery and Themes, Tables : Drawing tables, Inserting, Deleting, Formatting, Sorting Data within tables, Converting Text to a Table, AutoSum. Mail

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Merge, AutoText, Macros : Recording, Using, Adding. Working with Graphics : Clip Gallery, Vector and Raster graphics, Modifying Pictures, WordArt. Drawing Tools : Shapes, Text Boxes, Lines and Arrows, Special Effects. Table of Contents : Building and Index, Cross References, Footnotes and Endnotes. Spelling and Grammar : Thesaurus, Synonyms. Insert Menu, Bookmarks, Word interacting with other Office Documents : Using Binder to Organize projects, Adding Excel Worksheets, Designing Forms, Merging Letters using Access Database. Using the Web Toolbar : Hyperlinks, Webpage wizard, Saving documents in HTML, Building a webpage. Obscure features such as password protect and security.

MS Excel: Introduction to Excel, installing, introduction to Excel environment, Data entry & editing in Excel, Navigating and manipulating Excel documents, formatting and protecting worksheets, using Excel worksheet templates, Adding graphics and multimedia to Excel documents, creating Excel charts using Excel map features, printing Excel documents, using formulas in Excel, using functions, using pivot table, using Excel to analyze data , using Excel data in other applications, using Excel data with database, Sharing workbooks and consolidating data, custom controls, forms and data validation.

MS PowerPoint : Creating a new presentation, Presentation Wizards, Printing a presentation, Saving and Retrieving : Pack and Go, Editing Slides : Delete, Cut, Copy, Paste, Adding a new slide, Using the Outline View, Formatting Slides, Slide Masters : Changing the Style, Color Scheme, Handouts, Notes, Title, Headers and Footers, Coloring text and objects, using cliparts, Drawing : shapes, objects. Inserting : Graphs, Organization charts, Equations, Word Art, Adding Sounds and Video, Slide Transitions, Blinds, AutoCorrect, Notes, Making 35mm slides, Slide Show, Editing multiple presentations, Copying slides from other presentations, Importing foreign files, Creating Slides from outlines, Exporting outlines, Saving files as graphic files.

MS Access: Introduction to MS Access, DBMS concepts, understanding different Access objects: Tables, Queries, Forms, Reports, Data Access pages, Macros, Modules, creating simple tables, Building table using table wizard, Sorting records, field data types, Working of relationships, Designing of forms using form wizard / Autoforms, Navigating data in forms, Reports, Report wizard.

Books and references:

1. Comdex Computer Course Kit by Vikas Gupta.
2. Web design complete reference by Thomas Powell.
3. MS-Word for dummies
4. MS-Excel for dummies
5. MS-Power Point for dummies
6. MS-Access for dummies
7. Teach yourself MS-Office in 21 days

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List of Practicals for Certificate in Office automation **150 hrs**

1. MS-DOS internal and external commands.
2. Understanding of Windows 9X,Taskbar properties
3. Creating, formatting, editing and printing of document
4. Creating and manipulating Tables
5. Mail merge
6. Creating workbooks and managing worksheets.
7. Use of Functions, cell formatting
8. Formatting toolbar, Creation macro
9. Creating graphs
10. Creating presentation using Powerpoint, pack and go features, adding sounds and animation.
11. Creating database files, creating tables, defining constraints, adding validations to the table.
12. Creating forms, navigating through records, manipulation on fields (such as Adding, deleting, modifying fields)
13. Creating queries on a table, sorting records, hiding/unhiding fields, setting and deleting criteria, saving a query.
14. Creating reports with report wizard.
15. Working with Tally 6.3

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Diploma in Web designing and Office Automation **300 hrs**

Unit 1 **[75 hrs]**

Web Technologies :

HTML and Graphics : HTML Tag Reference, Global Attributes, Event Handlers, Document Structure Tags, Formatting Tags, List Tags, Hyperlinks, Image and Image maps, Table Tags, Form Tags, Executable content tags, Frame Tags.

DHTML and Style sheets : CSS, Introduction to DHTML, Advanced Netscape DHTML, Advanced Microsoft DHTML, Cross Browser DHTML.
XML : Introduction, Need for XML, Types of XML Mark ups, Document Type Definitions, XSL

Javascript : Introduction, Web Browser Object Model, Manipulating windows using Javascript, Using Javascript to create smart forms.

Unit 2 **[75 hrs]**

Database tools : Introduction to basic SQL commands, Creating and manipulating tables in Oracle(and/or) MS-Access.

Web servers : Working with web servers : Java Web Server, PWS, IIS, Apache Web Server.

Tools : Introduction to web designing tools such as Dream weaver, Frontpage.

Unit 3 **[75 hrs]**

Active Server Pages and VBScript : Understanding ASP, VBScript : Control Structure, Built-in functions. Working with Objects in ASP : Request, Response, Recordset, Error, Session, Server, Application ObjectContext. Interaction with the user : Form design and interaction, Sessions, Reading and writing files on the web server, Debugging and Handling errors, Interaction with a Database : Reading, writing, updating, deleting and other advanced database techniques.

Unit 4 **[75 hrs]**

CGI : CGI and Serverside scripting, Working, Script structure, Standard Environment Variables, CGI Libraries

Books and References:

1. The Web Programming Desktop Reference (6 in 1) (Que-PHI)
2. HTML by Xavier
3. Using HTML 4, XML & JAVA by Eric Ladd & Jim O'Donell
4. HTML Complete Reference (TMH Publication)
5. ASP 3 Unleashed

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6. Teach yourself ASP 3.0 in 21 days Techmedia publication
7. Foundation Web design: Essential HTML, Java script, CSS, Photoshop, Fireworks and Flash by Sham Dhamgal
8. Foundation macromedia Flash mx by Kriskian Besley

Project : Design a mini project involving a website.

List of Practicals for Diploma in Web designing and Office Automation. 150 hrs

1. Creating and formatting a HTML document.
2. Working with images, image maps and tables.
3. Creating forms.
4. Working with HTML editors-Dream weaver/FrontPage
5. Cross Browser DHTML: Browser Detection, Dynamic Fonts, Style-sheets etc.
6. Creating valid and well formed XML document, using DTD.
7. Using an XSL document.
8. Creation form, using Javascript
9. Window manipulation using javascripting.
10. Working with cookies using javascipting.
11. Handling forms using ASP
12. File manipulation, using ASP
13. Database interaction, using ASP
14. Session maintenance, using ASP
15. Working with CGI.

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Advance Diploma in Web Designing & Office Automation **300 hrs**

Unit 1 **[75 hrs]**

Basic Java : Introduction to OOPS, Java Fundamentals, Core API (including Applets, Multithreading, File Handling, Screen Layouts,etc.)

Unit 2 **[75 hrs]**

Advanced Java: Java Beans, Java RMI, Servlets, JDBC, JSP, Swings API.

Unit 3 **[75 hrs]**

Overview. Server Side Programming, Security Issues.: Serverside Scripting,.PHP, Server side includes, Web Servers.

Additional Web Design Tools/Concepts: Plugins, ActiveX controls, Flash, Photoshop, Macromedia Fireworks, Ucool3d

Project : Design a web-site and upload it on a server.

Unit 4 **[75 hrs]**

Tally 6.3

Introduction: Need of accounting, Advantages of computerized accounting, types of accounts, features of Tally 6.3, Company creation, Multi Directories.

Inventory information: Stock Group, Stock Categories, Stock Item, Opening Balance Account Details: Group, Ledger

Voucher Entry: Purchase, Journal: Debit note, Sales: Credit note, Receipt, Payment, Contra, Memo.

Balance sheet, Print preview, Stock ageing analysis, Cost center, Budget, Scenario Management, Reconciliation, ODBC, Protocol support

Tally Academic & Enterprise: Tally Locker, Backup & Restore

Books and references:

1. Java 2 Complete Reference by Herbert Schildt.
2. Java 2 Programming by Balguruswamy.
3. Learning java by O'Reilly
4. Servlet programming by O'Reilly
5. Accounting for Dummies by John A. Tracy
6. Learn Tally For Version 5.4 & 6.3 by BPB Multimedia

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List of Practical for Advance diploma in Web Designing & Office Automation

150 hrs

1. Using class and constructor
2. Using classes
3. using multithreading
4. File manipulation using java
5. Database interaction using java
6. File manipulation using java servlets
7. Database interaction using java servlets
8. User interface using swings API
9. Form handling using JSP.
10. Creating and handling remote objects using RMI
11. Form interaction, using PHP
12. Animation using flash
13. Image formatting using Photoshop
14. FTP and Web Site Uploading and setup.
15. Financial accounting using tally6.3

Software Requirement:

MS-Office
Tally 6.3
Dreamvieweaver
FrontPage
Browsers (IE, Netscape, Mozilla, Opera etc)
IIS/PWS
JDK 1.4
JSDK 2.0
BDK 1.1
Java Web Server
Perl 2.0

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UNIVERSITY OF MUMBAI

Syllabus for

UGC Career Oriented Course

Hardware Maintenance

- **Certificate**
- **Diploma**
- **Advance Diploma**

(With effect from the academic year 2004-2005)

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Hardware Maintenance

Objective of course: To provide Computer Training and Hardware Training to the students for self-employment and to compete with the current requirements of industry

Course Name	Theory Duration	Practical Duration	Objective
Certificate in Hardware Maintenance	300 hrs	150 hrs	To learn about basics of computer, parts of computer and threats in computer security. Understand what puts you in a risk and how to overcome or control it.
Diploma in Hardware Maintenance	300 hrs	150 hrs.	To learn about BIOS, Assembling PC and installation of various windows OS and fundamentals of networking.
Advance Diploma in Hardware maintenance	300 hrs	150 hrs.	To learn about advanced concepts in networking, installation of Linux OS, system administration, network administration.

Evaluation System	Theory Examination	200 Marks
	Practical	100 Marks

Certificate in Hardware Maintenance **Duration: 300 hrs.**

UNIT 1 [75 hrs]

Computer fundamentals: Introduction to computer system, classification of computers, Components of computer: CPU, Memory, I/O devices. Memory organization: RAM, ROM, EPROM, Secondary memory and Cache memory. Optical memory.

Computer Organization: Number system and codes, Computer arithmetic, Boolean algebra, logic functions, Theorems of `Boolean algebra, Simplification of expression, Logic gates- AND, OR, NOT, NAND, NOR, EX-OR, Ex-NOR operations and their truth tables, Combination and sequential circuits, Flip-flops: RS, D, JK, T and their truth tables. Registers, Counters, Encoders, Decoders, Multiplexer

UNIT 2 **[75 hrs]**

Study of components: Resistor, Capacitor, Inductor and transistor. Characteristics of LED, transistor. Study of Ohm's law, AC fundamentals.

Study of power supply

System components: study of motherboards, SCSI, Drives, Modem, Hub. Hardware and software interaction and overview, boot process, system resources.

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UNIT 3 **[75 hrs]**

Introduction to Operating system: OS structure, Types of OS, Main functions of OS, Introduction to MS-DOS, Windows 9X/NT/2000, Linux.

File System: Creating, copying, renaming, deleting files and folders. Desktop settings.

System security: Introduction-security, attacks, computer criminals, and method of defense.

UNIT 4 **[75 hrs]**

Microprocessor: Introduction to Microprocessor, microprocessor structure, microprocessor commands

MS-Office installation: Study of installation steps of MS-Office and introduction to MS-Office, Introduction to Word, Excel, Power point and Access.

Books and References:

1. Inside the PC- Peter Norton [7th edition]
2. Computer organization and architecture by Wiiliam Stallings
3. Computer architecture and organization by John P. Hays
4. Digital principles and applications by Malvino and Leach
5. Microprocessor programming by Gaokar
6. Microprocessor, microcomputer and their applications [2nd edition] by A.k. Mukhopadhyay.
7. Computer and common sense by Hunt and Shelly
8. Comdex computer course kit by Vikas Gupta

List of Practical for Certificate in Hardware Maintenance [150 hrs]

Group A

1. Study of electronic components.
2. Study of chip, how to buy a chip and other components.
3. Structure of chip and types of chip.
4. Practical on soldering a chip on a board.
5. Study of basic logic gates.
6. Study of universal gates NAND, NOR and Ex-OR
7. Study of half adder and full adder.
8. Study of multiplexer and demultiplexer.
9. Study of flip-flops.
10. Study of counters.

Group B

1. MS-DOS internal commands.
2. MS-DOS external commands.
3. Study of Taskbar
4. Desktop settings.
5. Installation of MS-Office.
6. MS-Word
7. MS-Excel
8. MS-Power point
9. Ms-Access
10. Study of viruses and anti-virus software.

Note: Practical on MS-Word, MS-Excel, MS-Power point and MS-Access may require more lab sessions compared to other practicals.

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Diploma in Hardware Maintenance **Duration: 300 hrs**

UNIT 1 **[75 hrs]**

Introduction to hardware: Hardware needs software to work, Hardware inside PC, Peripherals, BIOS and CMOS features, study of modem, AT command set, troubleshooting guidelines for modems. Selecting a PC to meet your needs, Preparing to Build Your Own PC, Building a PC Step by Step

Managing memory: Physical memory, Upgrading memory, and physical memory addressing.

Supporting I/O devices, Basic principles of peripheral installations, Ports and expansion slots for Add-on devices.

Floppy Drives: Working of floppy drive, Using windows explorer to manage floppy disks, Exchanging and supporting floppy drives, troubleshooting floppy drive. Zip drives.

UNIT 2 **[75 hrs]**

Hard disk drives: Understanding and installing hard drives, Hard drive technology, Communication with hard drive BIOS, logical organization of Hard drive, Installing hard drive, troubleshooting hard drive installation, optimizing and protecting hard drives, Managing hard drives, Viruses and Other computer infestations, Troubleshooting hard drives,

Printers: Supporting printers, Working of printer, Installation and sharing a printer, Troubleshooting printers.

Digital communication and networking: Data communication model, Communication media, Study of network and types of network, Network topology, Protocols, Switching techniques.

UNIT 3 **[75 hrs]**

Operating System

Windows 9X

Operating system basics, Windows 9X installation, Boot process, navigating Windows 9X, Windows files and disk management, Running application in Windows 9X, Configuring windows 9X, Windows 9X printing.

Windows NT

Supporting Windows NT workstation, Installation of Windows NT, Boot process, Configuring Windows NT, User accounts management, managing disk resources, and managing files. Troubleshooting Windows NT.

Windows 2000

Supporting Windows 2000 workstation, Installation of Windows 2000, boot process, Configuration of Windows 2000, User accounts management, managing disk resources, and managing files. Troubleshooting Windows 2000.

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UNIT 4 **[75 hrs]**

Windows XP

Supporting Windows XP workstation, Installation of Windows XP, boot process, Configuration of Windows XP, User accounts management, managing disk resources, and managing files. Troubleshooting Windows XP.

PC Hardware: System configuration, BIOS and CMOS setting, system resources, Safety and prevention maintenance, High voltage equipments, Disposal and handling, ESD and IDE devices, SCSI devices. Motherboards and components, Motherboard architecture, Printer connection, Configuring and troubleshooting networking cards and cables, Networking standards.

Project/Field Work/Job training

Books and References:

1. PC repair bench book by Ron Gilster
2. Computer Networks by Tannenbaum
3. Assembling PCs educational basic course [3rd edition] by Gabriel Torres
4. PC maintenance and configuration for beginners [2nd edition] by Gabriel Torres
5. Principles of Computer Hardware by Alan Clements
6. Inside Pc- Peter Norton
7. Troubleshooting maintenance and repairing [5th edition] by Bigelow.
8. WINDOWS 2000 –A Beginner's Guide by Martin Mathews
9. Comdex course kit (with CD) by Vikas Gupta.

List of Practical for Diploma in Hardware Maintenance: [150 hrs]

1. Study of PC Components, IDE devices, motherboard architecture
2. Study of networking cards and cables.
3. Assembling PC.
4. Installation of Windows 9X
5. Navigating Windows 9X, windows file and disk management
6. Running application on Windows 9X
7. Configuring Windows 9X and printer configuration in win9X
8. Installation of Windows NT
9. Navigating Windows NT, windows file management
10. Configuring Windows NT.
11. User Account management in Windows NT and managing disk resources
12. Troubleshooting Windows NT
13. Installation of Windows 2000
14. Configuring Windows 2000, file management
15. User Account management in Windows 2000 and managing disk resources
16. Troubleshooting Windows 2000
17. Installation of Windows XP
18. Configuring Windows XP, file management
19. User Account management in Windows XP and managing disk resources
20. Troubleshooting Windows XP

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UNIT 1 **[75 hrs]**

Concept of LAN, WAN & MAN, Introduction to Intranet and Internet, protocols.
PCs on a Local Network: Physical Network Architecture, Windows on a Network .
Connecting PC to network, Using Resources on the Network.
Internet concepts: Study of OSI model, The TCP/IP Suite of Protocols, Connecting to the Internet, Supporting Internet Clients

Physical Layer protocols and Access topologies: Physical layer protocols and interfaces, Accessing the network, Technologies - Copper access, Cable access, Fiber access, Air access.

Protocols and interfaces in LAN environment: Data link layer protocol, LLC and MAC sub layer protocol, Ethernet, Token ring, Token bus, FDDI, Bridge protocols, Switching in LAN environment.

UNIT 2 **[75 hrs]**

Study of IP addressing and routing, routing algorithms, Managing IP traffic, Establishing serial point to point connections, Frame relay specification and design, advantages and disadvantages of Frame relay, Establishing frame relay connections. Introduction to WAP.

Operating system (Linux)
Installation of Red Hat Linux OS: Hardware & Software Requirements, Creating Linux partition, Creating Install Disks, Installing Open Linux System, Network Configuration, Final Configuration, Installing LILO. Installing & Configuring X-Windows. Virtual consoles, init and /etc/inittab, Exploration of init process, GRUB boot loader. Accessing Your Linux System Starting & Shutting Down, Login/Logout, Linux Commands. Modem Setup, Internet Connections with Modems: pppd & ezppp, XFMail, X-Windows & network Configuration

UNIT 3 **[75 hrs]**

File system and software administration: Partitioning utilities, Formatting file systems, Installing Software Packages, Mounting and formatting floppy drive and hard drives. Mounting CD-ROM, automounter, /etc/fstab, Maintaing software with RPM, Archive Files and Devices: tar, Xtar. File Compression: gzip, Installing Software from Compressed Archives: .tar.gz, Downloading Compressed Archives

Study of shell operation and commands: The Command Line, Standard I/O & Redirection, Pipes, Shell variables, Shell Scripts, User defined Commands, Jobs: Background, Kills & Interruptions. Delayed Execution, shell commands

User administration: PAM, Creating user accounts, maintaining user accounts, creating/maintaining groups, NIS server and client configuration.

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UNIT 4 **[75 hrs]**

System administration tools: Installing with Kickstart, cron scheduling, Daily cron scripts, Network interface configuration, CUPs Configuration and administration, syslog configuration

Apache and squid: Squid proxy server overview, Apache configuration, Implementing Apache Virtual Hosts.

NFS and Samba: Configuring an NFS server, Samba client tools, Samba server configuration, Windows password and samba, Sharing files, Directories and printers with samba.

DNS and Electronic mail: Sendmail configuration files, Postfix configuration files, Configuring BIND, named.conf

FTP, xinetd and OpenSSH: vsftpd configuration, DHCP server configuration, OpenSSH client utilities, OpenSSH server configuration, xinetd.conf, xinetd service files.

Books and References:

1. Computer network by Tannenbaum
2. Computer network [5th edition] by William Stalling
3. Data communication and networking by Behrouz Forouzan
4. Linux The Complete Reference (Second Edition) by Richard Petersen
5. Using Linux by Bill Ball
6. Red hat Linux Networking and system administration by collings and wall

List of Practical for Advance Diploma in Hardware Maintenance [150 hrs]

5. Study of TCP/IP protocol suite.
6. Study of switches and routers.
7. Installation of Linux
8. Configuring X-window system
9. Creation of user accounts, groups. Assigning permissions.
10. Installing and running software on Linux system.
11. Mounting and unmounting floppy, hard drive and CD-ROM
12. Study of cron script.
13. Apache server configuration
14. NFS server configuration
15. Samba server configuration
16. Squid proxy server configuration.
17. DNS configuration
18. DHCP server configuration
19. xinetd services

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Requirement for Hardware Course

1. Motherboard
   a. Socket 7
   b. Socket A
   c. Socket 370
   d. Socket 478
2. Types of Processors
3. RAM (EDO, SD & DDR)
4. SMPS (AT & ATX)
5. Sound Card
6. VGA Card
7. LAN Card
8. Modem
9. Hard Disk
10. Data Cable
11. Floppy Drive
12. CD-Rom

CDS

Operating Systems CDs

1. Win98
2. Win 2000 Professional
3. WinNT
4. WinXP
5. WinMe

Application Software

1. MS-Office

AntiVirus Software CDS

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R. P. GOGATE COLLEGE OF ARTS AND SCIENCE AND
R.V. JOGALEKAR COLLEGE OF COMMERCE,
RATNAGIRI – 415 612, MAHARASHTRA.

UNIVERSITY GRANTS COMMISSION

SYLLABUS FOR COURSE IN TISSUE CULTURE UNDER CAREER ORIENTED PROGRAMMES AT FIRST DEGREE LEVEL IN COLLEGES

CERTIFICATE, DIPLOMA AND ADVANCED DIPLOMA IN TISSUE CULTURE

COMMITTEE MEMBERS:

Dr. Arvind S. Kulkarni (Co-Ordinator)

Shri. G. S. Kulkarni

Dr. Sanjay N. Kumbhar

Dr. Sameer S. Terdalkar

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Biotechnology is the one of the fast growing sector in India. Tissue culture (plant and animal) forms an integral part of Biotechnology and this sector is poised to take a leap forward in the next five years with a global share of 10 percent. The Indian Tissue culture Industry caters mainly to horticulture and floriculture. Recognizing this foremost requirement for a strong base in Biotechnology and Tissue culture trained human resource is needed to support Indian industries which has projected a turnover of US $ 4.5 billion by end of 2010. Hence, these courses have been tailored to fulfill the ever-growing demand of Human resources.

Objectives:

1. To prepare the candidates to face the future challenges in Science, as Tissue Culture and Biotechnology is the 21st Century Science and has grown tremendously in past two decades.
2. The candidate completing atleast a Certificate course will derive basic knowledge and basic practical techniques/tools used in Tissue Culture and Biotechnology.
3. The candidate will have an additional qualification and skill which will help him/her in finding a better job as compared to other counterparts.
4. The candidate completing Diploma and Advanced Diploma in Tissue Culture will be more preferred in the Biotechnology sector as he /she will have more practical knowledge in Biotechnology.
5. These add on value courses will provide a firm foundation in Biotechnology and will help in making the Institute academically more stronger.

Skills to be imparted:

All the basic tools / techniques in Tissue Culture, Biotechnology and Biological research will be imparted to the candidates which will help them in understanding the modern day techniques and thus help in shaping their academic careers.

Theory, Practicals, Assignments:

Theory: 15 Credits
Practicals: 10 Credits
Assignments: 03 Credits (one assignment per week)

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Practicals (Duration):

The duration of each practical will be three hours except visits, which may be of one / two days.

Required Faculty:

The Faculty for these courses can be had from the existing departments of the college as well as from other colleges affiliated to University of Mumbai. In addition, experts / executives from various Biotech / Pharma Research centers can be invited to deliver some special lectures.

On Job Training / Excursions:

On job training can be imparted to the candidates in biotech / instrumentation companies like Amchrom India Ltd., Bangalore Genei, Sun Pharma, Zydus Research Center etc.. This will make the candidates more skillful in operating a particular instrument or master a particular technique in Biotechnology. The Courses also cover visits/excursions to various Tissue Culture Labs, Beverage Industries / Food Processing Industries etc.,

Need of the Course at Local Level/ Opportunities, Employment:

Gogate Jogalekar College, Ratnagiri, happens to be a fast upcoming center of excellence in education as well as research. It also happens to the premier Institute in the entire konkan region. The vocational courses in Biotechnology are necessary for strengthening the academic beam of the college. The candidates from konkan and adjacent regions will be definitely exposed to some of the modern techniques used in the field of biotechnology and gain knowledge in the upcoming areas of biological research. This also can help in the economic development of the region in general and Ratnagiri in particular.

After completion of these courses the candidate will have a wide range of job opportunities in ever growing sectors of commercial science like tissue culture laboratories, Biotech Companies, research centers of various pharmaceutical industries, food processing industries, horticulture, agriculture, beverage industries, microbiological units, fermentation industries, banking and management sector as well.

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Fee Structure:

1. Certificate Course: Rs. 2000/-
2. Diploma Course: Rs. 2500/-
3. Advanced Diploma Course: Rs.3000/-

Intake Capacity:

The intake capacity for Certificate, Diploma and Advanced Diploma in Tissue Culture will be maximum 20 students.

Tentative Time Table:

Monday to Thursday: Two lecture per day from 5.30 p.m. to 6.30p.m and from 6.30p.m. to 7.30 p.m.

Friday and Saturday: Practicals from 5.30 p.m. to 8.30 p.m.

Exam System:

Each Theory Paper (Paper I and II) will be of 75 marks each and of 3 hours duration. Each Paper will consist of 5 Compulsory Questions of 15 marks each. 25 marks will be allotted for Continuous Internal Assessment.

Each Practical paper will be of 50 marks of 5 hours duration. The format of Practical Paper is as follows:

Q.1) Major Experiment	15 marks
Q.2) Minor Experiment	10 marks
Q.3) Identification	10 marks
Q.4) Viva Voce	05 marks
Q.5) Field Report	05 marks
Q.6) Journal	05 marks

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I. CERTIFICATE COURSE IN TISSUE CULTURE

COURSE CONTENTS	CREDITS
1. Introduction to Tissue Culture	02
2. Instrumentation	01
3. Techniques for Culturing of Eukaryotic Systems	01
4. Plant Tissue Culture	03
5. Animal Tissue Culture	03
6. Enzymes and Hormones	01
7. Biotechnology and Bioinformatics	01
8. Assignments	03
9. Practicals	15
TOTAL	**30**

Course Value: The candidate completing the Certificate course will have job opportunities in different disciplines like horticulture, agriculture, banking, food processing units etc..

II. DIPLOMA COURSE IN TISSUE CULTURE:

COURSE CONTENTS	CREDITS
1. Media, Buffers and other reagents in Tissue Culture	02
2. Instrumentation	01
3. Plant Tissue Culture	03
4. Animal Tissue Culture	03
5. Enzymes and Hormones used in Biotechnology and Tissue Culture	01
6. Biotechnology and Bioinformatics	02
7. Assignments	03
8. Practicals	15
TOTAL	**30**

Course Value: The candidate can work as a Technician in tissue culture Laboratories (Institutes as well private), Polyhouses, etc.,

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III. ADVANCED DIPLOMA IN TISSUE CULTURE:

COURSE CONTENTS	CREDITS
1. Applications of Tissue Culture	01
2. Instrumentation	02
3.Advanced Tissue Culture	02
4. Techniques in Recombinant DNA Technology	01
5. Applications of Genetically Engineered Bacteria.	01
6. Applications of Genetically Engineered Animal Cells	01
7. Biotechnology and Bioinformatics	02
8. Enterprenurship Development	02
9. Assignments	03
10. Practicals	15
TOTAL	**30**

Course Value: The candidate will have job opportunities in pharmaceutical industries, Biotechnology,laboratories, Companies, Agencies, etc.. and the candidate can establish a new tissue culture laboratory and green house.

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1) **Detailed Syllabus:**

Certificate Course in Tissue Culture:

Paper I

I) **Introduction to Tissue Culture**
Introduction, Scope and Historical background, Laboratory Design, Setting up of Laboratory Requirements of Plant and Animal Tissue Culture, Equipments, Culture media, Sterilization techniques.

II) **Instrumentation**
Basic concepts and Principles of Microscopy, Types of Microscopy, Laminar flow cabinet, Centrifuge machines, Autoclave

III) **Techniques for Culturing of Eukaryotic Systems**
Calluses from explants, Haploid culture, Protoplast culture, Culture media, Surface sterilization, Primary and Established Cell Lines, Preparation of cells/organs for culture.

IV) **Plant Tissue Culture**
Culture Vessels, Preparation of Media, Aseptic Manipulations, Laboratory Requirements, Protoplast Culture.

Paper II

V) **Animal Tissue Culture**
Introduction, General considerations in media design, Natural and Synthetic media, Considerations in media formulations.

VI) **Enzymes and Hormones**
Definition, Nomenclature, Classification of Enzymes and, Mechanism of Enzyme Action, Effect of various factors on Enzyme Activity, Definition, Introduction, Basic Concepts, Mechanism of Action, Biosynthesis of Hormones, Plant Growth Regulators (IAA, Gibberllins, Cytokinins, Ethylene etc.,)

VII) **Biotechnology and BioInformatics**
From Classical Genetics to Modern Genetics, Landmarks in Molecular Biology and Biotechnology, Scope and Importance of Biotechnology and Tissue Culture, Commercialization of Tissue

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Culture / Biotechnology, Global Scenario, New Horizons in Biotechnology, Concerns and Consequences of Bioetchnology, Research Institutes, Companies working in the field of Tissue Culture and Biotechnology in India.

Introduction and Scope of Bioinformatics, Information Networks (Internet, IP Address, TCP/IP, FTP, HTTP, HTML and URL's) Genome Projects.

Practicals:

Paper I

1) Instrumentation
i) Microscope, Centrifuge, Autoclave
ii) pH Meter, Conductivity meter
iii) Colorimeter, Autoclave, Laminar Air Flow

2) Safety measures and biohazards in the laboratory.
3) Sterilization and Aseptic techniques (Instruments, culture media and other lab ware).
4) Preparation of tissue culture medium and its sterilization.
5) Preparation of agar slants in culture tubes.
6) Cell planting technique or process of single cell culture and callus formation.
7) Visit to Tissue Culture laboratory.

Paper II

1) Isolation of animal cells by trypsinization.
2) Isolation of single cell from intact plant organs.
3) Isolation of plant cell DNA.
4) Isolation of animal cell DNA.
5) Preparation of primary cultures (animal)
6) Quantitation of cells in culture.
7) Basics in computer operations and use of Internet.
8) Visit to Biotech Company.
9) Visit to Bioinformatics Center.

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Diploma Course in Tissue Culture:

Paper I

I) **Media, Buffers and other Reagents in Tissue Culture:**
LB broth, LB agar, Standard medium, TCC medium, MS medium, Drosophila food and culture medium, PBS, various buffers essential for restriction enzymes, preparation and usage of other reagents, Considerations in media formulations (solubility and stability of material used, osmolarity, temperature, viscosity and surface tension).

II) **Instumentation**
Spectrophotometer, Millipore vaccum filter, Millipore syringe filter, refrigerated centrifuge, Eppendorf Microfuge, BOD and Co_2 Incubator.

III) **Plant Tissue Culture**
Production and usage of haploids, Protoplast culture and regeneration of plants, Somatic Hybridization and Genetic Modifications of Protoplast.

Paper II

IV) **Animal Tissue Culture**
Primary and Established cell lines, Primary culture, Cell Lines and Cloning of cells, Tissue and Organ Culture, Preservation of cell lines.

V) **Enzymes and Hormones Used in Tissue Culture**
Protein and Steroid hormones, Growth Factors, Blood derived factors, enzymes, antibiotics used in tissue culture.

VI) **Biotechnology and Bioinformatics**
Applications of Biotechnology in food and beverage industries, Vaccine biotechnology, Agriculture, Medicine, Transgenic animals and Environmental biotechnology, Gene Therapy.
Replication of DNA, Genetic Code, DNA Alphabets, Base Ambiguity, Single Letter Amino Acid Code, Sequence Analysis, Proteomics, Protein Structure and Prediction.

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Practicals:

Paper I

1) Instrumentation:
   i) Spectrophotometer ii) Millipore Vaccum Filter
   iii) Millipore Syringe Filter iv) Referigerated Centrifuge
   v) Eppendorf Microfuge vi) Biological and CO_2 Incubator

2) Preparation of LB broth, LB agar, Standard Tissue Culture Medium, TCC medium, MS medium.
3) Drosophila food and culture medium.
4) Preparation and Usage of various buffers for restriction enzymes used in tissue culture.
5) To make a primary culture of chicken fibroblast.
6) Visit to Tissue Culture laboratory.

Paper II

1) To culture calluses from explants.
2) Anther culture (haploid culture).
3) Protoplast culture from callus.
4) Steps involved in Aseptic *in vitro* culture plant tissue.
5) Problems in biotechnology and bioinformatics.
6) Visit to Biotech Company.
7) Visit to Bioinformatics Center.

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Advanced Diploma Course in Tissue Culture:

Paper I

I) Applications of Tissue Culture

In Virology, Oncology, Genetics and Genetic Engineering. Hazards and Impact of Genetic Engineering on the Society (Ethical, Economic and Legal Issues).

II) Instrumentation

Chromatography and Electrophoresis.

III) Advanced Tissue Culture

Initiation and maintenance of callus, Organogenesis , Elimamation of virus by meristem culture, Plant propagation through tissue culture, Micropropogation of flowering plants, Commercial application with reference to floriculture industry , Somatic Embryogenesis, Synthetic Seeds, Commercial potentials of synthetic seeds, Biology of cultured cells , the culture environment , cell proliferation ,differentiation , energy metabolism, initiation of culture, evolution of cell lines ,the development of continuos cell lines , Origin of cultured cell, Tissue Culture Techniques in biotechnology, Hybridoma Technique, Transgenic Organisms and their Applications.

IV) Techniques in Recombinant DNA Technology

Restriction Enzymes, Properties of cloning Vectors, Plasmids as cloning vectors, Bacteriophage and Cosmid Vectors.

V) Applications of Genetically Engineered Bacteria

In Agriculture – Nitrogen Fixation, Herbicide Resistant, Pesticide Resistant, *Bacillus thuringiensis* toxins.
In Therapeutics- Production of Human Insulin.

Paper II

VI) Applications of Genetically Engineered Animal Cells

Hepatitis Vaccines, Human Tissue Plasminogen Activator.

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VII) Biotechnology and Bioinformatics

DNA replication in prokaryotes and Eukaryotes , Modes of replication (Unidirectional, Bidirectional, Rolling circles,D.loop, Proteins involved, Concept of gene (promoters, ribosome binding site, Introns, Enhancer, termination).

Biological databases, NCBI and EMBL Networks, Tools for Bioinformatics, Software in Bioinformatics, Emerging areas of Bioinformatics.

VIII) Entrepreneurship Development

Concept of Entrepreneurship and Emergence of Entrepreneurship,Class , Characteristics of entrepreneurial leadership , Entrepreneurial functions , Types of Entrepreneurship, Decision making and business planning , Analysis of business opportunities, Environmental scanning, Project planing, Developing detailed project report for implementation , Feasibility study, Ancillary industry , Socio-psychological and Economic factors influencing Entrepreneurship development ,Institutional Assistance to small scale Entrepreneurs, Problems of Entrepreneurship in India, Remedial measures .

Practicals:

Paper I

1) Protoplast culture of leaf tissue cells (Part I).
2) Protoplast from Leaves (Part II).
3) Protoplast from stems, roots, petioles or hypocotyls.
4) Seeds sterilization and germination.
5) Callus induction from suitable explant material.
6) Axillary bud proliferation and regeneration of plantlets using any suitable material.
7) Encapsulation of axillary buds.
8) Callus initiation and maintenance by using different explants.
9) Regeneration of plants from callus through organogenesis and embryogenesis,
10) Electrophoresis of DNA and visualization.
11) Electrophoresis of RNA and visualization.
12) Visit to Tissue Culture laboratory

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Paper II

1) Adsorption chromatography.
2) Gas chromatography.
3) Thin layer chromatography.
4) Micropropogation of banana or any other suitable plant material using
    a. plant tissue culture technique.
5) Separation of serum proteins by polyacryl amide gel electrophoresis
6) and staining the bands.
7) Separation of serum proteins by salt and their separation by Polyacryl
8) Amide Gel electrophoresis and staining the bands.
9) Separation of LDH Isozymes from mouse kidney by polyacryl amide
10) Gel electrophoresis and their detection by activity stanining.
11) Separation of DNA and r RNA by Agarose Gel electrophoresis
12) Separation of DNA and RNA by DEAE Ion Exchange
13) Chromatography .
14 Isolation of Genomic DNA from chicken liver.
15) Visit to Biotech Company.
16) Visit to Bioinformatics Center.

References:

1. Genetics - P.K.Gupta
2. Environment and Biotechnology – Sohal and Srivastava
3. Biotechnology – Mohan Arora
4. Gene Biotechnology – Jogdand
5. Cell and Molecular Biology – De Robertis
6. Genetic Engineering – Desmond Nicholl
7. Genetic Engineering – P.Joshi
8. Introduction to Bioinformatics – Attwood and Parry Smith
13. Bioinformatics – C.S.V. Murthy
14. Genetic Engineering – Sandhya Mitra
15. An Introduction to Plant Tissue Culture – M.K.Razdan
16. In Vitro cultivation of Animal Cells.-Butterworth - Heinemann
17. Bioinformatics – Sundar Raja and Balaji
18. Handbook of plant tissue culture-Mascarenhas A. F.
19. Applied and functional aspects of plant tissue and organ culture-Reinhert J.and V.P.S. Bajaj

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20. Culture of Animal Cell - A manual of Basic Technique – Ian Freshney R.
21. Instumental methods of analysis –Sharma
22. Instumental methods of analysis –Willardard and Merritt
23. Biotechnology –Balasubramanian
24. Molecular Genetics -Good
25. Dynamics of entrepreneurial development and management.- Vasant Desai.
26. Guidelines for financing small scale industries- Nirmala Prasad and Chandradass.
27. Management of small scale industries – Ghosh S.K.

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UNIVERSITY GRANTS COMMISSION

SYLLABUS FOR COURSE IN ELECTRONICS EQUIPMENT MAINTAINANCE UNDER CAREER ORIENTED PROGRAMMES AT FIRST DEGREE LEVEL IN COLLEGES

CERTIFICATE, DIPLOMA AND ADVANCED DIPLOMA IN ELECTRONICS EQUIPMENT MAINTAINANCE

COMMITTEE MEMBERS:

Dr. K.V.Sukhatankar (Co-Ordinator)

Dr. M.M. Belekar

Dr. S.C. Watwe

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R. P. GOGATE COLLEGE OF ARTS AND SCIENCE AND
R.V. JOGALEKAR COLLEGE OF COMMERCE, RATNAGIRI – 415 612, MAHARASHTRA.

Syllabus of

CERTIFICATE IN HORTICULTURE,

DIPLOMA IN HORTICULTURE

AND

ADVANCED DIPLOMA IN HORTICULTURE

for

COURSE IN HORTICULTURE UNDER CAREER ORIENTED PROGRAMMES AT FIRST DEGREE LEVEL IN COLLEGES.

Objectives: -

1) To minimize the operational and scientific boundaries and to convince the importance of Horticulture to the students.
2) To acquire the basic knowledge of Horticulture as a science, art and business.
3) To develop the interest among the students to choose Horticulture as a hobby or / & a career.
4) To acquaint the students with some basic as well as applied skills if Horticulture to work as an entrepreneur.

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Syllabus for certificate course in Horticulture.

Unit I – Basic concepts of Horticulture. (4 credits)

a) **Horticulture** - Definition, nature and scope, objectives, divisions.

b) **Basic plant science**- Classification and nomenclature of horticultural plants, morphology, anatomy, growth requirements, physiology, and genetics of plants, plant diseases and their control.

c) **Personnel – Effective communication and management.** Writing skills, oral communication and presentation skills.

Unit II & III - Basic skills of Horticulture. (5 credits)

a) **Horticulture machinery and equipment** -Garden implements for soil preparation, weeding, budding, cutting and harvesting, pruning, watering and fertilization application.

b) **Plant propagation** –Sexual propagation, seed formation, production, seed dormancy, quality analysis, treatment, nursery activities, Vegetative propagation (asexual propagation), cutting, layering, grafting, budding, hybridization, micropropagation.

c) **Mineral nutrition & inorganic fertilizer support**- Soil, classification, properties, essential elements and their role, fertilizers, types, properties, handling and storage.

d) **Manure support**- Humus, its role, manures, their role in soil fertility, types of manures, methods of application & biofertilizers.

e) **Irrigation management** - Role of water, water resources, types of irrigation methods.

f) **Pots and potting**- Types of pots, size, material, potting mixture, potting and repotting.

Unit IV- Applied skills. (3 credits)

a) **Indoor plantation**- Concept of indoor plants and their selection, location, specific use, display, garden rooms, hanging baskets, window plants, diseases of indoor plants & their management, concept of plant library.

b) **Kitchen gardening**- Concept, principles, designing, selection of plants, use of domestic sewage, irrigation, harvesting and maintenance.

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Syllabus for certificate course in Horticulture.

Unit I – Basic concepts of Horticulture. (4 credits)

a) **Horticulture** - Definition, nature and scope, objectives, divisions.

b) **Basic plant science**- Classification and nomenclature of horticultural plants, morphology, anatomy, growth requirements, physiology, and genetics of plants, plant diseases and their control.

c) **Personnel – Effective communication and management.** Writing skills, oral communication and presentation skills.

Unit II & III - Basic skills of Horticulture. (5 credits)

a) **Horticulture machinery and equipment** -Garden implements for soil preparation, weeding, budding, cutting and harvesting, pruning, watering and fertilization application.

b) **Plant propagation** –Sexual propagation, seed formation, production, seed dormancy, quality analysis, treatment, nursery activities, Vegetative propagation (asexual propagation), cutting, layering, grafting, budding, hybridization, micropropagation.

c) **Mineral nutrition & inorganic fertilizer support**- Soil, classification, properties, essential elements and their role, fertilizers, types, properties, handling and storage.

d) **Manure support**- Humus, its role, manures, their role in soil fertility, types of manures, methods of application & biofertilizers.

e) **Irrigation management** - Role of water, water resources, types of irrigation methods.

f) **Pots and potting**- Types of pots, size, material, potting mixture, potting and repotting.

Unit IV- Applied skills. (3 credits)

a) **Indoor plantation**- Concept of indoor plants and their selection, location, specific use, display, garden rooms, hanging baskets, window plants, diseases of indoor plants & their management, concept of plant library.

b) **Kitchen gardening**- Concept, principles, designing, selection of plants, use of domestic sewage, irrigation, harvesting and maintenance.

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c) **Flower arrangement**- Types, selection of flowers & foliage, basic principles. Maintenance & career opportunities.

d) **Terrarium (Bottle garden)** –Concept, selection of plants, designing, tools, planting medium, procedure, care & maintenance, problems, career opportunities.

e) **Art of bonsai making**- Concept, principles, selection, designing, pruning, training, wiring, tools and container plants.

f) **Weed management**- Weed concept, types and methods of weeding, hoeing, weed control methods.

Unit V – Project and field visits. (4 credits)

- Any one project on basic or applied skills of Horticulture.
- Visits to different nurseries.
- Visit to soil testing / seed testing laboratory.
- Visit to manure production unit.
- Visit to Horticultural farms.

Practical: - (11 credits)

1. Study of classification and nomenclature of horticultural plants.
1. Study of morphology of vegetative plant parts.
2. Study of morphology of reproductive plant parts.
3. Study of anatomical features of plants of horticultural importance.
4. Study of ascent of sap in plants.
5. To study the effect of light in photosynthetic activity.
6. To study the role of water in plant life.
7. Study of apical dominance in plants.
8. To study the effect of growth regulators on plants.
9. Study of plant diseases on the basis of morphological symptoms.
10. To study the garden implements.
11. Propagation of plants using vegetative propagules.
12. Propagation of plants by cuttings.
13. Propagation of plants by layering.
14. Propagation of plants by grafting.
15. Propagation of plants by budding.
16. Testing of seed viability of different seeds.
17. Determination of seed purity of different seeds.
18. Determination of seed germination % of different seeds.
19. Measurement of seed moisture % of different seeds.
20. Study of seed germination patterns.
21. Propagation of plants by seeds.
22. Determination of water holding capacity of different soil samples.
23. To study the mechanical analysis of soil.

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24. Determination of soil pH and macro-elements using soil-testing kit.
25. Identification of different fertilizers by physical and chemical tests.
26. Determination of unit value of fertilizers.
27. Identification and use of biofertilizers.
28. Water analysis by using water-testing kit.
29. Study of different methods of irrigation.
30. Study of different types of nozzles and sprinklers and drippers.
31. Fertilizer application through irrigation.
32. To study the method of potting the plant.
33. To study the method of repotting the plant.
34. To study the plants suitable for indoor plantation.
35. Designing and display of indoor plants.
36. Developing the plants in hanging baskets.
37. To study the plants suitable for kitchen garden.
38. Designing of kitchen garden.
39. Preparation of garlands and decoration with garlands.
40. Preparation of veni and gajara.
41. Preparation of different ornamentals using various flowers.
42. Preparation of floral rangoli.
43. Preparation of bouquets.
44. Study of Ikebana- Japanese style of flower arrangement.
45. Study of western style of flower arrangement.
46. To study the plants and tools suitable for terrarium.
47. Designing and developing terrarium.
48. Care and maintenance study of terrarium.
49. To study the plants and containers suitable for Bonsai making.
50. Potting of plant for making the Bonsai.
51. Training of plant to prepare the Bonsai.
52. Study of weeds of rainy season.
53. Study of weeds of winter season
54. Study of weeds of summer season and preparation of weed chart.

Field Practical: -(3 credits)

1. Practical applications of various garden implements.
2. Collection of different vegetative propagules and their cultivation.
3. Collection of different specimens of horticultural plants showing infections.
4. Collection of different soil samples from various fields.
5. Study of effect of different fertilizers on growth of plants.
6. Study of effect of different manures on growth of plants.
7. Collection of biofertilizers in surrounding area.
8. Study of methods of cultivation of biofertilizers.
9. Development of surface irrigation system.
10. Development of modern irrigation system (Drip).
11. Development of modern irrigation system (Sprinkler).
12. Development of kitchen garden, part I.

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13. Development of kitchen garden, part II.
14. Development of kitchen garden, part III.
15. Study of mechanical and chemical control of weeds.

Skills to be imparted: -

1. Skills of various methods of plant propagation like cutting, layering, grafting budding etc.
2. Skills of developing garden room, hanging basket, window plants, plant library etc.
3. Skills of designing and developing kitchen garden.
4. Skills of various types of flower arrangement and their exhibition.
5. Skills of developing and maintenance of various types of terrariums.
6. Skill of developing a bonsai.
7. Effective communication and presentation.

4. Theory, practical, field practical breakup

1-Certificate course in horticulture

Unit No.	Title	Total Credits	Theory Credits	Practical Credits	Field practical Credits
I	Basic concepts of Horticulture	6	4	2	--
II&III	Basic skills of Horticulture	12	5	5	2
IV	Applied skills of Horticulture -I	8	3	4	1
V	Project and field visits	4	-	2	2

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Syllabus for Diploma course in Horticulture.

Unit I – Advance skills in Horticulture (2 credits).

a) **Nursery management** – Concept, location, structure, type production of plant-lets & aftercare, marketing and economics.

b) **Manure production** – Types of manures, production of compost, vermi-compost, phospho-compost, green manure, testing of manural quality & method of application.

c) **Disease management** – Classification based upon symptoms, Principles & methods of disease and pest control, physical chemical & biological control, legislative control.

d) **Training and pruning of horticultural plants** - training and pruning concept, need, advantages, practical uses .

Unit II & III– Applied skills (6 credits).

a) **Gardens in India** – History of garden, Hindu-Buddhist garden, Mughal, English garden, Different gardens in India.

b) **Garden features** – Paths & avenues, hedges & edges, topiary work, lawn, flower bed, arches & pergolas, screens & wall covers, ponds, rock, material & plant suitable for these locations.

c) **Garden designing** – Principles of garden designing, pubic, private landscape gardens.

d) **Olericulture** –Soil, climate, varieties, propagation, planting, intercultural operations, pests and diseases, harvesting and yield, post harvest technology, methods of crops with underground edible crops, cucurbits, legumes, leafy vegetables, solanaceous plants.

d) **Ornamental Horticulture** – Lawn making, Floriculture- Principles, types. soil, climate, varieties, propagation, planting, intercultural operations, harvesting and yield, post harvest technology and methods of preservation of Flowering plants like- Marigold, chrysanthemum, Lilies, Jasmine, Rose, Tube-rose etc and foliage plants like Anthurium, Caladium, Croton, Duranta etc.,Orchids - types, propagation and growing, Cacti - types, propagation and growing.

e) **Seed production technology in vegetables**: Tomato, Brinjal and Chilly - Isolation distance, and different methods of seed extraction and storage.

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Unit IV – Marketing skills of Horticulture (3 credits).

a) **Horticulture and economics** – Horticulture and economy of the Konkan region. Costing of the horticultural products, types of costs. Packing types, material, costing. Ancillary Industries of horticulture: Packing, processing, Transportation.

b) **Marketing of Horticultural goods** – Marketing channels for horticultural goods, grading, handling during marketing, packing types and material, quality and quality maintenance, marketing research for horticultural goods.

Practical: - (7credits)

1. Study of different media- soil, sand, leaf mould, Sphagnum moss, vermiculite, perlite, coco-peat, etc.
2. Study of different types of containers - earthen, cement, plastic, polythene bags etc.
3. Study of methods of raising the seedlings.
4. Identification of pests and diseases of nursery.
5. Selection and preparing the layout of nursery.
6. Testing of manurial qualities of different types of manure prepared in field.
7. Study of types of diseases on the basis of symptoms.
8. Study of different equipment used for chemical control of plant diseases.
9. Preparation of Tobacco, neem & Garlic-Chilly extract.
10. Preparation of Kerosene emulsion.
11. Study of different garden features.
12. Preparation of layout of garden- public garden.
13. Preparation of layout of garden- Private garden.
14. Preparation of layout of garden- landscape garden.
15. Study of climbers and creepers suitable to plant in garden.
16. Study of ornamental foliage and flowering plants suitable to plant in garden.
17. Study of avenue plants and flowering trees suitable to plant in garden.
18. Study of hedge and edge plants suitable to plant in garden.
19. Study of topiary and screen cover plants suitable to plant in garden.
20. Study of different plants suitable for lawn.
21. Study of different varieties of flowering and foliage plants as per theory.
22. Testing of seeds of vegetables.
23. Study of diseases and pests of vegetable plants.
24. Storage and processing of different vegetables.
25. Preparation of different vegetable products.
26. Packing of vegetables and vegetable products.
27. Extraction of seeds from fruit vegetables, processing and storage.
28. Study of different packing materials for packing of seeds, seedlings, flowers, vegetables and fruits.
29. Packing of seeds, seedlings and flowers for marketing.
30. Preparation of gulkand from rose.
31. Extraction of volatile oil from flowers.

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Field practical: -(10 credits)

1. Filling of polythene bags using different media for nursery.
2. Filling of containers for ornamental plants.
3. Preparations of raise beds for vegetable crops.
4. Fumigation of raised beds.
5. Drenching of raise beds with fungicides.
6. Solarisation treatments of raise beds.
7. Water management of nursery beds, local method and use of micro-sprinklers.
8. Pest and disease management of nursery beds.
9. Preparation of compost by heap method.
10. Preparation of compost by pit method.
11. Phosphocomposting.
12. Preparation of compost by Nadac method.
13. Vermicomposting.
14. Study of methods of application of manure.
15. Study of methods of application of pesticides.
16. Application of Tobacco, neem, garlic-chilly extract & kerosene emulsion.
17. Propagation of different climbers and creepers and their training.
18. Propagation of different flowering and ornamental trees.
19. Propagation, planting and training of edge and hedge plants.
20. Preparation of lawn by seed, turf method.
21. Maintenance and aftercare of lawn.
22. Preparation of flowerbeds.
23. Training of plants as topiary.
24. Transplanting of vegetable seedlings.
25. Cultivation of different vegetable crops.
26. Harvesting and grading the vegetables.
27. Marketing of vegetables and their products
28. Propagation of different flowering plants, transplanting and maintenance
29. Propagation of different foliage plants, transplanting and maintenance.
30. Propagation of different cacti and their maintenance

Unit V – Project and Field visits (4 credits).

- Any one project on basic or applied or marketing skills of Horticulture.
- Visits to different nurseries.
- Visits to different gardens.
- Visits to different manure production units / field.
- Visits to different vegetable growing units / field.

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Skills to be imparted: -

- Skills of nursery development and maintenance.
- Skills of production of different types of manure.
- Skills of designing of gardens.
- Skills of cultivation of garden plants, vegetables, flowering and foliage plants, cacti etc.
- Skills of lawn preparation & aftercare.
- Skills of preparing different products from vegetables.

Theory, practical, field practical breakup

Diploma course in Horticulture

Unit No.	Title	Total Credits	Theory Credits	Practical Credits	Field practical Credits
I	Advance skills of Horticulture	6	2	1	3
II&III	Applied skills of Horticulture -II	16	6	4	6
IV	Marketing skills of Horticulture	4	3	-	1
V	Project and field visits	4	-	2	2

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Syllabus for Advanced Diploma course in Horticulture

Unit I – Advance techniques in Horticulture (3 credits).

a) **Growth and development of horticultural crops**- Growth, definition, Development - definition. Different types of growth regulators, synthesis and site of action, role of PGR. Study of PGR available in the market.

b) **Bio-fertilizers**: Types, role, and applications. Study of bio-fertilizers available in market. Green manuring.

c) **Special horticultural practices**: Bending, ringing, smudging, Bahar treatment etc.

d) **Pest and soil organism's management**: Biological control.

e) **Hydroponics:** Definition, principles, method of cultivation, advantages.

f) **Biotechnology**: Definition, tissue culture, branches, micro-propagation, use in horticulture.

Unit II & III– Applied skills of Horticulture (6 credits).

a) **Pomology**: Soil, climate, varieties, propagation, planting, intercultural operations, pests and diseases, harvesting and yield, post harvest technology, methods of preservations of: Mango, Cashew, Coconut, Arecanut, Kokam, Banana, Pineapple etc.

b) **Green house development**: Glass house, poly-house, types of green houses, structure, cooling systems, irrigation, raising of horticultural crops in green house.

c) **Mulching**: Definition, types of mulch, advantages.

d) **Cultivation of spices**: Soil, climate, varieties, propagation, planting, intercultural operations, pests and diseases, harvesting and yield, post harvest technology of black-pepper, cinnamon, nutmeg.

e) **Cultivation of medicinal and aromatic plants:** Soil, climate, varieties, propagation, planting, intercultural operations, pests and diseases, harvesting and yield, marketing of medicinal and aromatic plants of Konan region.

f) **Mushroom cultivation**: Scope different types of edible mushrooms, material used, methods of cultivation, harvesting and yield, processing and marketing.

g) **Water garden** – Concept, types, preparation, plantation and maintenance.

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Unit IV - Commercial aspects of Horticulture (2 credits).

a) **Development of project proposal:** Generation of business idea, seeking business opportunity, preliminary survey, scanning business environment, project planning, preparation of project proposal/report, feasibility study and preparation of feasibility report, financing project proposal.

b) **Horticultural supporting schemes:** Institutional assistance available in India. Financing schemes for small-scale industries and entrepreneurs, schemes by central Govt. and state Govt., schemes by banks and financial institutions, funding a project.

c) **E- marketing:** Introduction to E- marketing, advance means of marketing, marketing assistance by Govt. and Non Govt. agencies and marketing co-operatives.

Practical: - (12 credits)

1. Preparation of plant growth regulators (varying concentrations): Paste, solution and powder.
2. Seed soaking and germination studies using plant growth regulators.
3. Determination of sex of different fruits and vegetable plants.
4. Study of different types of plant growth regulators and their effects.
5. Identification of Bio-fertilizers.
6. Processing and preservation of different Bio-fertilizer cultures.
7. Preparation of Pheromone trap.
8. Preparation of culture medium for soil-less cultivation.
9. Cultivation of some vegetables by soil-less cultivation method.
10. Study of different varieties of fruit plants as per theory.
11. Study of pests and diseases of fruit plants as per theory.
12. Preparations of different fruit products like Jam, Jelly, Pickle, Sauce, Chhunda, Chutney, Syrups, and Squash etc. from different fruits as per theory.
13. Preparation of layout of green house / poly house/ shade net house.
14. Cultivation of Oyster mushroom.
15. Processing of mushroom and preservation.
16. Preparation of different products from mushroom.
17. Study of different plants suitable for water garden.
18. Preparation of project proposal.

Field practical: -(5 credits)

1. Study of PGR on rooting of cuttings.
2. Study of PGR on rooting layering.
3. Study of PGR on ripening of fruits.
4. Application of Rhizobium culture on leguminous plants.
5. Study of green manuaring in situ.

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6. Study of green leaf manuring in situ.
7. Study of cultivation of cultures: Nostoc, Azolla.
8. Study of special horticultural practices: Ringing, Bending, Smudging, Exposure of roots, Girdling etc.
9. Study of Bahar treatment.
10. Development of shade net house.
11. Development of irrigation system in shade-net house.
12. Preparation of beds and cultivation of medicinal plants in shade-net house.
13. Application of Pheromone trap.
14. Mulching of fruit plants - different types.
15. Study of post mulching effects.
16. Training and pruning of fruit plants.
17. Preparation of water garden and their maintenance.
18. Environmental scanning.

Unit V – Project and Field visits (4 credits).

- Any one project on advanced techniques or applied skills or commercial aspects of Horticulture.
- Visits to different green houses/ poly houses/ shade net houses
- Visits to different fruit gardens.
- Visits to fruit processing units.
- Visits to spices production unit/ field.

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Skills to be imparted: -

- Skills of using PGR.
- Skills of using bio-fertilizers
- Skills of doing special horticultural practices.
- Skills of cultivation of fruit plants, species and medicinal plants.
- Skills of preparing different products from fruits.
- Skills of developing water garden & its maintenance.
- Skills of developing proposal for horticultural supporting schemes.

Theory, practical, field practical breakup

Advance diploma in Horticulture

Unit No.	Title	Total Credits	Theory Credits	Practical Credits	Field practical Credits
I	Advance techniques of Horticulture	6	3	2	1
II&III	Applied skills of Horticulture III	16	6	6	4
IV	Commercial aspects of horticulture	4	2	2	-
V	Project and field visits	4	-	2	2

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Proposed Syllabus for UGC sponsored CAREER ORIENTED ADD-ON course

EQUIPMENT MENTAINANCE

NAME OF THE COLLEGE IMPLIMENTING THE COURSE:

R.P. Gogate College of Arts & Science and R.V. Jogalekar College of Science, Ratnagiri- 415612

OBJECTIVES:

To develop the trained human resource to repair and maintain electrical\electronic equipments, which are in day-to-day use.

GENERAL INFORMATION:

This course will be implemented at three levels,

1. Certificate Course.
2. Diploma course.
3. Advanced Diploma Course.

The student seeking admission to any of the above courses must be a bonafide student of the degree course in the college. At the entry level, admission will be given to the Certificate Course. Admission to the next level course will be given only after passing the previous course successfully.

Each course is divided into 30 credits and each credit is equivalent to 15 hours of course work. The total duration of the course is therefore of 450 hours.

For each course, theory work will carry 12 credits, practical work will carry 12 credits and 6 credits are assigned to ON JOB TRAINING.

Scheme of Examination

The scheme of examination for the Certificate, Diploma and Advanced Diploma is as follows.

Theory/ Practicals	Title	Maximum Marks	
		Theory	Internal
Paper-I		75	25
Paper-2		75	25
Practical Paper-I	Experiments from Group-A	45	
Practical Paper-II	Experiments from Group-B	45	
Certified Journal		10	
TotalMarks	**Theory**	**150**	
	Practical	**100**	
	Internal	**50**	
	Total	**300**	

Each theory paper syllabus is divided into three equal units. Theory question paper will consist of four questions out of which three questions of twenty marks each with internal options are to be set on each unit. The fourth question of 15 marks is to be set on all the three units with internal option. All four questions are compulsory. Duration of theory examination is three hours.

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For practical examination, the candidate will be examined in two experiments (one from each Group). Each experiment will be of three hours duration. Minimum 80% experiments from each Group are required to be completed. Candidate should submit Certified Journal at the time of practical examination. Practical examination will be conducted in following manner.

1. One long experiment of 3 hours (carrying 45 marks) Group-I
2. One long experiment of 3 hours (carrying 45 marks) Group-II
3. Viva (Oral examination carrying **internal** 50 marks) on full year's work including **ON JOB TRAINING** report.

Note: Internal marks will be awarded on the basis of regular work of the candidate during the course period, Report of the ON JOB TRAINING, and Oral examination.

CERTIFICATE COURSE

Syllabus for CERTIFICATE COURSE (Theory)

Paper-I: **Safety precautions, Measuring Instruments, Domestic wiring**

	Topics	No. of credits
Unit-I	Introduction to basic circuit theory, Safety precautions, Electrical and Electronic components (Symbols, Identifications, Testing).	2
Unit-II	Tools, Testing and measuring instruments. Introduction to Basic accountancy methods- Registers, statements, Bank operations- Deposits, loan, other services. Marketing skills.	2
Unit-III	Domestic electrical wiring, Installation of (Tubelight, Fan) and necessary faultfinding.	2

Paper-II: Domestic electrical appliances, D.C. power supplies.

	Topics	No. of credits
Unit-I	Domestic electrical heating appliances, electric iron, water heaters, geyser, oven etc. troubleshooting and maintenance of electrical heating appliances.	2
Unit-II	Single Phase motor, household mixer, single-phase water pumps, etc. Troubleshooting and maintenance.	2
Unit-III	Electronic rectifiers, battery eliminators, Fixed and variable d.c. power supplies, battery chargers.	2

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Syllabus for CERTIFICATE COURSE (Practicals)

Group-A Experiments

1. Study of Safety precautions while handling electrical/electronic equipments.
2. Study of Components, identification, symbols, tracing of equipment circuits.
3. Study of various tools necessary for repairs and maintenance of electrical/electronic equipments.
4. Study of soldering technique and soldering of some standard circuits.
5. Study of measuring instruments for testing and trouble shooting.
6. Study of domestic electrical wiring.
7. Identification of faults in the working Tubelight and Fan, their repairs and mentainance.

Group II Experiments

1. Study of working of domestic heating equipments (Electric iron, geyser, oven), faultfinding, repairs and maintenance.
2. Study of single-phase motor, single-phase water pump, Mixer, faultfinding, repairs and maintenance.
3. Study of working of rectifiers and designing of battery eliminators, Troubleshooting.
4. Study of designing and working of fixed and variable d.c. power supplies. Troubleshooting.
5. Study of designing and working of battery chargers.
6. Study of various banking services.

DIPLOMA COURSE

Syllabus for DIPLOMA COURSE (Theory)

Paper-I: Motor winding and voltage stabilisers.

	Topics	No. of credits
Unit-I	Introduction to motor winding, study of stator, rotor etc. Winding of fan, mixer and single phase water pump.	2
Unit-II	Theory and working of A.C. voltage stabilisers, constant voltage transformers, spike guard, voltage corrector, their repairs and mentainance.	2
Unit-III	Marketing skills- survey, introduction to costing, Registration of unit-shop and establishment, SSI, Introduction to labor management-recruitment, wage, payments, allowances.	2

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Paper-II: Low power invertors and Public address system.

	Topics	No. of credits
Unit-I	Introduction to low power output invertors, Emergency tube light, working repairs and maintenance.	2
Unit-II	Introduction to portable petrol/diesel generator set, repairs and maintenance.	2
Unit-III	Theory and working of audio Public address system. Cables, amplifiers, various types of speakers and microphones.	2

Syllabus for DIPLOMA COURSE (Practicals)

Group-A Experiments

1. Study of various types of motor windings.
2. Single phase motor winding and related circuits.
3. Study of domestic mixer winding and related circuits, repairs and maintenance.
4. Study of domestic fan winding and related circuits, repairs and maintenance.
5. Study of various types of a.c. voltage stabilisers, repairs and maintenance.

Group II Experiments

1. Study of at least two types of low power (bellow 40 Watts) inverters circuits.
2. Assembly of low power inverters, repairs and maintence.
3. Study of various types of microphones and speakers.
4. Study of audio amplifier unit, repairs and maintenance.
5. Assembly of public address system, connections and triobleshooting.

ADVANCED DIPLOMA COURSE

Syllabus for ADVANCED DIPLOMA COURSE (Theory)

Paper-I: PC Hardware.

	Topics	No. of credits
Unit-I	The PC overview, Parts of computer, Motherboard, Storage system, Display system,	2
Unit-II	Input & Output peripherals, Power stabilizer and UPS system, introduction to Computer networking.	2
Unit-III	Internet & applications, Hard Disc Management, Computer assembling, Dealing with BIOS,	2

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Paper-II: Power inverters and Communication systems.

	Topics	No. of credits
Unit-I	Theory and working of power invertors	2
Unit-II	Introduction to telephony and wireless communication, Intercom systems, Working of Mobile.	2
Unit-III	Project report, Introduction to taxation- Income tax, sales tax etc. Management concepts, consumer protection- related laws.	2

Syllabus for ADVANCED DIPLOMA COURSE (Practicals)

Group-A Experiments

1. Study of Computer operations & Windows installations.
2. Windows operations.
3. Study of Network under windows.
4. Computer maintenance and Troubleshooting.
5. Preparation of quotation of Computer system and its marketing.
6. Study of working of low power UPS, repairs and maintenance.

Group-B Experiments

1. Study of working of Power inverters, installation, maintenance.
2. Study of working of Intercom system, installation, repairs and maintenance.
3. Study of various parts of mobile, low level repairs.
4. Preparation of project report for bank loan proposals.

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R. D. National College, Bandra.

Add on Career Oriented Programme

Heritage Management

Syllabus

Heritage management is an inter-disciplinary field, which has the potential of improving the quality of life in India's metros, small cities, towns and villages. The practice of heritage management relies on strong research, the desire to protect our cultural and natural heritage, and effective administrative skills. Conserving forests, historic sites, heritage buildings, and reviving dying art-forms are all considered aspects of heritage management. The emergence of cultural tourism and eco-tourism in a country like India also provides conservation and management professionals with tremendous opportunities to create economic wealth and promote social development.

Theoretical Section of Proposed Syllabus

I Introduction to Heritage Management (22 hours)

1. Introducing the various forms of heritage
   i. Identify monuments, buildings, townscapes, archaeological sites, handicrafts and other art-forms that can be recognised as our cultural heritage. Recognise that
   natural heritage refers to outstanding physical, biological and geological formations as well as endangered plant and animal habitat.
   ii. Develop an understanding of the valuation of heritage. Study the reference to a common cultural past during the nationalist freedom struggle, and the contemporary call to conserve natural reserves, forests and sanctuaries. Study violent assaults on cultural heritage, including the defacement of idols at Elephanta & destruction of the Bamiyan Buddhas.

2. Caring for Our Past, Caring for our Future
   i. Study the primary areas of heritage management: urban conservation, museum administration, promotion of the traditional performing arts and handicrafts, archaeological preservation, ecological conservation, cultural tourism & eco-tourism.
   ii. Study the various private, public and voluntary agencies currently operating within the field locally, nationally and internationally. Identify the potential for job growth, economic and social development through effective heritage management.

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Unit Test of 100 marks.(The paper will have two sections: A compulsory section will contain short -answer questions covering the entire syllabus covered during the first unit. A second section will consist of essay questions, which will require detailed answers. There will be a choice of questions in this section).

II Economics of Conservation (4 hours)

Study financial mechanisms and institutions that encourage conservation of our natural and cultural heritage.

III Introduction to Specialisation Areas (72 hours)

Introduce Indian and international case studies on urban conservation, museum administration, promotion of the traditional performing arts and handicrafts, archaeological preservation, ecological conservation, cultural tourism & eco-tourism.

i. Guest Lecture Series: Professionals, policy-makers and concerned citizens describe recent work in the field of heritage management with students.

ii. Student Presentations: Based on theory lectures, field and other practical investigations students will prepare their own analysis on the relative successes in the various sub-fields of heritage management within the Mumbai Metropolitan Region.

IV Heritage Management as Social & Economic Development (26 hours)

i. Social benefits of heritage management: Study the impact of heritage conservation in various parts of the world, with an emphasis on measuring the potential for social and education development.

ii. Economic benefits of heritage management: Study the impact of heritage conservation in various parts of the world, with an emphasis on measuring the potential for cultural tourism and eco-tourism. Other fields of inquiry will include social, economic and education support for indigenous artisans, and promotion of cultural institutions.

iii. Legal basis for conservation: Study the history of the heritage conservation movement in India and elsewhere. Structure of ASI, other governing institutions and governing acts of the Indian parliament. Emphasis on emergence of local guidelines for the protectoral of cultural properties and endangered natural heritage.

Unit Test of 100 marks. (The paper will have two sections: A compulsory section will contain short -answer questions covering the entire syllabus covered during the fourth unit. A second section will consist of essay questions, which will require detailed answers. There will be a choice of questions in this section).

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IV Final Project (36 hours)

Students will be divided into three groups, each responsible for a particular programme, institution or site. Students will be assigned a group depending on their practical work experience and area of specialised interest. Thus a student interested in the promotion of Hindustani music would work in conjunction with students interested in museum administration to create or manage a cultural centre. Correspondingly, students interested in archaeological or urban conservation or tourism development may be assigned the task of managing an endangered site that has tremendous potential for preservation and economic development. The intention is to introduce the related concepts of programme management, partnership management and site management to students.

i. Final Project Introduction: Students will be presented with situations that require either a site-based intervention, or the creation of an institutional partnership, or the creation of an education and financial support programme.

ii. Final Project Tutorial: Advanced study of programme design and planning, strategic planning, organisation management and human resources development. Additional topics will include capital sourcing and project management, public education, emergent information technologies, policy analysis and intervention.

Final Project Submission of 100 marks. (The submission will consist of two sections: An oral presentation, which might include the presentation of visuals or recorded audio samples and interviews. A written report jointly authored by members of the student group under faculty supervision will also be submitted at the end of the course for evaluation. The report must contain a table of contents, an executive summary, a section on methodology along with the analysis and recommendations. Supporting diagrams or an annexure of tables is expected if it is appropriate for the given final project topic area).

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Practical Section of Proposed Syllabus

The practical section of the proposed programme in heritage management is designed to take one hundred and fifty hours for completion. Students will be expected to complete all practicum requirements during the academic year, and alongside their theoretical instruction. Units of the practical section include visits to archaeological, heritage and museum sites, interviews and meetings with museum staff, artisans and musicians. The archival research and site study units will commence with a demonstration of appropriate methodology and application. The proposed course also requires the completion of a sixty-hour internship with a reputed voluntary, public or private sector organisation in field of heritage management, tourism or conservation.

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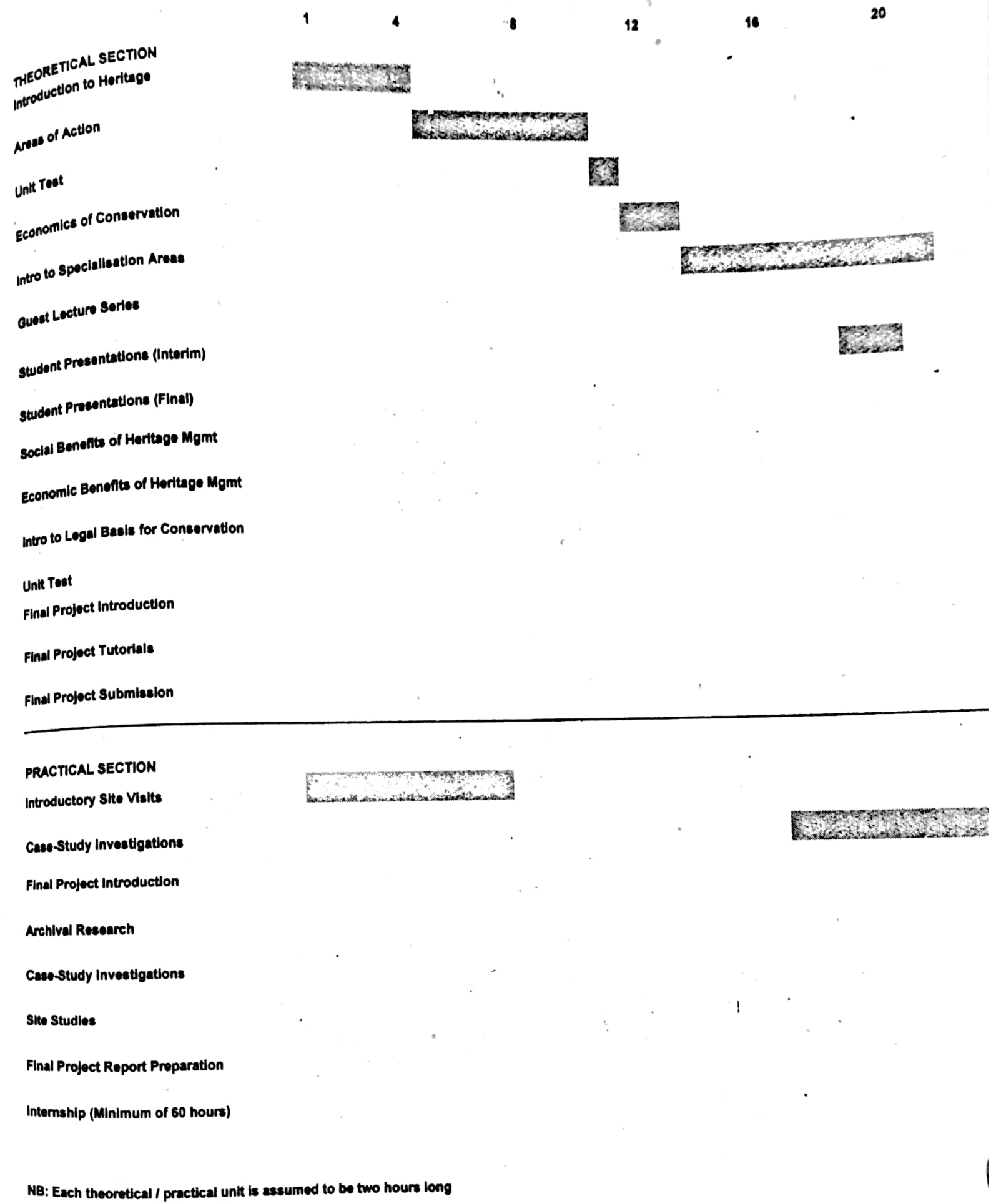

NB: Each theoretical / practical unit is assumed to be two hours long

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