NOTIFICATION

No. : 167/ 2024 Date: 05 /12/ 2024

Subject : Syllabi leading to the various Certificate / Diploma / Advance Diploma Courses under Department of Lifelong and Extension.

Whereas the Direction No. 100/2024 dated 07/11/2024 has been issued regarding conduct of 164 short term courses by the university / colleges with which is mentioned scheme of teaching and examinations is provided.

It is notified for general information of all concerned that the syllabi is hereby published which shall be as per Annexure II for 15 Days Certificate Courses, Annexure III & IV for 3 Months Certificate Courses. Annexure V, VI & VII for 6 Months Diploma Courses, Annexure VIII, IX & X for 1 Year Advance Diploma Courses attached to Direction No. 100/2024 published in Gazette Part-I on 07/11/2024 and made applicable to the students as prescribed in the Direction-vide its Para-10 in the academic year 2024-25 students admitted to these courses.

Sd/-
Registrar
Sant Gadge Baba Amravati University

Sant Gadge Baba Amravati University

Department of Lifelong Learning & Extension

Short Term Certificate Course

(15 Days)

Syllabus

For

1) Certificate Course in Goods and Service Tax (GST)

Unit - I: Overview of GST

- Important Definitions under GST
- Registration under GST Act + Composition Levy
- Levy and Scope of Supply (including Exemptions under GST)
- Composite and Mixed Supply
- Input Tax Credit under GST
- Value of Supply under GST
- Time of Supply of Goods and Services under GST
- Place of Supply of Goods under GST
- Place of Supply of Services under GST
- Reverse Charge MECHANISM under GST
- TDS / TCS & E-COMMERCE

Unit - II: Important Concept of GST

- Type of Invoices, Credit / Debit Notes and Maintenance of Accounts under GST
- E-Way Bill
- Imports under GST
- Introduction to Zero Rated Supply and other Misc Refund Provision
- Returns and Payment of Tax
- Assessments & Penalties
- Finalisation of Accounts
- Annual return/Audit under GST
- Confiscation and Arrest provisions
- Appeals and AARs
- OVERVIEW OF GST WEBSITE
- Open interaction with Students and Closing ceremony

Recommended Books/References:-

1. Professional's Guide to GST by Abhishek A.
2. GST Mini Ready Reckoner by Arpit Haldia.
3. GST E-Way Bill by V.S. Datey.
4. GST Tariff with GST Rate Reckoner | Set of 2 Volumes by Taxmann's Editorial Board.

Sant Gadge Baba Amravati University

Department of Lifelong Learning & Extension

Short Term Certificate Course
(3 Months)
Syllabus
For
2) Certificate Course in Retail Sales Associate

Unit –I :- Prepare products for sale

- **Fundamentals of Display and Visual Merchandising :-** Understand and identify need for the display in relations to stock, space, position of the display and dates' Set up and dismantle the display safely, in line with plans and within the time allowed. Create new and effective ways of improving the visual effect, within limits of design brief, company's visual design policies and authority you have. Know how to update stock records to account for merchandise on display. Create displays that achieve the visual effect you need and are consistent with the company's visual design policy. Learn to Position merchandise, graphics & signs according to guidelines and in ways that attract attention & interest information they need. Dismantle displays safely and-return the parts of the display to the appropriate place promptly and, if needed, in saleable condition. Check that storage facilities and items in storage are clean, safe, secure and accessible only to those with a right to them.
- **Maintain Security, Health and Safety :-**company procedures for reporting security risksWork in line with your organization's policies and procedures.Take suitable safety measures protective clothing.
- **Customers Loyalty Schemes :-** Explain clearly and accurately to customers how joining the scheme would benefit them, including any current special offers relating to the scheme. Treat the customer politely at all times and in a way that promotes goodwill
- **Inform Customers :-** Identify the customer's needs for information and advice. Provide information and advice to customers that are relevant, complete, accurate and up to date.
- **Create Positive Image of Self & Organization in the Customers Mind**Identify the customer's needs for information and advice. Provide information and advice to customers that are relevant. Acknowledge the complaint clearly and accurately and apologize to the customer. Follow legal requirements and company policies and procedures for dealing with complaints.
- **Work Effectively with team :-** Work with colleagues to integrate your work effectively with theirs. Make your presence adequate as required by the workplace, job role and level of customer contact. Follow organization's policies and procedures for working with colleagues. Provide different types of information that colleagues might need and know the importance of providing this information when it is required. Set priorities to complete the task according to required timeframe. Know the importance of understanding problems fromyour colleague's perspective and how to provide support. Know the importance of understanding problems from your colleague's perspective and how to provide support, Give clear, accurate and relevant information and advice relating to tasks and procedures.

Unit - II :- On the Job Training

On the job skill by working with a retails organization Acquire basic experience and knowledge of various activities in retails operations.

Recommended Books/References:-

1. Visual Merchandising and display- Martin M. Pegler
2. Customer Loyalty programme – S. A. Bulscher
3. Relationship Marketing and Customer RelationManagement- A. Brink
4. Sales Promotion- Julian Cummins
5. Retails Management- U.C. Mathur.

Sant Gadge Baba Amravati University

Department of Lifelong Learning & Extension

Short Term Certificate Course

(3 Months)

Syllabus

For

3) Certificate Course in Retail Cashier / Cashier

Unit I :- Introduction to Cashier

- **Service Cash Point/POS**
  Understanding of setting up and operating cash points correctly, accurately and prompt theorize any refunds, cheques and credit card payments which need authorization. Knowledge of cash point security procedures and developing effective plans to cope with unexpected problems at the cash point.
- **Follow Point-of Sale Procedures for Age-Restricted Products**
  legal requirements and company policies and procedures for asking proof of age. offering additional services to the customer.
- **Process Customer Orders for Goods**
  Identifying customer needs and the goods that will meet customer's needs, legal and company procedures for checking the customer's identity and credit status and company policy for offering to order goods needed by the customer. Prepare accurate, clear and complete information about the order and pass this information
- **Process Part Exchange Sale Transactions**
  Inspect the items being offered and protect the item from damage while handling exchange value its feasibility for checking who owns and to work out accurately the balance the customer is required to pay. Accepting or refusing the customer's offers according to company policies and discretions and end the transactions politely, assessing the correct amount to pay and check accurately the amount and means of payment offered by the customer line with company procedures.
- **Process Payments and Cash and Credit Transactions**
  Ability to accurately identify the price of purchases and promptly sort out any pricing problems by referring to pricing information. Ability to get advice promptly from right person and work out accurately the amount the customer should pay. Knowledge of relevant rights, duties and responsibilities relating to the Common methods of working out payments including point-of sale technology, electronics calculators and Electronics Data Capture (EDC) Machines etc. Knowledge of company guidelines for setting customer credit limits. Ability to periodically check customer accounts accurately to ensure that payments are up to date.
- **Process Returned Goods**
  Legal and company requirements for offering replacements and refund Stock Control System.
- **Maintain Health and Safety**
  Notice and correctly identify accidents and emergencies
- **Creating Positive Image of Self and Organization in the Customer Mind**
  Identifying customer's expectations and treat them courteously and helpfully at all times, Knowledge to respond promptly to a customer seeking assistance and select the most appropriate way of communication with them. Writing skills, reading skills, oral communication skills and professional skills relevant to the job.

- **Work Effectively in Retail Team and Organization**
  Ability to display courteous and helpful behavior at all times. Ability to complete allocated tasks as required and seek assistance when difficulties arise. Ability to use questioning techniques to clarify instructions or responsibilities. Knowledge of appropriate dress code and presentation as well as personal hygiene procedures. Ability to interpret, confirm and act on legal requirements in regard to anti-discrimination, sexual harassment and bullying. Knowledge of employee rights and obligations. Ability to share work fairly with colleagues and make realistic commitments to colleagues. Ability to encourage and support colleagues. Knowledge of company's health and safety procedures, Knowledge and skills to achieve goals and regularly checking the progress and obtaining feedback on progress. Ability to give clear, accurate and relevant information and explain and demonstrate procedures clearly, accurately and in a logical sequence. Knowledge of team's purpose, aims, targets and responsibilities. Writing's skills, reading skills, oral communications skills and professional skills relevant to the job.

Unit II: One the Job Training

- On the job skill by working with a retail's organization. Acquire basic experience and knowledge for various activities in retail operations.

Recommended Books/References:-

1. Life of a Cashier-L. Benoil
2. Balance of Payments adjustment-Sidney Dell, Roger Lawrance
3. Health & Safety at work-Jeremy Stranks

Sant Gadge Baba Amravati University

Department of Lifelong Learning & Extension

Short Term Certificate Course

(3 Months)

Syllabus

For

4) Certificate Course in Food and Beverage Service

Unit - I : Food and Beverage Service Operations

- Introduction to Service Sector, Hospitality Industry and Scope in India
- Attributes of Food and Beverage Service Personnel
- Hierarchy in Food and Beverage Department
- Handling Cutlery, Crockery and Glassware
- Mise En Place and Mise En Scene
- Carrying the Food Service Tray
- Arrangement and Preparation of Side Board
- Napkin Folding
- Types of Food Service
- Table Service
- Service at Breakfast, Lunch and Dinner
- Knowledge of Locally Popular Cuisines
- Knowledge of Various Beverages and the Correct Serving Style
- Basic Equipment's and Glassware Used in Bar
- Waste Disposal
- Safety at Work and Basic First Aid

Unit - II: Internship

Entrepreneurship in Food and Beverage Industry

- Identification of cutlery, crockery and glassware
- Welcoming Guest
- Hoe to serve food and Beverage
- How to clear/ clean the table after having food.
- How to serve beverages
- Hoe to

Recommended Books/References:-

- Food and Beverage Service - Vijay Dhawan
- Introduction to FCS Hospitality Services – Pearson Publication
- MISE EN Scene – John Gibbs
- Home Staging - Christine Rae
- Complete book of napkin and napkin folding- Rick Beach
- Family table Service – D.D. Davis
- Water Treatment and Disposal – Ronald Hester
- Haute Cuisine – A.B. Trubek
- Hospitality – John Walker

Sant Gadge Baba Amravati University

Department of Lifelong Learning & Extension

Short Term Certificate Course

(3 Months)

Syllabus

For

5)Certificate Course inHousekeeping

Unit I : Various types of operations of Houskeepuing

- **Introduction to Service Sector**
  Introduction to the Sector and subsectors
  Introduction to the housekeeping
- **Attributes of Housekeeping Service Personnel**
  Importance and role of Housekeeping
  Attendant Importance of Hygiene and Grooming
- **Hierarchy in Housekeeping Department**
  Understanding the structure of the department
  Knowing where to report an issue
  Handling disputes
- **Cleaning Equipments and Cleaning Agents**
  Choosing the appropriate equipment and materials
- **Ceramics, Glass, Plastics, Linen and Uniforms**
  Identify the types of surfaces to be cleaned
- **Bed and Bedding**
  Understanding the various items and their functions in a bedding: pillow, pillow cases, pillow covers, Duvet, Duvet Covers, Mattress, Mattress Protector
  Learning the Maitre Fold
  Making the bed
- **Carpet cleaning**
  Dure for cleaning and shampooing carpets
- **Cleaning Sanitary Fittings**
  Follow the procedures for entering the toilets and washrooms
  Using the correct cleaning agents so that the fittings do not incur damage
- **Interdepartmental Coordination**
  Importance of co-ordination between Front Office, Maintenance and Security departments
- **Safety at Work**
  Identify any hazards or potential hazards and deal with these correctly
  Report any accidents or near accidents quickly and accurately to the concerned authority
  Follow safety procedures at the workplace Use protective equipment when required
- **Pest Control**
  Ensuring that the workplace well protected from pest and rodent infestation
- **Flower Arrangements**
- Knowledge about commonly used flowers and other decorative items

Unit II: One the Job Training

- On the job skill by working with a Housekeeping organization. Acquire basic experience and knowledge for various activities in retail operations.

Recommended Books/References:-

1. Housekeeping - M. Robinson
2. Introduction to Management in Hospitality – C.W. Barrows
3. Handbook of Critical cleaning – Barbara kanegsberg
4. Make your bed – Leslee Evans
5. Carpet Cleaning – Shane Daley
6. Cleaning Surfaces Prior to Sanitary Service – A.H. Tuthill
7. Front Office Management – S.K. Bhatnagar
8. Pest Control – William Olkowski
9. Flower Arrangements - Ella Griffin

Sant Gadge Baba Amravati University

Department of Lifelong Learning & Extension

Short Term Certificate Course
(3 Months)
Syllabus
For
6) Certificate Course inDesktop Publishing

Unit I : Desktop Publishing Introduction and different DTP Software's used

- Introduction to Desktop Publishing introduction to Desktop (DTP) history, Defination, need and area of Application, Difference between word processor and publication software, Use and importance of DTP in Publication and newspaper printing, Introduction to offset printing Technology printers formatting of text, Typography, fonts Font Size, spacing breaks, Measurements etc, Types of printing : lithography, stenography — Gravure, Screen printing ,offset printing, working of offset printing, term used in offset printing, CMYK, impression importance of DTP in for publication, laser printers used types, advantage of laser printer in Publication.
- Adobe PageMaker –Introduction to page layout margins and page orientations with various pages sizes, text editing and manipulation, fitters, import and export options, placing of text and images, auto flow and history editor, different layouts views, table settings columns and gutters, use of style palettes and colors find option and document setup.
- column balancing, brakes, text wrapping, windows and orphar lines, revert command and he use, using caps and various style format editing of graphic and frame
- Introduction to Adobe Photoshop, Photoshop documents and Graphic files, vector image and raster images, Pixels application programs to work vector graphic and raster graphics various color made and models : HSB,RHB,CMYK, Bitmap, grayscale dutone models
- Introduction to various versions, concepts and application of Photoshop understanding design principles and colour theory Understanding the use of various fonts and typo issues with web design understanding designing standards, print layout design and creative visualization for intuitive layout.
- The file menu the tools, Drawing likes & shapes working with Photoshop tools working with layers. WEB & WEB GALLERY using internet explorer in Photoshop using image ready creating animations & presentations.

Unit II: Practicals on DTP

- Working with Images in Photoshop, working with paletters, i.e. layers palette, navigator palette, into palette color palette, swatches palette, styles palette, History palette, Actions Palette Tool preset Palette channels palette and path palette, working with layers photo editing.
- Image adjustment options- Labels, Auto Labels, Auto contrast, curves, colors balance, Brightness/ Contrast pasteurize valuations, preparing the file and work area, creating different shapes, creating three Dimensional effects using layers working with the magic wand tool and lasso tool creating images using symbol sprayer tool.

Recommended Books/References:-

1. The Ultimate DTP Book-Bill Rosoman
2. Computer Fundamentals- P.K. Shinha
3. Adobe PageMaker 7.0 Development by Staff of Adobe
4. Adobe Photoshop develop by Staff of Adobe
5. The Essential book

Sant Gadge Baba Amravati University

Department of Lifelong Learning & Extension

Short Term Certificate Course

(3 Months)

Syllabus

For

7) Certificate Course inTally

Unit I : Accounting and Tally

- **Basics of Accounting**
  Type of Accounts, Golden Rule of Accounting, Accounting Principles, Concepts & Principals, Double Entry System of Book Keeping, Mode of Accounting, Financial Statement, Transaction, Recording Transaction.
- **Fundamentals of Tally ERP 9**
  - Getting Functional with Tally ERP 9
  - Creation/Setting up of Company in Tally ERP 9
- **Accounting Masters in Tally ERP 9**
  Fl 1-Features
  F12 – Configuration
  Setting up Accounts Heads
- **Inventory in Tally ERP 9**
  Stock Group, Stock Categories, Do downs/Locations, Unit of Measure Stock Item
- **Voucher Entry in Tally**
  Accounting Voucher Inventory Voucher Invoicing
- **Advance Accounting in Tally ERP 9**
  Bill wise Details, Cost Centre & Cost Categories, Multiple Currency, Bank Reconciliation, Interest Calculation, Budget & Controls Seenario Management.
- **Advance Inventory in Tally ERP 9**
  Order Processing, Reorder Levels, Tracking Numbers, Batch wise Details, Bill of Materials (Bom), Price levels & price List Stock Vallrtion, zero valued entries, different Actual & Billed Quantities.
- **Technological Advantage of Tally ERP 9**
  Tally Vault, Securty Control, Tall Audit, Back up, Restore Split Company Data, Export &Inport of Data. Printing of Reports & cheques.
- **Payroll Accounting & compliance pay Heads**
  Employers Group, Employees configuring payroll in Tally ERP 9, Salary details, Unit, Attendances, Processing Payroll in Tally ERP 9, Accountting for Employer PF contribution. Est. Contribution. Payment of Professional Tax., Generating Reports.

- **Printing configuration**
  Select Printer Print Preue : Tax for Printof the Report Print
- **Taxation in Tally.**
  CST, VAT, TDS, TCS, Service Tax, Basic Concept, Configuring in Tally, Creating Masters, Entering Transition & Report pointing. GST- Concept, Activating Tally in GST, Setting up GST, Understanding SGST,CGST, IGST, Creating GST Master Purchase voucher with GST, Sales Voucher with GST, TDS - Concept, Creating TDS Masters, TDS Payment, Tax Reports & Tax form.
- Finalization Entries & Finalization Process, Depractation Entries, Creating General Reserves, Provision for Taxation, Bad debit Reservers, Partnership firm, Tranforing Profit, outstanding Expenses & Account Income, Changing Financial Year.

Unit II: Practicals onTally

- Practicals on Setting up Accounts Heads
- Practicals onInventory in Tally ERP 9
- Practicals onVoucher Entry in Tally
- Practicals on Advance Accounting in Tally ERP 9
- Practicals onAdvance Inventory in Tally ERP 9
- Practicals onPayroll Accounting & compliance pay Heads
- Practicals on Taxation in Tally.

Recommended Books/References:-

1. Tally 9.0 in Simple Steps by - Kogent solutions
2. Text Book of Financial Accounting by - Daniel M. Kimuda
3. TDS by Chandan Gupta
4. Value added Tax-Alan A. Tail
5. Service Tax -Shubham Shinha
6. Payroll Management - Steven Bragg
7. Tally ERP 9 - Nadkani

Sant Gadge Baba Amravati University

Department of Lifelong Learning & Extension

Short Term Certificate Course

(3 Months)

Syllabus

For

8) Certificate Course inWildlife and Photography

Unit - I:-. Photography, its origin and history & Basics of Digital Photography.

- History of photography and prominent photographers:
- background,
- Early history and development of digital photography.
- Types of Photography and techniques.
- Understanding Image: Types of shots: distance, angle and movement;
- digital image basics: image format, resolution, aspect ratio, Pixels, DPI and PPI;
- composition and aesthetics: rules and guidelines;
- visual element and principles; timing and decisive moment
- Photo critique; prominent photographers.
- Introduction to digital photography & technicalities: Introduction to digital photography, digital cameras

Unit – II :- Composition technique and themed photographs (Practical)

- How camera works; Exposure: shutter speed, aperture, ISO; arriving at properexposure, depth of field, white balance, understanding histograms
- Photography techniques: soft focus, long exposure, short exposure, multiple exposures,time-lapse photography;
- Understanding lenses: wide angle lenses, telephoto lenses, and macro lenses, imagesensor: types of image sensors, size and aspect ratios, image formats, image
- Understanding lights and lighting techniques: Natural vs artificial lights, thecharacteristics of light, colour temperature, Direction of light, intensity of light,
- Hard and soft lighting, direct light, diffused light, high key lighting, low key lighting,inverse square law.

Recommended Books/References:-

1. Digital Photography-A hands on Introduction (Phillip Krejcarek,Delmer Publishers)
2. Understanding Digital Cameras (Jon Torrant,Focal Press)
3. Teach Yourself Digital Photography in 14 Days (Carla Rose,Techmedia, 1997)
4. An Introduction to Digital Photo Imaging (Agfa,Agfa, 1994)

Sant Gadge Baba Amravati University

Department of Lifelong Learning & Extension

Short Term Certificate Course

(3 Months)

Syllabus

For

9) Certificate Course inMushroom Cultivation and Entrepreneurship

Unit-I :- History, General Introduction, Morphology and importance of Mushroom

- History of Mushroom, Morphology of mushroom
- Introduction of mushroom
- Importance of mushroom
- Nutritional value of mushroom

(Practical)

Unit-II :- Cultivation, Production of Paddy straw mushroom, Uses and market selling

- Mushroom Types (Edible and Poisonous) Paddy straw Mushroom Cultivation Pleurotus spp. (Oyester) Harvesting.
- Cultivation techniques, preparation
- Mushroom recipes (Indian recipes, Chinese recipes)
- Harvesting, market selling

Recommended Books/References:-

1. Mushroom Cultivation in India- B. C. Suman and V. P. Sharma (2007).
2. Mushroom Growing for Everyone- G. Roy (1982).
3. Mushroom Production and Processing- V. N. Pathak, N. Yadav and M. Gaur (2000)
4. Mushroom Cultivation, Tripathi, D. P. (2005) Oxford & IBH Publishing Co. PVT.LTD, New Delhi.
5. Mushroom Production and Processing Technology, Pathak Yadav Gour (2010) Published by Agrobios (India).
6. A hand book of edible mushroom, S. Kannaiyan & K. Ramasamy (1980). Today & Tomorrows printers &; publishers, New Delhi

Sant Gadge Baba Amravati University

Department of Lifelong Learning & Extension

Short Term Certificate Course

(3 Months)

Syllabus

For

10) Certificate Course inQuantitativeAptitude

Unit-I:-**Basics of Quantitative Abilities**

- Problems on Number System
- Problems on HCF & LCM
- Decimal & Fraction
- Simplification.
- Averages
- Profit & Loss
- Ratio & Proportion
- Percentage

Unit-II:- General Aptitude Problems

- Number & Ages
- Problem on Trains
- Discount
- Partnership
- Mixture & Allegation
- Time & Work
- Time & Distance
- Calendar
- Clock
- Permutation & Combination
- Probability

RecommendedBooks/References :-

1. R. S. Aggarwal Quantitative Aptitude for competitive examination.
2. Arun Sharma – Quantitative Aptitude for CAT.
3. Arihant Publications – Fast track objective Arithmetic.
4. Abhijit Guha/Mcgraw Hill education- Quantitative Aptitude for all competitive examination.

Sant Gadge Baba Amravati University

Department of Lifelong Learning & Extension

Short Term Certificate Course
(3 Months)
Syllabus
For
11) Certificate Course inHerbal Medicine

Unit - I:- Introduction & Application of Herbal Medicine

1. **General Introduction & Identification of Local Herbal Medicine**
   1.1: Definition & History, scope of Herbal Medicine
   1.2: Introduction of System of Indian Medicines
   1.3: Identification, local name, Botanical Name of Medicinal Plants.
2. **Traditional Uses of Herbal Medicine**
   2.1: Traditional knowledge & utility of some medicinal plants
   2.2: Introduction of medicinally used plant parts: Roots, Stem, Barks, Leaves, Flowers, Fruits, Seeds
   2.3: Ethno-medicine, Folk Medicine.
3. **Cultivation**
   Common cultivation Methods for local & rare herbal Medicinal Plants
4. **Harvesting Management**
   4.1: Harvesting of Medicinally used plant parts
   4.2: Storage & Preservation.
5. **Application &; Doses of Herbal Medicine**
   5.1: Application methods of common Herbal Medicinal Plants
   5.2: Preparation of doses of herbal drug on particular diseases.

Unit -II :- Practical on Herbal Medicine

1. To study & scientific identification of common Medicinal plants
2. Study Ethno medicinal plants & their Usages
3. Identification of crude drugs/ medicinal plant parts
4. Study of Cultivation methods for High potential Herbal Medicines
5. Study of Harvesting Methods & preservation technique for Herbal Medicines
6. Study of methods of preparations of Ayurvedic medicines
7. Study of Quality controls &doses on particular diseases.

RecommendedBooks/References :-

1. Indian Medicinal Plants by Vaidya Ratnam & P.S. Varires, AryaVaidya Sale vol-4
2. Ayurvedic Pharmacology & Therapeutic uses of Medicinal plants by Vaidya V. M. Gogte
3. Medicinal Plants of India by Lal S. N.
4. Charak Samhita on Ayurvedic text by Govt. of India
5. Handbook of Medicinal Herbs by S. Bhattacharya
6. The Ayurvedic Pharmacopia of India by Govt. of India vol-5
7. Indian Medicinal Plants- An Illustrated Medical Dictionary
8. Economic Botany by Pande B. P.
9. Economic Botany by Sen S.
10. Cultivation of Medicinal Plants by C. K. Atal & B. M. Kapoor
11. Database on Medicinal Plants Used in Ayurveda by K.V. Billore, M.B. Velne, T.J. Dennis & B.G. Chaudhari

Sant Gadge Baba Amravati University

Department of Lifelong Learning & Extension

Short Term Certificate Course

(3 Months)

Syllabus

For

12) Certificate Course inIndustrial Chemistry

Unit- 1: Polymerization and Instrumentation

A) Polymerization

- Introduction of polymerization
- Classification of polymer
- Preparation of polymer
- Properties of polymer
- Industrial Applications of polymer

B) Instrumentation

- Basic information of Instruments- pH meter, Digital Potentiometer, Conductivity meter, Spectrophotometer. Ostwald's Viscometers, Salagmometer.
- Application of Instruments

Unit- II: - Practicals on Polymerization and Instrumentation

- Preparation of phenol formaldehyde resin
- Preparation of Nylon
- Preparation of Chromalum
- Preparation of 2 phenyl azo-naphthol dye
- Preparation of phthalein dyes
- Determine the molecular mass of polymer from viscosity measurement.
- Surface Tension of liquids: Determination of the surface tension of an organic liquid.
- Viscosity of liquids: Determination of relative viscosity of a liquid with water.
- Detemination pH of Water and Soil.
- Determination of normality and strength of acetic acid using NaOH solution Conduct metrically.

RecommendedBooks/References :-

1. Unit processes of organic synthesis by P.H. Groginns
2. Industrial chemistry by B. K. Sharma
3. Air pollution by M. N. Rao and H. V. N. Rao
4. Stoichiometry - B. I. Bhatt and S. M.Vora
5. Chemical Process Principles, Part I - O. A. Hougen, K. M. Watson, R. A. Ragatz
6. Unit Operation: I - K. A. Gavane
7. Conventional and Non-conventional Energy Sources – R. C. Rai
8. Analysis, Synthesis and Desigen of Chemical process. By Richard Turton
9. Industrial Chemistry: Samuel Rideal
10. Fundamental of Solid Waste Management. By Dr. S. V. Agarkar and Dr. S. B. Borul.
11. Reaction Mechanism by Singh and Mukharji
12. Instrumental Methods of Chemical Analysis by Sham K. Anand and Gurdeep R. Chatwal.
13. Systematic Experimental Physical Chemistry. By S. W. Rajbhoj and T. K. Chondhekar.
14. Concise Practical Chemistry- Dr. W.B. Gurnule, Dr. N.S. Dhoble
15. Textbook of Organic Name Reactions- Kashaw S K
16. Basic Chemistry - Karen C Timberlake,

Sant Gadge Baba Amravati University

Department of Lifelong Learning & Extension

Short Term Certificate Course

(3 Months)

Syllabus

For

13)Certificate Course inNursing

Unit - I : Nursing Care Skills

Curriculum Topics :

- Basic human anatomy & physiology
- Understanding hospitals & the health care systems
- General health & hygiene
- Caring for the visually handicapped
- Special skin care for radiotherapy & pressure sores.
- Role of a patient care assistant
- Basic nursing skills
- Administering drugs as per prescription
- Disposal of medical waste
- Daily care of patient
- Understanding body mechanics
- Patient handling, Lifting & transferring

Unit - II : Clinical Experience

The clinical experience of students for clinical assignments & practices to develop nursing care skills.

Recommended Books/References :-

1. Notes on Nurse by Florence Nightingale.
2. The Shift : One Nurse, Twelve hours, four patients lives by Theresa Brown
3. First Year Nurse by Kaplan Nursing.

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Short Term Certificate Course

(3 Months)

Syllabus

For

14) Certificate Course inBeauty Parlor

Unit - I: Basics of Parlor

- Basics of parlor.
- Threading, Waxing , Haircut,
- Manicure, Pedicure.
- Heena and color Application

Unit - II: Entrepreneurship

- Beauty Parlor Setup and
- Market Study
- Promotion
- Workshops

Recommended Books/References:-

- P Great Skin – Secrets The Beauty Industry Doesn't Tell tou By Ingeborg Van Lotringen
- Skincare : The Ultimate No – Nonsense Guide By Coroline Hirons
- Palette: The Beauty Bible For Women of Colour By Funmi
- Love Your Skin By Abigail Jame
- Indrani Hair Cutting Basic & Advance Book By – Mrs. Suwarna Gugle
- Advance Make-up & Haistyle By- Navneet Publication
- Basic Cosmetology Theory By Arihant Publicaation

Sant Gadge Baba Amravati University

Department of Lifelong Learning & Extension

Short Term Certificate Course

(3 Months)

Syllabus

For

15) Certificate Course inYoga Teacher Training

Unit-I :- Yoga Concept

- Yoga: Meaning, concept, misconception about yoga, Yogasan-Standing position, Asana.
- Ashtang Yog with special reference to:-
  1. Yamas, Niyama, Asana, Pranayam, Pratyahar, Dharna, Dhyan, Samadhi.
  2. Yoga as science
- Raj Yog, Bhakti Yoga, Karma Yoga, Gyan Yoga, Hath Yoga.

Unit- II :- Basic Yogic Pranayam and Kriyas

- Yogasana-Standing position, Sitting Position Asana., Asana to be done lying on the stomach, Asana to be done lying on the back.
- Pranayam :- Anulomvilom, Bhastrika, Capalbhati, Ujjai, Shitali,, Shitakari, Kumbhak Pranayam, Bramari.
- A Shatkarma- personal hygiene of yoga- six Purifactory methods o Yoga:- Neti, Sutra neti, Jal neti, Dhauti:- dandadhoti, vastra dhoti, basti, Nauli, kunjal, Tratak
- Bhandhas :- Mulbandh, udyan band, Jalandhar band, Mahabandh
- Chakras of yoga
- Weight loss and diet

Recommended Books/References :-

1. Aasana and Pranayam by Swami kuvalayanand
2. Yoga Personal Hygiene by Shri Yogendra
3. Yogic Exercise by the fit and the Align by S mujumdar
4. Yogic Asanas for health and Vigor by Dr Role
5. Hatha Yoga by Goswami SS
6. Raj Yog by Swami Vivekanand Bhakti Yog by Swami Vivekanand
7. Yoga Education by Dr Babarao Amrutrao Sangle

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For

16) Certificate Course inAdvanced Instrumentation Techniques and their Practical Applications

Unit I: Theory of Instrument

- IR
- AAS,
- HPLC
- UV-visible
- XRD

Unit II: Practical of Instrument

- IR
- AAS
- HPLC
- UV-visible
- XRD

Recommended Books/References:-

1. Practical HPLC method development : Snyder, Kirkland &; Dolan.
2. Beginners guide to liquid chromatography (SBIN-13-978-1879732025).
3. HPLC column: theory technology & practices, by UWE D. NEUE.
4. Modern practice of gas chromatography (ISBN-13-978-0471597001)
5. Principle of instrumental analysis by Skoog, Holler & Crouch.
6. Advance gas chromatography by Andrianna, Coty, Scitus.

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(3 Months)

Syllabus

For

17) Certificate Course inIntroduction to Physical Fitness

Unit-I :- Importance of fitness

- Being Physically active can improve brain health help manage weight reduce the risk of disease, strengthen bones and muscles and improve your ability to do everyday activities.
- **Yogasanas :-** Best Yogasanas for Physical Fitness- Shashankasana, Ustrasana, Dhanurasana, Shalabhasana, Pawanmuktasana, Chakrasana

Unit-II :-Practical on Physical Fitness

- **Stretching Exercise:-** Upper Body Stretch, chest and shoulder stretch, Bent arm stretch, upper back stretch, standing quad stretch, biceps stretch, hip flexor stretch, wrist flexion, lying knee twist.

- **Surya Namaskar :-** (12 Poses) Help with weight loss, strengthens muscles and joints, help combat insomnia, ensures regular menstrual cycle, useful in treatment of frozen houlford, spinal cord and abdominal muscles are stretched.

- **Pranayama:-** Bhastrika, Kapalbhati, Anulom Vilom, Bhramari- It's main component of yoga, an exercise for Physical and Mental wellness. In Sanskrit, "Prana" means life energy and "Yama" means Control. The practice of Pranayama involves breathing exercises and patterns. you purposely inhale, exhale and hold your breath in a specific sequence.

- **Meditation:-** Some Benefits Include Reduced Anxiety, improved self-control, better self-care and less pain.

- **Yogasanas :-** Best Yogasanas for Physical Fitness- Shashankasana, Ustrasana, Dhanurasana, Shalabhasana, Pawanmuktasana, Chakrasana

Recommended Books/References :-

1. Physical Fitness – Wikipedia
2. TheUltimate Body Stretching Guide – Dave leLino – 2017
3. Physical Fitness 4 – NCERT
4. योगाभ्यास सूखी जीवन-प्रा. श्रीपाल जर्दे, चंद्रमाप्र. प्रथम आवृत्ती- मे 1995
5. खेल चिकित्सा ज्ञानको-मीनूपसरीजा, चारू सपरा, स्पोटर्सपब्लिकेशनदरियागंज नईदिल्ली. प्रथम संस्करण-2004
6. आरोग्य सप्तमी-डॉ. रणजित चिकोडे, रियापब्लिकेशन, कोल्हापूर- 416001
7. सूर्य -नमस्कार-श्रीमंत भगवानराव उर्फ बाळासाहेब पंत, मुद्रकः स्वाध्याय मंडळ-पारडी, वलसाड

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Syllabus

For

18)Certificate Course inSwami Vivekananda Teachings on Skills and Human Value

Unit – I :- Life of Swami Vevekananda

- Life of Swami Vivekananda – as a boy as wondering monk
- Sri Ramkrishana and his impact on Swami Vivekananda
- An introduction to the system of Vedanta
- Vivekanada's practical Vedanta
- Divinity of Man
- Vivekananda and Yogic Methods : Raj Yoga, Bhakti Yoga, Karma Yoga and Jnana Yoga

Unit – II :- Teaching of Swmi Vivekananda

- Harmony between Education, Science and Different Religions
- Swami Vivekanada's views on
- Caste , Society and Politics
- Art and Literature and Aesthetics
- Man-making Education
- The message swami Vivekananda for the upliftment of masses, women and youth.

Recommended Books/References:-

1. The Complete Works of Swami Vivekananda - Swami Vivekananda
2. Complete Book of Yoga -Swami Vivekananda
3. Swami Vivekanada :- The Living Vedanta by Chaturvedi Badrinath
4. Teaching s of Swami Vivekananda by Swami Vivekananda
5. Swami Vivekananda : Hinduism and India's Road to Modernity by Makarand Paranjape.

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Syllabus

For

19) Certificate Course in Soil and Water Analysis

Unit I : Study of Water and Soil

- Water Quality Parameters and Standards
- Water Microbiology
- Drinking Water Analysis
- Nature and classification of soil
- Soil health
- Soil moisture

Unit II: Soil and Water Analysis Experiments

- **Water Analysis Experiments**
  - 1 .Collection of water samples (Field work)
  - Determination of total hardness of water
  - Determination of alkalinity of water
  - Determination of pH of water
  - Determination of conductivity of water
  - Determination of TDS in water
  - Determination of phosphorous in water
  - Determination of Na, K in water
  - Determination of important metal in water

- **Soil Analysis Experiments**
  - Collection of soil samples from fields and study of soil sampling tools (Field work)
  - Soil sample preparation
  - Determination of maximum water holding capacity of soil
  - Determination of bulk density of soil
  - Determination of pH of soil
  - Determination of conductivity of soil
  - Determination of important metal in Soil

Recommended Books/References:-

1. Laboratory Mannual of Water and Wastewater Analysis(Daya Publishing House, Delhi) by D.R. Khanna, R. Bhutiani
2. Chemical and Biological Methods for Water Pollution Studies(Oriental Printing Press, Aligarh) by R.K. Trivedy, P.K.Goel
3. Analytical Chemistry(PragatiPrakashan) by Alka Gupta
4. Soil chemicals Analysis by P.R. Hesse
5. Soils and soil fertility(L.M. Oxford Press) by Troch, F.R. And Thompson
6. Fundamentals of soil science(Wiley Books) by foth, H.D
7. Soil Science and Management(Delmar Publishers) by Plaster, Edward J.
8. Handbook of Agricultural Sciences(Kalyani Publication) by S.S.Singh, P.Gupta, A.k.Gupta

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(3 Months)

Syllabus

For

20)Certificate Course in Textile Quality Inspection

Unit I : Textile - Quality Inspection

- **Introduction to Textile Testing**
  Random sampling, sampling method forcible from row cotton, sliver, roving and yarn. sampling method for yarn from various types of package and cloth, sampling method for cloth
- **Testing methods**
  Fiber testing methods: Length, strength, fineness, maturity. Yarn testing methods: Single yarn strength, lea strength, count, evenness, yam faults, twist, direction of twistfor single and ply yarns. Fabric testing methods: EPI, PPI, length, width, thickness, crease recovery, air permeability.
- **Fabric Inspection**
  Fabric defects: warp way defects, weft way defects, various knitted fabric defects, severity of defects. Inspection system of fabric: cloth construction, inspecting the fabricon four-point inspection system
- **Quality Inspection & Discipline**
  Data collection, data arrangement, data analysis. Reporting the observation in a suitable format, importance of disciplines at work, work culture and ethics
- **Safety and Security**
  Importance of cleanliness and personal safety, fire-fighting and first aid, safety gadgetsin textile factory, precaution to be taken while working. Communication skills and reporting skills.

Unit II: Practicals onTextile - Quality Inspection

- Sampling methods for fiber, yarn & cloth
- Testing of fiber, yarn & cloth
- Checking the roll weigh of fabric and the construction details.
- Inspecting the fabric and marking the defects found by stickers.
- Putting a tag at the side for objectionable defects
- Reporting the observation in a suitable format.
- Practicing considering safety and health aspects.
- Mock drill for fire fighting and first aid.

Recommended Books/References:-

1. Process control in Textile manufacturing
2. Quality Assurance for Textile
3. An Introduction to quality Control for apparel Industry
4. Textile Quality: Physical methods of Products and Process Control

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Syllabus

For

21) Certificate Course in Textile Weaving

Unit I : Textile Weaving Operations

- **Sectional Warping**
  Details of Sectional Warping machine, Creeling pattern and the quality requirements, Importance of Sectional, warping, creeling the cones as per pattern setting the length per section and section width, Importance of maintaining uniform tension all the time.
- **Beam Warping**
  Knowledge of colour codification, Knowledge of yarn count, cone weight and the weaver's knot.
- **Knotting & Tying**
  Basics of knotting machine and its operations, Basics of beam gaiting and its operations, Knowledge about the working of the machines in a safe and hygienic manner, Knowledge about the working of the Knotter in a safe and hygienic manner, Precautions for using a Knotter for new sort introduction.
- **Air Jet Looms**
  Introduction Knowledge about the shade differences and the weave of the fabric, Let-off, Take-up, Weft selector and warp stop motions, Dobby motions, selvedge motions, air-pressure controls, relay nozzles, main nozzle.
- Safety, Security & Discipline
  Importance of cleanliness and personal safety, Firefighting and First aid, Safety gadgets in a spinning factory, Precautions to be taken while working, importance of disciplines at work

Unit II: Practicals onTextile Weaving

- Understanding the Warping machine and its creel.
- Understanding the pattern and creeling the cones in their respective places.
- Winding the required number of sections.
- Attending the breaks and putting weaver's knot.
- Understanding the salient features of super high speed warping machine and its Controls. Understanding the pattern and creeling the cones in their respective places.
- Understanding the requirements of the beam and loom to be gaited.
- Practicing the safety systems by wearing head cover and masks
- Collecting the hard wastes. 10 Auditing the parts needed and indenting them.
- Understand shedding picking and beat up on loom.
- Understand let off and take up on loom.

Recommended Books/References:-

1. Handbook of Weaving by- Sabit Adanur
2. The Everything Knots book for time and Knot - Randy Penn
3. The Course of Loom development by- Teruo Ishida
4. Industrial Safety by- Chetan Prakashan

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For

22) Certificate Course in Textile Spinning

Unit I : Textile Spinning Procedure

- **Introduction**
  Importance of ginning. Bale storage, identification and management. Machine sequence in blow room, its function and controlling. Functioning of the condensers, Different signal lamps used in machines, knowing the different control buttons and operating them on need basis. Knowledge about humidity conditions in blow room.
- **Carding & Draw Frame Tenting**
  A) Importance of carding, various parts in a card and their functions, Precautions to be taken while working, Knowledge about humidity conditions and the working of cards, Normal defects in card web and actions needed to correct them.
  B) Importance of draw frame, various parts in a draw frame and their functions, Precautions to be taken while working, Knowledge about humidity conditions and the working of cards, Normal defects in draw frame sliver and actions needed to correct them, Importance of cleanliness and personal safety.
- **Speed Frame & Ring Frame Operation**
  A) Details of working of a speed frame, doffing the bobbins and restarting the machine, Importance of speed frames, taking the doff and the quality requirements, Precautions to be taken while running, doffing and restarting the machines, Importance of cleanliness and personal safety.
  B) Importance of ring frames & taking doff and precautions to be taking while working, Details of working of a Ring frame, Precautions to be taken while doffing and restarting the machines.
- **Automatic Winding & Yarn Packing**
  A) Importance and details of automatic winding machine Knowledge about various faults and Stop motions. Importance of maintaining uniform tension all the time. Knowledge of yarn count, cone parameters, cone weight. Various types of knots and splices. Importance of length measurements in winding.
  B) Details of packing cones in Cartons, the mandatory markings, Importance of Packing and the mandatory requirements, Importance of maintaining clean and good aesthetics of packing, Knowledge of color codification, Concepts of length measured cones and the tolerance for
- **Safety, Security & Discipline**
  A) Importance of cleanliness and personal safety, Fire fighting and First aid, Safety gadgets in a spinning factory, Precautions to be taken while working, importance of disciplines at work.

Unit II: Internship and Practical's

- Understanding the Process and material flow in Textile mill
- Understanding the importance of fibers, types of sliver, sliver hank, importance of sliver quality.

- Understanding the importance of roving quality, types of yarn, yam count,
- Understanding the functions of different machines in blow room department.
- Understanding the importance and function of different signal lamps in blow room.
- Understanding the different control buttons in blow room machines.
- Understanding the functions and methodology equipments.
- Understanding the types of contaminations and importance of segregating contaminations.

Recommended Books/References:-

1. Process control in speed frame - R. Senthil kumar
2. Practical guide to Ring Spining by- Werner Klin
3. Packaging Prototypes - Edward Danison, Rechard Cawthroy
4. Industrial Safety by- Chetan Prakashan

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For

23) Certificate Course in Chemical Processing

Unit I :-Fabric scouring, Bleaching, Mercerizing, dying and Printing

- **Introduction: Sizing, Desizing & Singeing**
  Chemicals and enzymes, function and operation of the machines to get optimum production knowledge about various aspects of Singeing machine function and operation to get optimum production, Importance of Singeing of fabrics.
- **Fabric scouring, Bleaching and Mercerizing processe**
- **Yarn and Fabric Dyeing**
  Cheese form, and Beam form, Details of the machines, Knowledge of colours, chemicals and machines (Jigger, Jet dyeing machine) used for fabric dyeing.
- **Printing** Basic knowledge about various aspects of fabric Printing. Ingredients used in printing paste. Styles of printing (Direct, Resist, Discharge). Printing machinesRoller printing, screen printing, rotary screen printing, transfer printing,
- **Stenters and Finishing** Basic knowledge about various aspects of Stenter machine, function and operation to get optimum production. Importance of finishing, various types of finishing processes viz. Sanforising, anticrease and calendaring. Details of the machine, Knowledge of chemicals used.

Unit II: Internship in Textile or Chemical Company

- Understanding the Process and material flow in Textile mill
- Understanding the importance of fibers, types of yarn, yam count.
- Preparation of desizing solution.
- Scouring of cotton material.
- Bleaching of fabric.
- pH control by using chemicals.
- Preparation of dye bath for soluble dyes.
- Preparation of dye bath for insoluble dyes.
- Dyeing of cellulosic fabric.
- Dyeing of synthetic fabric.
- Study of dyeing faults.
- To study screen printing.

The project will give them a first-hand experience of solving the clinical issues in patient counseling and patient navigation.

Recommended Books/References:-

1. Technology of bleaching and mercerization by V. A. Shenai.
2. Technology of dyeing by V. A. Shenai.
3. Technology of printing by V. A. Shenai.
4. Textile Processing and Properties : Preparation, Dyeing, finishing and performance — Tyrone L. Vigo, Elsevier

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(3 Months)
Syllabus
For

24) Certificate Course in Soft Skills and Personality Development

Unit - I: Basic of Soft Skills and Personality Development

- **Know Yourself**
  SWOT Analysis; Importance of attitude, self-esteem, courage, confidence, reading and reflection; Dreams to Reality stories; Purpose of life; Case study Related activities
- **Motivation**
  Importance of motivation; Internal and external motivation; Self talk; Growth mindset; CaseStudy; Related activities
- **Goal Setting**
  Dreams and Goals; Setting Goals; Types of Goals (Short term, long terms, life time); CaseStudy; Related activities
- **Time Management**
  Time as a resource; Identification of time wasting; Prioritizing work to be done to do list;Check list; Case study; Related activities
- **Presentation Skill**
  Correctness of language; Clarity of words, thoughts and ideas; Gestures and manners Speed,audibility, voice modulation; Eye contact, body posture and facial expression; Case study;Related activities
- **STRESS MANAGEMEN**
  Causes of Stress; Important of stress; How to manage stress? Mediation and its application;Case study; Related activities

Unit –II : Practicals based communication skills

- **Group Discussion**
  What is group discussion? Types of group discussion; Skills for group discussion; Case study; Related activities
- **Interview Skill**
  What is interview? Preparation of interviews; Conventional interviews; Modern Interviews-egTelephonic interview, interview using internet etc; Case study; Related activities
- **Effective Communication Skill**
  Self-communication; Communication with others; Verbal communication; Nonverbal communication; Case Study; Related activities;
- **ICT**
  Working with computer; Making PPT and presenting it; Communication- email, Facebook,WhatsApp, etc; Social media benefits and drawbacks; Case Study; Related Activities Subject

Recommended Books/References:-

1. SGBAU, Amravati (2020) A SOF-10 E Book on Soft skills and personality development published online and available at www.sgbau.ac.in
2. Meena K and V. Ayothi (2013) A Book on Development of Soft Skills (Soft Skills: A Road Map to Success), P. R. Publishers & Distributors, No. B-20 & 21, V. M. M Complex, Chatiram Bus Stand, Tiruchirappalli-620002. (Phone No: 0431-2702824Mobile No.: 9443370597, 9843074472)
3. Alex K. (2012) Soft Skills-Know Yourself &; Know the World, S. Chand &; Company LTD, Ram Nagar, N

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Syllabus

For

25) Certificate Course in Research Methodology

Unit I :-General Concept of Research Methodology

- **Introduction**
  Meaning, concept and Definition, Need, Importance and Characteristics, Types– Historical, Descriptive, Action and Experimental, Qualities of a Good Researcher.
- **Developing the Research Problem**
  Definition and Meaning of Research Problem., Location of Research Problem., Criteria for Selecting a Research problem, Meaning, Definition and types of Research Hypothesis, Formulation of Research hypothesis.

- **Survey of Related Literature**
  Need and Purpose for Surveying Related Literature, Kinds of Related Literature, Sources of Literature, Steps in Literature Search, Use of Library Sources.

- **Methods of Research**
  Need and Importance of Formulating Method, Sampling and population – meaning, importance, Types of sampling – Probability and Non-Probability Methods, Design and analysis of Study, Meaning, Definition and types

Unit II: Survey and Experimental Research, Analysis, Result, Dissertation Report Writing

- **Experimental Research**

  Meaning Experimental Research, Sources of validity in Experimental Research, Threats in Thesis / Dissertation/Research reports, Controlling threats to internal and External Validity, Type of experimental design.

- **Organization of thesis/Dissertation/Research reports**
  Research proposal- Meaning, Need and Preparation of research proposals, Research Repots – Purpose, Characteristics of good report, Mechanics of typing and printing research reports, Use of figures and Illustrations, Reference materials – Bibliography and Foot note forms, Ethics and Research
- **An Introduction of Statistics**
  Statistics – Meaning, Definition, Nature and Importance, Data- Meaning and Types, Class Interval – Raw Score, Continuous and Discrete series, and Construction of Frequency table, Graphical representation of data.

- **Measures of central Tendencies**
  Mean – Definition, Importance, Advantages and Disadvantages calculation from Groups and Ungrouped data., Median- Definition, Importance, Advantages and Disadvantages, Mode – Definition, Importance, Advantages and Disadvantages, Calculation from Grouped and Ungrouped data.

Recommended Books/References:-

1. Manual for Writing of Applied – Turabian, Kate. I.A., Chicago Papers Thesis and Dissertation University of Chicago Press, 1967.
2. Research in and Education- Best, John, W. Chiffs N.J., Prentice.
3. Education Research Principals – Smith, H. L. Bloomington, Indian and Practices Educational Pub.
4. Yogic Therapy Its Basic Principle & Methods Central Health Education & Bureau Govt. of India. New Delhi-1963
5. Research Methods Applied Education and recreation 2nd D.C., Press, 1967-Scott, G.M.(Ed.) Health, Physical.
6. Research in Education Prentice Hall Inc. 1964- Best. John, W. Chiffs. N. J.
7. Introduction to Research- Hilway, Tyrus Bostn, Houhton Mifflin co, 1956.
8. The Elements of Research-Whiteney, F.I. New Yourk Prenctice Hall Inc.1961.

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For
26) Certificate Course inGardening Management
(उद्यान परीसर व्यवस्थापन)

Unit I : बागेची ओळख, महत्त्व आणि व्यवस्थापनाची गरज

- उद्यानांचे प्रकार उद्यानांचे महत्त्व उद्यानांच्या संरचनेची ओळख, उद्यानांसाठी उद्दिष्टे, उद्यान व्यवस्थापनाच्या गरजा आणि निवडलेल्या क्षेत्राच्या बागेचे महत्त्वनिर्मिती
- **बागेच्या आवश्यक घटकांचा अभ्यास:**

  जमिनीचा प्रकार उपलब्ध जमिनीच्या आकाराचे वर्गीकरण विविध वनस्पती, फुलझाडे लॉन गवत, पाण्याचे स्त्रोत, पाणी व्यवस्थापन, सिंचन व्यवस्था, पाण्याची गुणवत्ता, मजुरांची उपलब्धता, सुरक्षित, शेड्स, हरितगृह, स्टँड सुविधा, सरकारची मान्यता आणि परवाना, स्टोरेज रूम, दर्शनी गेट
- **बागेसाठी आवश्यक साधने:**

  शस्त्रास्त्र उद्यानात करावयाच्या कामासाठी लागणारी साधने. ओळख,माहिती हाताळणी आणि देखभाल फावडे ,कुदळ, फावडे, माती,मटक,बेड मार्कर गार्डन रेक डिब्बलरखोदणारा काटा चाकू झारी घमेलीसिकेटर इतर लहान साधने हात करवत, कुदळ, विळा,विळा, हातोडा, नांगर, चाळणी, बादली, डस्टर लॉन मोअर पुश कार्ट, छोटे ट्रॅक्टर,रबरी नळी इ.

Unit II:बागेच्या आवश्यक घटकांचा अभ्यास(प्रात्यक्षिक)

बागेत करावयाची महत्त्वाची कामे: उत्खनन, वाफे तयार करणे, माती,कंपोस्टिंग, खत आणि माती भरण्याच्या पद्धती, तण काढणे, बियाणे उगवण करणे,रोपे लावणे, कीटकनाशकांची फवारणी, खते, पोषक तत्वे, खते,आवश्यकतेनुसार लागवड आणि सिंचन हे करण्यासाठी, राजा प्रतिबंधात्मक उपाय योजना करा,आवश्यकतेनुसार साहित्य खरेदी करा, जमा खर्चाचा हिशेब ठेवा, शक्ती तपासा, आवश्यकतेनुसार झाडे पुरवठा, छाटणी आणि लावा, बोन्साय तयार करा आणि त्यांची देखभाल करा.

Recommended Books/References:-

1. गोपालस्वामीयंगारजी. एस. कम्प्लीटगार्डेनिंगइनइंडीया, बेंगलुरु
2. त्रिवेदीप्रतिभा, होमगार्डेनिंग, नवीदिल्ली, भारतीयकृषीअनुसंधानपरीषद
3. रंधवाजी.एस. आणिमुखोपाध्याय, फ्लोरिकल्चरइनइंडीया, मुंबईअलाईडपब्लिशर्सप्रायवेटलि.
4. पी. कचरू, इन्ट्रोडक्शनटुगार्डेनींगनवीदिल्ली, भारतीयकृषीअनुसंधानपरीषद

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For

27) Certificate Course in Agriculture basedEntrepreneurship

(कृषीआधारितउद्योजकता)

Unit - I : कृषीआधारीतउद्योग

- धान्यसाठवणगोडावुन,दालमिलबिजप्रक्रियाधान्य, सफाई/ पॅकींगकेद्र
- दुग्धव्यवसाय – गाईम्हशीपालन, कुक्कुटपालन, शेडनेटहाऊसउभारणी, ऑईलमिल, शितगृहे, फळप्रक्रीया, नविनफळबागलागवड, नियंत्रीतफुलशेती/ भाजीपालाउत्पादन, कृषीपर्यटन,रोपवाटीकासंगोपन, भाडेतत्वावरअद्यावतकृषीअवजारे, उपकरणेयंत्रसामुग्रीपुरवठा, शेतकरीगटधान्यबाजारप्रदर्शनमहोत्सवआयोजन, गोड्यापाण्यातीलमस्यशेती
- कृषीउद्योजकनिर्मीती
- कृषीउद्योगनिर्मीती
- प्रकल्पआराखडातयारकरणे
- कृषीप्रकल्पउद्योगासअनुदान/ साहाय्यदेणा-यासंस्था
- प्रशिक्षणकार्यक्रम

Unit - II:प्रात्यक्षिक

- प्रत्यक्षकार्यानुभव
- शासकीयसंस्थाभेटी
- बाजारसवेक्षण
- ऑनलाईनप्रकल्प / अर्जप्रणालीप्रशिक्षण
- कृषीउद्योग / प्रकल्पाचाअभ्यासप्रशिक्षणार्थी

Recommended Books/References:-

1. पाटीलअ. व्यं. महाराष्ट्रातीलफळझाडे, पुणे, कॉंटिनेंटलप्रकाशन
2. पाटीलअ. व्यं. रोपवाटीकासंगोपन, पुणे, कॉंटिनेंटलप्रकाशन
3. राहुडकरवा. ब. फुलबागपुणेअतुलबुकएजेंशी

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Department of Lifelong Learning & Extension

Short Term Certificate Course

(3 Months)

Syllabus

For

28) Certificate Course inSugam Sangit (सुगमसंगीत)

Unit - I:- Inroduction of Sugam Sangit

- Abhyaskramavar adharit vividh gaan shaili antargat raganche prarbhik adhyan
- Sugam sangatichi aavaj sadhana
- Bhartiya Ani Pashrtyat Sangeetatil Swar saptkache prarmbhik Adhyaan.
- Vividh Tallanche Bhartiy ani Pashrtyat padhatine prarmbhik adhyan,
  1) Dadara, 2) Karda, 3) Rupak, 4) Zapatal, 5) Kappali, 6) Trital, 7) Ektal

Unit – II :-Types of Gan Shailis

- Sugam Sangeetatil Gaan Shailinche Adhyaan,
  A)Bhavgeet B)BhaktiGeet(Bhajan Abhang etc)
  C)Gazal D)Kavvali E)Chitrapat Geet(Hindi,Marathi)
- Geetatil Kavyanche sangikik v Saudaryatmk Drustine Adhyayan
  1.Microphone Ani Dwani Tantradhnyan
  2.Karaoke Gayan
  3.Sadarikaran
  A)Ekal Ani Yugal Geet
  B)Samuh Gaaan Sagayan (koras,Kvayar)Kaushalya

Recommended Books/References:-

1. सुगमसंगीतगायनातीलयशासाठीकायकराल ? – हेमंतसाने
2. सुगमसंगीततंत्रवमंत्र – चारुशीलाबेलसरे

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Short Term Certificate Course

(3 Months)

Syllabus
For
29) Certificate Course in Hip-Hop Dance Style

Units –I :- Introduction to Hip-Hop

- Introduction of Hip-hop
- Cultural History

Units–II :- Implementation of Dance Steps

- C-Walks(Footwork)
- C-Walks(Footwork)
- Old School (Hip-Hop Original Basic Dance Moves)
- Fitness Warm-up
- Breaking
- Top Rock (up rock 20 Steps)
- Foot Work(down rock)
- Freezes (10 Types of Freezes)
- Power Moves
- Acrobatics

Recommended Books/References:-

1. Notes on Hip-Hop Dance Style
2. Books on Hip-Hop Dance Style

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Syllabus
For
30) Certificate Course in Advance Welding Technology

Unit- I (Basic Welding processes) :

- Introduction to metal joining process, Soldering, Brazing, Welding, difference between soldering, brazing and welding, Types of welding processes-Arc welding: working principle, applications, advantages and limitations. Gas welding- working principle, applications, advantages and limitations. Types and purpose of Electrodes, Electrode coatings(flux). Types of welded joints.

Unit-II (Advance Welding Processes) :

- **T**ungsten Inert Gas welding- TIG: working principle, applications, advantages and limitations. Metal Inert Gas – MIG welding – working principle, applications, advantages and limitations. Resistance welding- working principle, applications, advantages and limitations, safety precautions while working in welding shop.

Practicals List :-

1. How to do metal joining process, Soldering, Brazing and Welding practically.
2. How to process Arc welding practically
3. How to process Gas welding practically
4. How to process Metal Inert Gas welding practically
5. How to process Resistance welding practically
6. Conduct Practical on safety precautions while working in welding shop.

Recommended Books/References:-

1. A textbook of Welder theory by P.W. Shinde
2. A textbook of Welder theory by W. L. Joshi
3. A textbook of Workshop Technology vol.1

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Syllabus

For

31) Certificate Course inRenewable Energy

Unit I : Introduction of Photovoltaic Technology and its applications

- Introduction of Photovoltaic Technology and its applications Basics of Light to Energy Conversion Solar Cells to Module, Module name plate specifications, Module to Array and Basic Structure of PV module Classification of PV Modules based upon technology Brief on PV Cell/Module manufacturing process STC and NOCT test conditions and Characterization of PV Modules
- Applications of PV, different configurations of PV power system: Stand along, Grid, Hybrid system etc Components of a PV System; Battery, inverter and Charge controllers.
- Introduction: Batteries, type of batteries, operation and structure, Inverter, type of inverters, operation, make and specifications
- Types of charge controllers and selection criteria. Components of a grid connected SPV system (ACB, DB and cabling)
- Junction Box, Lighting arresters, grounding etc. Fundamentals of PV system sizing Various steps involved in sizing of grid connected PV systems.
- Introduction to instruments used for monitoring performance of PV module.
- Interpretation of performance data, and troubleshooting of possible defects in PV modules Troubleshooting of Batteries, Inverters and Charge controllers

Unit II: Structure Erection and Civil Works& Installation of Solar Power plant

- Introduction to various tools used in the power plant installation. Its usage.
- Brief on civil foundation and erection of supporting structures.
- Fixing the foundation of the structure and, the grounding considerations
- Installation of Array support structure and mounting of PV module
- Interconnection of modules, strings and Combiner boxes.
- Installation of other System components, i.e. Inverter, battery etc.
- Installation of ‘AC and DC power distribution boxes.
- General safety consideration in the installation phase of solar power plant.

Recommended Books/References:-

1. Reinventing Fire: Bold Business Solutions for the New Energy Era (Hardcover) by Amory By Lovins
2. The Renewable Energy Handbook: A Guide to Rural Independence, Off-Grid and Sustainable Living (Paperback) by William H. Kemp
3. Sustainable Energy - Without the Hot Air (Paperback) by David J.C. MacKay

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Syllabus

For

32) Certificate Course inCNC Technology

Unit - I : Lathe Machine Basics and Advance CNC technology

- Importance of trade training, List of tools & Machinery used in the trade. Health & Safety: Introduction to safety equipment's and their uses.
- Vernier caliper-its construction, principal graduation and reading, least count etc. Digital Vernier caliper. Outside micrometer-different parts
- Types of lathe drivers, merit and demerit. Description in details-head stock cone pulley type- all geared type-construction & function. Tumbler gear set. Reducing speed-necessary & uses. Back Gear Unit - its construction use.
- Lathe operation Facing, Turning, Drilling, Boring, Knurling, Threading and different types and their uses.

Unit-II: Lathe operation Facing, Turning, Drilling, Boring, Knurling, Threading and CNC programming Lathe & Milling

- Measuring instrument Vernier caliper, Micrometer, Bevel protractor
- Lathe operation Facing, Turning, Drilling, Boring, Knurling, Threading
- CNC programming
- CNC programming Lathe
- CNC programming Milling

Recommended Books/References:-

1. Machining and CNC Technology by Michael Fitzpatrick, 2003
2. CNC Machines by B.S. Pabla
3. CNC machine Handbook by Alan Overly, 2010
4. CNC Milling for Makers: Basics - Techniques - Applications by Christian Rattat,2017

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Syllabus

For

33) Certificate Course inFarm Management

(फर्म मॅनेजमेंट)

Unit-I : Study on various crop

- Agronomical crop
- Management of farm
- Horticultural crop
- Agriculture Economics
- Crop Husbandry
- Production Techniques

Unit-II: Cultivation Techniques

- Cultivation of various crop
- Farm machinery
- Farm operation

Recommended Books/References:-

1. Principles of agronomy-
2. Farm Machinery and Equipment
3. Secrets of Diagnosis by Dr Goel Brij Bhushan
4. The Guidebook for Patient Counseling Book by Tracey S. Hunter
5. CURRENT Medical Diagnosis and Treatment 2022 (61st Edition), 28 October 2021 by Maxine A. Stephen J. McPhee Michael W. Rabow, Kenneth R. Mc Quaid
6. Combining Old And New: Naturopathy For The 21st Century Paperback – Import, 30 January 2000by Robert J. Thiel

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Syllabus

For

34) Certificate CourseinEnglish Communication for Workplace and Business

Unit-I : BWEC Theory Part -I

- **Reading**
  Vocabulary
  Tone of Voice different media
  Grammer
- **Writing**
  Sentence Composition
  Subject-Verb Agreement Grammer
  Writing Etiquettes

Unit-II: BWEC Part - II

- **Listening**
  Listening Abilities
  Answer the right questions
  Language Understanding
- **Speaking**
  Pronunciation
  Intonation and stress
  Grammar
  Vocabulary
  Relevance of content

Recommended Books/References:-

1. Market Leader (Pearson/Longman)
2. Business Builder (Macmillan)
3. Total Business (Cengage)
4. Intelligent Business (Pearson/Longman)

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Syllabus

For

35) Certificate Course inBamboo Handicraft

Unit – I :- Distribution of Bamboo (Theory)

- BambooSpecies anditsDistribution.
- SelectionofBambooClum
- SizingofBamboo
- BambooTreatment.
- Slicingand machinerymechanisms.
- Knotremovingmechanisms.
- FinishingandPainting.

Unit – II :- Handicraft (Practical)

- PreparationofBamboo Dustbins.
- PreparationofBamboo Furnitureitems.
- MementoPreparation.
- BambooJewelryArt.
- BambooFrames.
- BambooStandsPreparation

Recommended Books/References:-

1. Prosea Series Vol. 7, Plant Resources of South-East Asia: Bamboos Edited By S.DranfieldandE. A. Widjaja.
2. TheBookofBamboo:AComprehensiveGuidetoThisRemarkablePlant,ItsUses,and itsHistory.DavidFarrelly.
3. Bamboo:ThePlantanditsUses(Tropical Forestry) Softcoverreprintoftheoriginaled.2015Edition byWalterLiese(Editor), MichaelKöhl (Editor).

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Short Term Certificate Course

(3 Months)

Syllabus

For

36) Certificate Course inAdvance Bamboo Handicraft

Unit – I :- Designing (Theory)

- BambooTreatment.
- SelectionofBambooClum.
- SizingofBambooas per structurebaseddesign.
- Bamboostructuresdesignandcreativity.
- Introductiontomachineries.
- BambooStructuresBasecreationtechnology.

Unit – II :- Bamboo Technology(Practical)

- PreparationofBambooStructureBase.
- PreparationofBamboo advanced Furnitureitems.
- BamboodecorativeItems.
- BambooArtitems.
- BambooFrames.
- BambooStandsPreparation

Recommended Books/References:-

1. Prosea Series Vol. 7, Plant Resources of South-East Asia: Bamboos Edited By S.DranfieldandE. A. Widjaja.
2. TheBookofBamboo:AComprehensiveGuidetoThisRemarkablePlant,ItsUses,and itsHistory.DavidFarrelly.
3. Bamboo:ThePlantanditsUses(Tropical Forestry) Softcoverreprintoftheoriginaled.2015Edition byWalterLiese(Editor), MichaelKöhl (Editor).

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Short Term Certificate Course

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Syllabus

For

37) Certificate Course inVedic Mathematics and Basic Mathematics

Unit I: Basic Operation

- Additions, Subtractions, Multiplication and Division in Vedic Mathematics. Numbers (Natural, Whole, Integer, Rational, Irrational, Real, Complex), Prime Numbers, Composite Numbers, Even Numbers. Odd Numbers and their addition, subtraction, multiplication, division, Numericals.

Unit II: Basic Properties

- Decimal and their addition, subtraction, multiplication, division, Factorization. GCD and LCM, Calendar, Logarithm, Surds, Percentage, Rate of Interest, Some banking mathematical numerical problems.

Recommended Books/References :-

1. Vedic Mathematics 2 nd Edition, by Dhawal Bhatiya, Jaico Books.
2. Vedic Mathematics: Sixteen Simple Mathematical Formulae from Vedas, by Swam Sri Bharati Krishna Tirthaji, Motilal Banarasidas Publishers Pvt .Ltd.

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Syllabus

For

38) Certificate Course in Modi Lipi(मोडीलिपी)

Unit I – Modi Script Introduction (मोडीलिपी परिचय)

- Modi Alphabets(मोडी मुळाक्षरे)
- Vowels & Consonants (स्वर आणि व्यंजन)
- Phonology (संपूर्णबाराखडी)
- Various types of writing alphabets'R''र'याअक्षराचेविविधप्रकारचेलेखन
- Numbers ('अंक / आकडे')
- Homophones (एकसारखेदिसणारेशब्द)

Unit II –Modi Script Types

- Short forms of Modi Script (मोडीलिपीतीलसंक्षिप्तरूपे)
- Aanewari Reghi Hisheb (आणेवारीरेघीहिशेब)
- Types of Modi Script Documents(मोडीकागदपत्रांचेप्रकार)
- Chronological Types (कालगणनांचेप्रकार)
- Reading Practice of Modi Script Letters (मोडीपत्रांचालेखनसराव)
- Archives (अभिलेखागार)

Recommended Books/References:-

1. मोडीलिपी-प्रशिक्षणवसरावपुस्तिका, महाराष्ट्रपुराभिलेखागारसंचालनालय, महाराष्ट्रशासन, मुंबई032, 2008.
2. मोडीलिपीप्रशिक्षणवर्ग, वाचनसरावपुस्तिकासंपादकश्रीमतीस्वातीम्हसेपाटील, संचालक, महाराष्ट्रपुराभिलेखागारसंचालनालय, महाराष्ट्रशासन, मुंबई032, 2008. ३
3. मोडीलिपीपरिचयआणिऐतिहासिकनमुनापत्रे, डॉकुलकर्णीमधुकररामचंद्र, भारतीयइतिहाससंकलन, समिती, पुणे030, 1991.
4. मोडीवाचनआणिलेखनभाग1,2,3,4,5 (संपादक), वाळिंबे, गणेशराजाराम, प्रकाशककेशवभिकाजीढवळे, मुंबई004, जानेवारी2016.
5. प्राचीनभारतीयलिपीमाला, ओझागौरीशंकर, मुन्शिराममनोहरलालजेपब्लिकेशन, न्यूदिल्ली, 191
6. भारतीयलिपींचेमौलिकएकरूपपंडितगणपतीशास्त्रीहेबाळ, प्रकाशकमहाराष्ट्रराज्यसाहित्यआणिसंस्कृतीमंडळमुंबई, 1988.
7. चलाशिकूयामोडीआपण, संपादनकृष्णाजीम्हात्रे, प्रकाशक- मोडीलिपीशिक्षणप्रसारकमंडळ, मुंबई084. एप्रिल2009.
8. मोडीलिप्यंतरकौशल्य, संपादनकृष्णाजीम्हात्रे, प्रकाशकशीलप्रकाशन, मुंबई081.
9. सोपीमोडीपत्रे, लवटे, मंदारआणिसोमणभासवती, अभिजितप्रकाशन, पुणे2013.
10. शिवछत्रपतींचीपत्रे, खंड1आणि2, कुलकर्णीअनुराधा, प्रकाशन2011.
11. तुम्हीचमोडीशिका, कुलकर्णीमधुकररामचंद्र, डायमंडपब्लिकेशन, पुणे.
12. गिरवामोडीलिपीस्वर-अक्षरे, गांगलशुभानन, मोडीलिपीसंवर्धनमंडळ, पुणे

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Syllabus

For

39) Certificate Course inE-Marketing

Unit -1 :- Introduction to E- Marketing

- **Understand the Internet**
  - History of Internet.
  - How the Internet.
  - How people access the Internet,
  - Internet statiscs and Trends.
- **Online Marketing Research.**
  - Definition of E-Marketing.
  - Research methodology.
  - Online Marketing Research tools.
- **Online Advertising.**
  - Definition of advertising.
  - How it work.
  - Planning and execution.

Unit – II :- Affiliate Marketing

- Definition Marketing.
- How it works.
- Advantages and Challenges.
- **Customer Relationship Management.**
  - Definition of Management
  - The relationship with the customer must be maintained properly.
  - Using CRM and Advantage of CRM.

Recommended Books/References:-

1. Internet and World Wide Web by prof. Pradip Barad, Mayor Publication Usmanabad.
2. Banking by Dr. Ravindra Deshmukh, pimpalapure publication, Nagpur.
3. Banking System by Dr. Megha Kanetkar, Dr. J. M.
4. Advertisement and selling Management by Dr. Mahesh Kulkarni, Nirali Publication.

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Syllabus

For

40) Certificate Course inManagement of Child Care Centre

Unit - I Basics of Child care centre

- Fundamental principles of growth and development
- Factors influencing growth and development
- Psychological needs of children and play behavior in children
- Meaning, need and importance of child care centre
- Elements of organization and administration
- Difference between child care centre and preschool

Unit - II Key elements in driving Child care centre

- Types and arrangements of rooms, ventilation, lighting and Safety
- Playground – play equipment and storage facilities
- Provision of safe drinking water and sanitary facilities
- Types of records- Admission. Progress, Financial, Equipment, Attendance, Accounts, Stock and Staff Profile
- Role and qualities of teacher and caretaker

Recommended Books/References:-

1. Caring for Your Baby and Young Child, 7th Edition, American Academic of Paediatrics 2019
2. The New Father – A Dads Guide to the First Year, Armin A Bratt 2015
3. Dr Spock's Baby and Child Care, 10th edition, Benjamin Spock M D, 2018
4. Teaching Children to Care- Classroom Management for Ethical and Academic Growth, K B Revised Edition

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Short Term Certificate Course

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Syllabus

For

41) Certificate Course inIntroduction to Indian Constitution

Unit – I :- निर्वाचनआयोग

- निवडणूकआयोगासंबंधीसंविधानातीलतरतुदी
- निवडणूकआयोगाचीरचना
- निवडणूकआयोगाच्यारचनेतीलबदल- बहुसदस्यीयनिवडणूकआयोग
- निवडणूकआयोगाचीआवश्यकतावमहत्त्व
- राज्यपातळीवरीलनिवडणूकयंत्रणा
- निवडणूकआयोगाचीकार्यवअधिकार
- निवडणूकविषयकसुधारणा

Unit – II:- नियंत्रकवमहालेखापरीक्षकपरीक्षक, महाधिवक्ता,भारतीयघटनापरिषदआणिअल्पसंख्यांक

- रचनाआणिपात्रता
- बडतर्फी
- कार्येवअधिकार
- संविधानात्मकतरतुदी
- नियुक्तीवपदच्युती
- कार्येवअधिकार
- भारतीयसंविधानातीलतरतुदी -
- धार्मिकसवलतीसांस्कृतिकशिक्षणभाषाविषयकसवलतीविषयकसवलती
- अनुसूचितजातीववनजातींच्याविकासासाठीकेलेल्याघटनात्मकतरतुदी
- मागासलेल्याजातींसाठीसवलती.

Recommended Books/References:-

1. प्राचिंगघांगरेकर, भारतीयराज्यघटनास्वरूपआणिराजकारण,मंगेशप्रकाशनरामदासपेठनागपूर.
2. प्रा. शेखहाशम, डॉ. जोगेंद्रगवई,
   भारतीयशासनआणिराजकारण,विश्वपब्लिकेशनअँडडिस्ट्रीब्युटर्स,नागपूर.
3. डॉ. अलकादेशमुख, भारतीयशासनआणिराजकारणसाईनाथप्रकाशन,नागपूर.
4. डॉ. प्रशांतविघे, भारतीयशासनआणिराजकारणसाईनाथप्रकाशन, नागपूर.

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Syllabus

For

42) Certificate Course inEvent Hosting andCompering (सुत्रसंचालन)

प्रकरण 1 ले: सुत्रसंचालनसंकल्पना, स्वरूपआणिव्याप्ती

सुत्रसंचालनम्हणजेकाय?

अ) सुत्रसंचालनाचीप्रस्तावनाब) स्वरूपक) उदिद्श्टेड) सुत्रसंचालकाचीकार्ये

सुत्रसंचालनाचेप्रकार

अ) वैयक्तिककार्यक्रमब) सामाजिकक) धार्मिकड) दिनविशेषइ) वयोगटई)

सरकारीनिमसरकारी

संचालनाचीविविधटप्पे

अ) पूर्वतयारीब) कार्यक्रमतयारीक) कार्यक्रमाचीआखणी

संचालनाचेप्रत्यक्षव्यवस्थापन

अ) नियोजनब) वातावरणनिर्मितीक) निर्णयड) माहितीचाप्रसारइ) कार्यक्रमाचे

उद्दिश्टे

संचालनसंयोजकाचेगुण

अ) नैतृत्वब) निर्णयक्षमताक) जनसंपर्कड) निरिक्षणषक्तीइ) सहनशिलता

प्रकरण2 रे: सुत्रसंचालनकार्य, उपयोजनआणिउदिदश्टये (प्रात्येक्षिक)

उत्कृश्टकार्यक्रमाचीउद्दिश्टे

अ) उत्सुकताब) मनोरंजनात्मकक) समाधानकारकताड) प्रेक्षकांचेस्वागतइ)वेळेचेभानफ) अल्पोपहार

सुत्रसंचालनातीलअडचणी

अ) तणावब) गोंधळक) पाठांतरड) कार्यक्रमालदिरंगाई

प्रभावीसुत्रसंलनासाठीमहत्त्वाच्याबाबी

अ) प्रभावीसुरूवातब) शिष्टाचारक) सुत्रसंचालनकरतांनाहेटाळावेड)देहबोली

इ) आवाजाचाच-सजयउतार

सुत्रसंलनाचाशेवट

अ) आभारप्रदर्षनब) काहीमहत्त्वाच्याबाबी

Recommended Books/References:-

1. पुस्तकांचीयादी (पब्लिकेशन, लेखक)
2. कार्यक्रमाचेप्रभावीसंयोजनआणिसुत्रसंचालन, लेखन: जयप्रकाशबागडे
3. उपयोजितमराठी: डॉ. केतकीमोडक, संतोश, सुजाताशेणई
4. सुत्रसंचालनकसेकरावे? सुत्रसंचालनाच्यामहत्वाच्याटप्पा.
5. भाषणकला: उल्हासकोटकर
6. प्रभावीसुत्रसंचालनासाठीस्क्रिप्टकशीलिहावी: अशोकबागडे
7. व्यक्तीमत्वविकासासाठी: संभाषणववाचनकौशल्य, संपादकडॉ. पृथ्वीराजतौर, डॉ. शैलेंद्रलेंडे, डॉ. वंदनामहाजन
8. संभाषणकौशल्य: राजेंद्रदत्तात्रयथोरात
9. सुत्रसंचालन: प्रतिभाकदम, जतीनकदम
10. मुलाखत: शैलेशत्रिभुवन, रवींद्रबेंम्बरे
11. वत्कृत्व: पुंडलिककोलते
12. मुलाखत: मनोहरभोळे
13. कार्यक्रमाचेप्रभावीसंयोजनवसूत्रसंचालन

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Short Term Certificate Course

(3 Months)

Syllabus

For

43) Certificate Course inPhonetics and Communication Skills

Unit -I: Communication Skills

- **Part-A Verbal Communication**

(Oral Skills)

a. Daily Habits and Routine
b. Asking Questions
c. Greeting, Wishes, Appreciation and Disapproval

Presentations/Seminar
(Writing Skills)
e. Letter Writing
f. Report Writing
g. Minutes & Agendas

- **Part - B Non-Verbal Communication**

a. Body Language
b. Paralinguistic
c. Artifacts

Unit -II:- Modern Grammar and Usages

a. Articles
b. Parts of Speech
c. Tenses
d. Kinds of Sentences

Recommended Books/References:-

1. Micheal Cooper - Effective Communication Skills.
2. Krishna Mohan - Developing Communication Skills.
3. Dr. Sapana MS - Corporate Communication.

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Short Term Certificate Course

(3 Months)

Syllabus

For

44) Certificate Course inOffice Automation

Unit-1:- Computer Introduction

- Computer Introduction
- Windows 7/8/10 and Internet
- Word Processing, Worksheet
- MS Power Point
- Database Management.

Unit-II:- Practical on

- Word
- Excel
- Power-Point
- MS-Access

Recommended Books/References:-

1. Microsoft office - 2013 Word, Excel, OneNote Book - Vol. 1. By Lalit Mali
2. Windows 7 Home Edition by David Pogue
3. Enhanced Computer Concepts and Microsoft Office 2013 Illustrated. by J. Parsons, D. Oja, D. Beskeen
4. Computer Concepts and Microsoft office with Internet by Fact education solution Pvt. Ltd.

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Short Term Certificate Course

(3 Months)

Syllabus

For

45) Certificate Course onIntroductory Pathology

Unit- I :- Introductory Pathology Test

1. Most common pathology test.
2. Introduction of Pathology, Definition of Pathology
3. Study of Diseases Diagnosis.
4. Understanding of Pathology.
5. Terminology in Pathology.
6. Subdivisions of Pathology.

Unit- II:- Pathology Internship

Full blood examination and Hospital Internship-

1. Blood Group,etc. Rh factor
2. Hemoglobin concentration present in blood samples.
3. Malaria, Typhoid, Dengue, Evaluate any disease-causing anaemia or thalassemia, S. Bilirubin, SGPT/SGOT
4. Liver function test. –Blood Sugar Fasting .TSH (Thyroid Stimulation Hormone)Pregnancy Test, HIV Test

Recommended Books/References:-

1. Basic Pathology-10th Edition –Vinay Kumar **by** Robbins
2. Rapid review of pathology **by** Edward F.Goljan
3. Robbins and cortaran Review of Pathological by Klatt and kumar. **by** Klatt and kumar
4. Comprehensive Pathology(Practical and Techanical Book **by** Parmesgwar Goswam
   Instant Pathology **by** Neil R Borley and Bryan F.warren

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Short Term Certificate Course

(3 Months)

Syllabus
For
46) Certificate Course inIntellectual Property Rights(IPR)

Unit I: Introduction to Intellectual Property Rights

- Overview of Intellectual Property
- Patents
- Copyrights
- Trademarks
- Design
- Geo graphical indication

Unit II: Assignment and Case studies on Intellectual Property Rights

Recommended Books/References:-

1. Nithyananda, K V. (2019). Intellectual Property Rights: Protection and Management. India, IN: Cengage Learning India Private Limited.
2. Neeraj, P., &Khusdeep, D. (2014). Intellectual Property Rights. India, IN: PHI learning Private Limited.

Reference book:

3. Ahuja, V K. (2017). Law relating to Intellectual Property Rights. India, IN: Lexis Nexis.
4. E-resources:
5. World Intellectual Property Organisation. (2004). WIPO Intellectual property Handbook.
6. Retrieved from https://www.wipo.int/edocs/pubdocs/en/intproperty/489/wipo_pub
7. _489.pdf Reference

Journal:

8. Journal of Intellectual Property Rights (JIPR): NISCAIR Useful Websites:
9. Cell for IPR Promotion and Management (http://cipam.gov.in/)
10. World Intellectual Property Organisation (https://www.wipo.int/about-ip/en/)
11. Office of the Controller General of Patents, Designs & Trademarks(http://www.ipindia.nic.in)

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Short Term Certificate Course

(3 Months)

Syllabus

For

47) Certificate Course inIndian Medicinal Plants and Value-Added Products

Unit I: Medicinal Plants and Value-Added Products

- Indian Medicinal Plants and various guidelines
- Value addition and Entrepreneurship
- Startup opportunities.

Unit II: Case studies of drug discovery from plants

- Field Demonstration of few Medicinal
- Aromatic plant cultivation site companies manufacturing traditional medicines

Recommended Books/References:-

1. 13. Deore SL, Khadabadi SS, Baviskar BA. Pharmacognosy and Photochemistry-A Comprehensive Approach. Pharm Med Press, Hyderabad. 2nd Edition, 2018.
2. Hand Book of Ayurvedic Medicines with Formulations (a Complete Hand Book of Ayurvedic and Herbal Medicines). Engineers India Research Institute [EIRI]2006
3. Khadabadi SS, Deore SL, Baviskar BA. Experimental Phytopharmacognosy.Niraliprakashan,Pune. 1st Edition, 2019.
4. WHO Guidelines on Good Agricultural and Collection Practices (GACP) for Medicinal PlantsBy World Health Organization, WHO · 2003
5. WHO. Guidelines for Good Clinical Practice (GCP) for Trials on Pharmaceutical Products. World Health Organization, WHO Technical Series, No. 850, 1995, Annex 3.
6. WHO. Guidelines for the Assessment of Herbal Medicines. World Health Organization, 1991
7. WHO. Joint FAO/WHO Expert Committee on Food Additives: Evaluation of Certain Food Additives - WHO Technical Report Series, No. 952 - 69th Report. World Health Organization.2009.
8. WHO. WHO Expert Committee on Specifications for Pharmaceutical Preparations – WHOTechnical Report Series, No. 885 – 35th Report. 1999
9. WIPO Website-https://www.wipo.int/portal/en/index.html
10. World Health Organization Research Office for the Western Pacific. Research Guidelines forEvaluating the Safety and Efficacy of Herbal Medicines. 1993.
11. World Health Organization. Quality Control Methods for Medicinal Plant Materials. 1998
12. Indian patent office website-http://www.ipindia.nic.in/index.htm
13. Indian Pharmacopeia 2018, Ghaziabad: Indian Pharmacopeia Commission; 2018.

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Short Term Certificate Course

(3 Months)

Syllabus

For

48) Certificate Course inPatient Navigation

Unit I :- Patient Navigation

- Introduction to Disease Diagnosis
- Clinical Counseling
- Overview of Critical Care
- Patients Handholding
- Principles and operations of health system

Unit II:- Hospital Internship

- The project will give them a first-hand experience of solving the clinical issues in patient counseling and patient navigation.

Recommended Books/References:-

1. Secrets of Diagnosis by Dr. Goel Brij Bhushan
2. The Guidebook for Patient Counseling Book by Tracey S. Hunter
3. CURRENT Medical Diagnosis and Treatment 2022 (61st Edition), 28 October 2021 by Maxine A. Stephen J. McPhee Michael W. Rabow, Kenneth R. Mc Quaid
4. Combining Old And New: Naturopathy For The 21st Century Paperback –Import, 30 January 2000by Robert J. Thiel

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Short Term Certificate Course

(3 Months)

Syllabus

For

49) Certificate Course in General Duty Assistant

Unit - I: General Duty Assistant

- Hospital structure and services
- Roles and responsibilities
- Basics of anatomy and physiology
- Branches of medicine
- Common infections and tropical diseases
- Hepatitis and other viral disease (HIV and AIDS)
- Infection and the control
- General surgical and medical instruments
- Personal protective measures
- Waste management
- Sterilization procedures
- Managing patient hygiene
- Feeding the patient
- Assistance in medication
- Measuring vital signs
- Medical record documentation

Unit -II : Practicals on General Duty Assistant

- Management of specimens
- Medical lab testing procedures
- Care of dying and care of dead body
- Communication skills
- Healthy safe and secure environment

LIST OF PRACTICAL

1. To identify different sections and departments of the hospital.
2. To identify the different parts of the human body and their function.
3. To understand the safety measures that would prevent the spread of the disease.
4. To identify and use methods for proper waste disposal.
5. To understand the procedures for sterilization.
6. To identify the different methods of feeding the patient.
7. To identify the different types of instruments used in drug administration.
8. To identify various vital signs that needs to measure the pulse, B.P., berating rate, height & weight.
9. To identify the various procedures that is done for medical lab testing.
10. To understand the common emergency condition.

Recommended Books/References :-

1) Practical Zoology by Lal S.S., Rastogi Publication
2) Practical Biochemistry by Pummer L., McGraw-Hill
3) Endocrinology by Hadley, Pearson Education, 2007
4) Physiology by Guyton, Elsevier
5) Role of General Duty Assistant for Inpatient Care by NCERT Books, National Council of Educational Research and Training, 2018
6) General Duty Assistant by Handbook, NDC, Govt. of India, NDC,Govt. of India.

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Short Term Certificate Course

(3 Months)

Syllabus

For

50) Certificate Course inOffice Administration using Technologies

Unit - I:-Introduction to Computer

- Basics of Computer
- Operating Systems -Ms-Windows

Unit-II:- MS Office (Practical)

- Office Applications – I - Ms Office: Ms-Word
- Office Applications – II -Ms Office: Ms-Excel
- Office Applications – III -Ms Office: Ms-Access
- Office Applications – IV - Ms Office: Ms-Power Point
- Internet & Advanced Communication

Recommended Books/References :-

1. Fundamentals of computers - V. Rajaraman - Prentice- Hall of india
2. Microsoft Office 2007 Bible –John Walkenbach, Herb Tyson, Faithe Wempen,cary N. Prague, Michae lR.groh, Peter G.Aitken, and Lisa a. Bucki –Wiley India pvt. ltd.
3. The complete reference Linux - Richard petersen - Tata McGraw - Hill Edition
4. A Conceptual Guide to OpenOffice.org 3 - R. Gabriel Gurley- CreateSpace Independent
5. Publishing Platform, 2008
6. Introduction to Information Technology - Alexis Leon, MathewsLeon, and LeenaLeon,
7. Vijay Nicole ImprintsPvt. Ltd., 2013.
8. Computer Fundamentals - P. K. Sinha Publisher: BPB Publications
9. Operating System Concepts - by Abraham Silberschatz, Greg Gagne, and Peter Baer
10. Galvin Publisher: Wiley; 8 edition (July 29, 2008)
11. Computer Networking 6th ed. - J.F. Kurose and K.W. Ross - Pearson;
12. Data Communications and Networking - Behrouz A. Forouzan, 2nd Edition - McGraw
13. Hill Education;
14. Discovering the Internet: Complete -Shelly Cashman 4th Edition - Course Technology
15. Computer &; Internet Basics Step-by-Step - Etc-end the Clutter – Infinity Publishing
16. https://en.wikipedia.org
17. http://windows.microsoft.com/en-in/windows/windows-basics-all-topics

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Short Term Certificate Course

(3 Months)

Syllabus

For

51) Certificate Course in Plant Cultivation: Hydroponics and Bonsai Making

Unit-I Introduction

1.1 Plant Cultivation & Hydroponics

- Meaning. History of Hydroponics, Basic of Hydroponics, Terminology of Hydroponics.
- Types of plants that grow with hydroponics.
- Growing systems, Types of systems,Growing substrates, Types of growing substrates, Common hydroponics substrates.
- Nutrient Solution, Micro and Macronutrients, Secondary nutrients, additives, Nutrient solution maintenance.
- Advantages and disadvantages.
- Scope of hydroponics.

1.2 Bonsai Making Technique

- Introduction about Bonsai, History of Bonsai, Signs of good Bonsai.
- Basic proportions, Sunlight, watering and fertilizers, Bonsai Soil, Wiring, Pots for Bonsai.
- Insects and Diseases
- Care of Bonsai : before and after.
- Tools required for Bonsai.
- Advantages and disadvantages.
- Scope of Bonsai technique.

Unit-II :- Practical's on Plant cultivation & Hydroponics

Recommended Books/References :-

1. Ornamental Horticulture in India. Chadha, K. L. and Bhattacharjee (1986). ICAR, New Delhi. Korner,
2. Floriculture at Glance. Raj, D. (2004). Kalyani Publisher, Ludhiyana.
3. Floriculture in India. Randhawa, G. S. and Mukhopadhyay, A. (2010). Allied publishers private limited. New Delhi.
4. Miniature Bonsai. The Complete Guide to Super-Mini Bonsai Terutoshi Iwai
5. Bonsai: A Beginners Guide by Bonsai Empire & Walter Pall
6. The Complete Book of Bonsai: A Practical Guide to Its Art and Cultivation. Harry Tomlinson. (1995).
7. Hydroponics - A Beginners Guide To Growing Food Without Soil: Grow Delicious Fruits And Vegetables Hydroponically In Your Home: (Inspiring Gardening Ideas). Jason Johns.
8. How to Hydroponics by Keith F. Roberto.
9. Hydroponics In India: The Ultimate Beginners Guide to Building a Hydroponic System by Stephen Miller.
10. Hydroponics: The Essential Hydroponics Guide: A Step-By-Step Hydroponic Gardening

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Short Term Certificate Course

(3 Months)

Syllabus

For

52) Certificate Course in Introduction to Instructional Design

Unit - I:- Introduction to Instructional Design

1.1 Instruction and Learning

- Identify four major factors that influence learning.
- Describe the differences between Education, Teaching and Instruction.
- Outline three elements of the Instructional Decisions Model (IDM).

1.2 Curriculum Analysis

- Describe three domains of learning (cognitive, psychomotor, and affective).
- Apply 'Topic analysis' in your selected topic.
- Apply 'Procedure analysis' in your selected procedure.

1.3 Bloom's Taxonomy

- Identify the six levels of Bloom's Taxonomy.
- List essential and optional parts of a Learning Objective.
- Write measurable learning objectives using bloom's taxonomy guide.

1.4 Instructional Strategies

- Outline basic structure of a Team-Based Learning (TBL) module.
- Plan 'Initial Presentation' strategies for 'Facts', 'Concepts', 'Principle', and 'Procedures' in your selected topic.
- Plan 'Generative Strategies' for 'Facts', 'Concepts', 'Principle' and 'Procedure' in your selected topic.

1.5 Assessments

- Describe the relationship between an 'action verb' in a learning objective and the test item.
- Describe the difference between 'objective tests' and 'constructed response tests'.
- Evaluate multiple-choice questions using the checklist.

Unit - II:-Instructional Design Project

Recommended Books/References :-

Model and Workbook

1. *Instructional Decision Model (IDM), Thankachan (2020)*

Books

2. *Designing Effective Instruction*, 7th Edition, Morrison, Ross, Kalman & Kemp (2013).
3. *Instructional Design*, 3rd Edition, Smith & Ragan (2005)
4. Foundations of Learning and Instructional Design Technology (1st ed.). R. West (Ed.) (2016) Available at https://edtechbooks.org/lidtfoundations.
5. A practitioner's guide to instructional design design in higher education, Stefaniak, J., Conklin, S., Oyarzun, B., Reese, R. (2021).. EdTech Books. https://edtechbooks.org/id_highered
6. Instructional-design theories and models, Vol. IV: The learner-centered paradigm of education Reigeluth (2016)

Journals

7. Bloom, Benjamin S. (March 1968). "Learning for Mastery" UCLA - CSEIP - Evaluation Comment. Vol. 1.
8. Carroll, J. B. (1963). A model of school learning. Teachers College Record, 64, 723-733.

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Short Term Certificate Course
(3 Months)
Syllabus
For
53) Certificate Course inAdvanced Web designing using Content Management System

Unit - I: Advanced Webdesigning using Content Management System

1.1 Introduction to web designing,

Web designing tools, open source technologies, offline development, system configuration, domain name registration, server space registration, configuration of server, Software Development Life Cycle, Database technologies, static and dynamic website development, basics of HTML and CSS

1.2 Introduction to Content Management System,

Types of content management system, types of open source database technologies, offline website development vs. Online development, online web development resource working with Apache and MySQL.

1.3 Working with Wordpress,

Installing and configuration of wordpress, introduciton to XAMPP server, installation and configuration of XAMPP, selecting and installing wordpress themes, developing static website using wordpress and XAMPP, creating pages, installing plugins, adding text, images, videos.

1.4 Developing **offline website**,

Installing and customisation of wordpress themes, http and https security, Wordpess Admin dashboard and bar, desiging wordpress theme, adding plugins and widgets, responsive website, menu design, plugins security.

1.5 Developing online website using wordpress, online plugins and widgets selecting and installation, Menu Management, Widget Areas, Post Formats, Theme Settings, Theme Customizer, content selection for website, image selection and editing, developing forms, social media integration.

Unit - II: Practical: WORDPRESS using Content management with XAMPP server

1) XAMPP server setup
2) Offline Wordpress setup
3) Online Server and Wordpress setup,
4) Creating users,
5) Setting up wordpress theme,
6) theme customization,
7) create webpage,

Working with images, videos, audios, tables and text.

Recommended Books/References :-

1. Wordpress for Web developers : An introduction for web professionals, Stephanie Leary, Apress publication
2. Building Web Apps with WordPress: WordPress as an Application Framework , by Brian Messenlehner and Jason Coleman , O'Reilly Media
3. WordPress 3.5 Complete , Packt Publishing , by karol krol , Aaron hodge Silver
4. WordPress Web Application Development , Packt Publishing
5. Professional WordPress: Design and Development, by Brad Williams, David Damstra, and Hal Stern, Wrox Publication

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Short Term Certificate Course

(3 Months)

Syllabus

For

54) Certificate Course inCloths Bag Making

Unit -I:- Production Sewing & Products Value

- **Production Sewing**
  Production sewing is very different from sewing one-offs. You lay out the patterns — whether for cloth grocery bags, stuffed toys, or pajamas — very differently than you do a single item. A single item means waste fabric.

- **Products Value :**
  If a person needs a Cloth bags, 10 rupees is a small up-front cost for supermarket bags. 50 rupees for a cloth bags that will last a lifetime is not. Source your fabric wisely

Unit - II:-Practical on Cloths Bag Making

1. Cloth Bag Manufacturing Process
2. Cutting
3. Stitching And Finishing
4. Checking & Packing

Recommended Books/References :-

1. Aaker, D. A. &Mc Loughlin, D. (2010), Strategic Market Management: Global Perspectives UK: John Wiley& Sons
2. Dahlen, M., Lange, F. & Smith, T. (2010), Marketing Communications: A Brand Narrative Approach, UK: John Wiley& Sons
3. Fifield, P. (1998), Marketing Strategy, UK:Butterworth-Heinemann
4. Lamb, C., Hair, J. &McDaniel, C. (2011), Essentials of Marketing 11th Edition, USA: South-Western Cengage Learning
5. Kotler, P. & Keller, K. (2012), Marketing Management 14th Edition, USA : Pearson Education
6. Beebe, S., Mottet, T., & Roach, K. (2003), Training and Development : Enhancing Communication and Leadership Skills, Pearson
7. Bell, R. (2012), Coaching, Training &Developing the Retail Manager, CreateSpace Independent Publish.
8. Bersin. (2008), The Training Measurement Book :Best Practices, Proven Methodologies, and Practical Approaches (Essential Knowledge Resource), Jon Wiley & Sons WEBSITES 1. www.entrepreneur.com 2. ForEntrepreneurs.com 3. OneVest.com 4. Quora.com 5. Reddit : start-ups

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Short Term Certificate Course

(3 Months)

Syllabus

For

55) Certificate Course in Eco-Friendly Environment, Climate Change and Dwindling Natural Resources

Unit-I:- Earth-friendly living

1.1 Everyday food alternatives : millet-based foods, unprocessed foods, whole-grain foods,

1.2 Season-based function : processing of food during dry conditions, plant propagation during rainy season

1.3 Waste not: Want not – upcycle, recycle, repair, reuse; consider everyday use items vs. budget of time, effort and money

1.4 Unconventional use of natural resources: solar power to create biomass, grow plants with water from hand-wash

1.5 Thinking outside the box for alternatives to non-renewable resources: bicycle vs. 2-wheeler

1.6 Guidance for Outreach project: designing and scheduling a talk, delivery of content by poster or speech at local Anganwadi or school or club or gathering

Unit -II: Final project (Earth-friendly living)

Recommended Books/References :-

1. Environmental science for a changing world: Susan Karr, Anne Houtman, Jeneen Interlandi(Importance of earth-friendly living P. Chapter 1)
2. Ashish Kothari and K. J. Joy (eds), 2017, Alternative Futures: India Unshackled,AuthorsUpFront, New Delhi. Anna Swaraj: A Vision for Food Sovereignty and Agro-EcologicalResurgence in P.228-249https: //www. globaltapestryofalternatives.org/ _media/publications:en:alternative _futures_india_unshackled.pdf#page=250
3. Developing seasonal calendar https://www.spring-nutrition.org/sites/default/files/publications/trainingmaterials/session-5-developing-seasonal-calendar.pdf
4. Seasonal produce calendar: https://ipad.fas.usda.gov/rssiws/al/crop_calendar/us.aspx
5. Reducing waste https://www.epa.gov/recycle/reducing-waste-what-you-can-do
6. The five Rs of waste management https://www.circlewaste.co.uk/2020/09/16/what-are-
7. the-5-rs-of-waste-management/
8. Renewable resources - what can I do? https://extension.psu.edu/renewable-and-
9. nonrenewable-resources
10. Fruit bouquets : https://www.youtube.com/watch?v=xK6biXNrsaE
11. Outreach planning : https://www.examples.com/business/outreach-strategy-plan.html

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Short Term Certificate Course

(3 Months)

Syllabus

For

56) Certificate Course in Professional Communication Skills for Employability

Unit - I :- Professional Communication Skills

- **Listening:** Techniques of effective listening, Listening and comprehension, Barriers to listening
- **Speaking:** Pronunciation, Enunciation, Vocabulary, Fluency, Common Errors
- **Writing and different modes of writing:** Letter, E-mail, paragraph story, ideas writing.
- **Interview Skills:** Preparation and Presentation Do's and Don'ts, open and closed ended questions
- **Group Discussion Skills:** Methods, Procedure, Simulation, Common Errors.

Unit - II:-Practical : Exploring Career Opportunities :

- Knowing yourself – personal characteristics
- Knowledge about the world of work
- Requirements of jobs including self-employment
- Sources of career information
- Preparing for a career based on their potentials and availability of opportunities

Recommended Books/References :-

1. Cheryl Benz and Kara Dworak,(2000), Tapestry,heinle and Heinle,Boston Cruttenden, Alan. 2008. Gimson's Pronunciation of English. Arnold, London
2. Crystal, David. 2002. The English Language. Penguin, London
3. Cook, Vivian. 2004. The English Writing System. Arnold, London
4. G. Radhakrishna Pillai (2004),Written English For you,Emerald publishers, Chennai
5. G. Radhakrishna Pillai(2003), English for Success, Emerald publishers, Chennai
6. Kamlesh Sadanand and Sushila Punita (2008), Spoken English, A Foundation Course, Orient Longman, Hyderabad.
7. Kreidler, Charles W. 1997. Describing Spoken English. London: Routledge
8. Sen Madhucchanda (2010), An Introduction to Critical Thinking, Pearson, Delhi
9. Silvia P. J. (2007), How to Read a Lot, American Psychological Association, Washington DC

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For

57) Certificate Course in Proof Reading(मुद्रितशोधन)

Unit - I :- 1. 1प्रस्तावना

अ) मुद्रितशोधनआणिप्रकाशनक्षेत्र

ब) मुद्रितशोधनाचेमहत्त्वआणिव्यवसायाच्याकिंवानोकरीच्याविविधसंधी

क) भाषाआणिमुद्रणकलायांचासंबंध

ड) मुद्रितशोधनअभ्यासक्रमाचीआवश्यकता

1.2) लेखनविषयकनियमांचाअभ्यास

अ) मुद्रितशोधनातलेखनविषयकनियमांचेमहत्त्व

ब) लेखनविषयकनियमांचा 18 नियमांचाअभ्यास

Unit - II :- 2.1 मुद्रितशोधनकसेकरावे?

अ) मुद्रितशोधनकरण्यासाठीचीपूर्वतयारी, मुद्रितशोधनाच्याखुणांचातक्ता

ब) प्रत्यक्षमुद्रितशोधनकसेकरावे, याचाअभ्यासवसराव

क) समारोप

2.2) अंतर्गतमूल्यमापन

अ) गृहपाठ - गृहपाठविषयदेणेआणिसादरीकरण

ब) मौखिकपरीक्षा

Recommended Books/References :-

1) व्यावहारिकमराठील.रा. नाशिराबादकर, प्रकाशक, मोरेश्वरफडके, तृतीयआवृत्ती 1989

2) व्यावहारिकमराठी, प्रकाशपरब, प्रकाशक - रमेशउदार , प्रथमआवृत्ती - जून 1989

3) उपयोजितमराठीडॉ. ग. ना. जोगळेकरकृतज्ञताग्रंथ, संपादक - डॉ. केतकीमोडक, संतोषशेणई, सुजाताशेणईपद्मगंधाप्रकाशन, प्रथमावृत्ती: 14 ऑगस्ट 2012

4) व्यवहारिकमराठी - डॉ. लीलागोविलकर, डॉ. जयश्रीपाटणकर, स्नेहावर्धनपब्लिशिंग, हाऊसपुणे - 2004

5) उपयोजितमराठी, डॉ. संजयसंभाजीलांडगे, दिलीपराजप्रकाशन - प्रा. लि. पुणे - 2011

6) उपयोजितमराठीवप्रसारमाध्यमांचीकार्यशैली, संपादक - डॉ. संजयसांगळे, डायमंडपब्लिकेशन -पुणे

7) मराठीशुद्धलेखनप्रदीप - मोरावाळिंबे, नितीनप्रकाशनपुणे 2, पुनर्मुद्रणएप्रिल - 2012

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For

58) Certificate Course inRelevance of Mahatma Gandhi's Thoughts

Unit :- I :-Nature and Background of Mahatma Gandhi's Non Cooperation Movement

- Mahatma Gandhi's concept of Gram Swarajya -
- Concept of Ram Rajya, Tools of Ram Rajya, Integration through village prosperity, Rural Administration System, Village Education, Rural autonomy and self-reliance
- Nature and Background of Mahatma Gandhi's Non-Cooperation Movement -
- Mahatma Gandhi's Philosophy of Satyagraha, Background of Mahatma Gandhi's
- Non-Cooperation Movement, National Achievements of Mahatma Gandhi's Non-
- Cooperation Movement, Evalution of Mahatma Gandhi's Non-Cooperation Movement

Unit :- II:- **Mahtma Gandhi's thoughts on Panchayat Raj System & non-violence**

- Mahatma Gandhi on Panchayat Raj System -
- Gandhiji's position on decentralization A three-tier plan 73rd and 74th Constitutional
- Amendment Evaluation of Panchayat Raj
- Mahtma Gandhi's thoughts on non-violence -
- Meaning, types and characteristics of non-violence Ahimsa Paramo Dharma Ahimsa is humanity

Recommended Books/References :-

1. भारदेबाळासाहेब [**ग्रामक्रांतीचीदिशा**] महाराष्ट्रगांधीस्मारकनिधी, गांधीभवन, कोथरूडपुणे 38-
2. जैनमाणक**गांधीकेविचारोंकी21 वींसदीमेप्रासंगिकता**संस्करण2010-
3. डॉ. पवारजयसिंगरावभाऊसाहेब [**भारतीयस्वतंत्रचळवळीचाइतिहास**, निरालीप्रकाशनपुणे
4. लोटेरा.ज. [**भारतीयराजकीयविचारवंत**] पिंपळापुरेबुकडिस्ट्रीब्युटर्स, नागपूर, जून2014-
5. डॉ. भोळेभा.ल. [**आधुनिकभारतातीलराजकीयविचार**] पिंपळापुळेपब्लिशर्स, नागपूर, 2014-

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Syllabus

For

59) Certificate Course inAuditing and Taxation

Unit – I:- Auditing

- Introduction: Meaning of auditing, internal check system, audit programme routine checking and vouching.
- Company Audit: Company Auditor, appointment, power, duties and liabilities.
- Various Institutional Audit: Audit of banking, insurance and Educational institutions.

Unit – II :- Taxation

- Heads of Income :Computation of income from salary and income from other sources & house property.
- Assessment Procedure & Basic IT Concept : Return of income, e- filing procedure, feeling the form No. 16, Tax planning, Advance Tax, PAN, TDS, TAN, Income Tax Refund

Recommended Books/References :-

1. A Hand Book Of Practical Auditing : Tandon, S Chand & Com, New Delhi
2. Accounting And Auditing Standards : Thakor, Kumudini Horizon Press, Jaipur, 2013
3. Auditing A : Shukla , Navayug SahityaSadan, Agra ,1967
4. Auditing – Ukhalkar, Pimplapure Prakashan, Nagpur
5. Income Tax - Ukhalkar, Pimplapure Prakashan, Nagpur
6. Elements of Income Tax -Gupta,Rupram -Mira Prakashan, Agra
7. Elements of Indian Income – Tax-:- Lakhotia, AshaPublishing, Pune
8. Income Tax : Mehta -ShriKuberP ublishing House ,Mumbai
9. Income Tax : Law And Accounts:- Malhotra, Sahitya Bhawan, Agra
10. Income Tax : Law And Practice :- Chandra, Frank Bros. &Co.
11. Income Tax Law And Practice :Daur , Kalyani Publication, New Delhi
12. Principles of business Taxation by Christopher Jones

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Short Term Certificate Course

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Syllabus

For

60) Certificate Course inAquarium Setup and Maintenance

Unit – I :- Theory : Aquarium Setup and Maintenance

- General Consideration of Aquarium
- Home Aquarium design
- Health benefits of keeping an Aquarium
- Aquarium fishes
- Aquarium Plants
- Home Aquarium setup
- Breeding of Aquarium fishes
- Common Aquarium Fish illnesses: Prevention, Cause and Cure.
- An Aquarium business
- Best Aquarium from waste.

Unit – II :- Practical on Aquarium Setup and Maintenance

- Field visit for observational of home and public Aquaria.
- How to prepare and maintain the Aquaria.

Recommended Books/References:-

1. Aquarium fidh Keeping by Prof. S.S. Patole , Dr. V.R.Borane, Dr. R.K. Petare – Published by Prashant Publication.
2. Concept of Aquarium Fish keeping by – Dr. Sanjib Saha Published by – Techno world.
3. Home Aquarium and ornamental fish culture – K.V. Jayshree, C.S. Thara Devi, N.Arumugam.
4. Modern concept of an Aquaria – Dr. P. Dhabe-Khilare published by Medha publication ISBN-987-83810-95-6
5. Shobhiwant Mashanchi Olak Wa Matsyavevsay Sandhi- Dr. P. Bhabe Khilare published by Govt. of Maharashtra, department of fisheries, Akola.

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Syllabus

For

61) Certificate Course inInvestment Management Consultancy

Unit – I :- Investment

- Investment Meaning
- Objectives of investments
- Characteristics of investment
- Factors assisting to investment
- Saving & Investment.

Unit – II :- Assignment

- The Assignments will given to study different avenues of investments, Participants are required to collect information from Investor Broker, Investor analyst or private investment companies.

Recommended Books/References:-

1. Investment Management by Preeti Singh
2. Investment in Gold by Everything you know before starting investment.

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Syllabus

For

62) Certificate Course inComputer Fundamentals & Web services using Internet

Unit I :- Computer Fundamentals

- Computer, Various generations of Computers, Functions Hardware & Software of computer, Operating System, function of operating system, System Software, Application Software, Handling of Computer, Functions of Computer.

Unit II :- Practical on Computer

- **MS-Word :-**

MS-Office, Features of MS-Office, WordPad, Notepad, Hardware requirements, Installation Process, MS-Word, Features of MS-Word, Page Formatting in MS-word, Document Preparation, Various function of MS-Word.

- **MS-Excel :-**

Introduction to MS-Excel, Types of sheets, Features of MS-Excel, Preparation of worksheet, Formatting of worksheet, Formulation in MS-Excel, Data Entry in MS-Excel, Various functions of MS-Excel.

- **MS Power Point :-**

Introduction to PowerPoint, Usage of PowerPoint, PowerPoint template, making ppt (PowerPoint presentation), Slide preparation, formatting slide, Special Effects, Transition, Animation Effect and various function of PowerPoint.

- **Internet :-**

Introduction to Internet, Features of Internet, Advantages of Internet, What is mean by Network, Types of Network, Hardware & Software required for Internet, ISP, Mechanism of Internet, Internet Enabled services, WWW, Designing Webpage, HTML concept, Domain Name, Web Browsing, Functions of Web Browser, Search Engines.

- **Web Services :-**
- Introduction to web services, E-mail, Types of E-mail Account, Advantages of E-mail, Working with E-mail, Outlook Express, E-Commerce, Video Conferencing, Various Online conferencing platform, Social Networking, Types of Social Networking, Various Web services, Advance features of Web services.

Recommended Books/References:-

1. Computer Fundamental by V.Rajaraman
2. Computer Fundamental by Sinha P.K., Goyal V.K.
3. MS-OFFICE(PHI)
4. MS-OFFICE(TMH)
5. I WWW by Dr. Kale, U.S.
6. Information Technology & Business Data processing by Dr. Kale U.S.

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Syllabus

For

63) Certificate Course inFabric Block Printing and Painting

Unit – I :- Introduction of Fabric Block Printing and Painting

- Scope of Fabric printing and Painting in Cottage industries at present era
- Entrepreneurial aspect of industries
- Principles of Cottage Industries.

Unit – II:- Practical and class work project

- Marble or Ebru Printing technique
- Fabric Painting
- Fabric printing
- Block Printing – Application on Fabric.

Recommended Books/References:-

1. Block printing : Alap Louise Alartin.
2. Indian Textile : Theme and Hudson.
3. Design from Indian textiles Blocks print Chippa : Aparna Gawande
4. A for Ajrakh A-Z for block printing : Nina Sabnani
5. Block Printed of textile of India – Imprint of Culture: Eiluned Eswards
6. Turkish Art of Marbelling : Gozen Yayinlari

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Syllabus

For

64) Certificate Course inRepair and Maintenance of Domestic Electric Appliances

Unit I : Introduction to electricity:

- Electrical Circuit, Earthing, Simple house wiring circuit, Making electrical connection &testing, study, connection & testing of electrical motors and pumps, Earthlings, wiring types, selection of cable, circuit breakers, junction box and contactor installation.
- General safety and electrical safety, Safety in repair of Home Appliances, repair all kinds of electrical home appliances Safety precaution House Wiring. Ohms law, Kirchhoff's law and Calculations of power
- **Component study:** Introduction of Electronic Choke & CFL, Familiarization with different Electronic components used like Resistors, capacitor, transistor, diode and choke coil. Interpret the components as per circuit and laying the components on PCB.

Unit II:- Identification and Testing:

- Testing iron coil and connection, Identification of phase and neutral in single-phase A/C. supply Test a single-phase transformer for its continuity and insulation. Introduction of AC/DC motor Procedure followed for re-winding of all kind of electric motors like single phase A./C. motors, pump
- **Practical**
  1. Use of Multi meter to check voltage, current and resistance
  2. Understand drawings, circuit diagrams and electrical code specifications of the electricalEquipment and gadgets.
  3. Study of components Transistors, Diodes and Resistors
  4. Soldering of winding wires, cables and their joints in electrical gadgets
  5. Study of AC and Dc motors
  6. Study the continuity of supply in the device.
  7. Study Choke coil and transformer.
  8. Demonstration on preventive maintenance, regular cleaning, oiling, greasing of household Gadgets like fans, cooler, water pump motors.
  9. Maintenance and repair of electrical equipment's like- iron, toaster, induction-plate & cooker.
  10. Maintenance and repair of electrical equipment's like- mosquito mat, fan, electric iron, cooler, Water pump etc.

Recommended Books/References :-

1. 1 A/c and D/c motor winding by Hopwood, H.
2. Alternating current motor windings by Anawani
3. Basics shop practical electrical engineering by Jagdishlal
4. Centrifugal pumps and blowers in M. K. S. units by Allanlyter
5. Electric motor and generations by Deshpande, M. V.
6. Electric motor applications and controls by Anawani, I. M.
7. Electrical appliances theory and repair by Kakkar
8. Electrical equipment operation and maintenance by Arora, B. Das
9. Electrical workshop eng. and practical by Tatpunje, Dipak
10. Elements of electrical technology by Kohali, D. R.
11. Labor Courses in ele. machiner's by Faliya, R. K.
12. अपेक्षित तोंडी प्रश्नोत्तर शहा, प्रकाश
13. आधुनिकविद्युतशास्त्र भाग १ शहा, प्रकाश
14. आधुनिकविद्युतशास्त्र भाग २ शहा, प्रकाश
15. आर्मेचर रिवाईडींग जोशी, जगदीशचंद्र
16. इलेक्ट्रॉनिक्स प्रोजेक्ट्स जोशी, व्ही. बी
17. इलेक्ट्रिक गाईड शहा, पी. पी.
18. इलेक्ट्रिक डायग्राम आणी, एम. एल.
19. इलेक्ट्रिक मोटर बाईडींग एन्ड रिपेअर, गोखले, श्री. पु.
20. इलेक्ट्रिक वायरिंग डायग्राम्स, क्षमत्तल, के . के .
21. घरगुती क्षिद्युत उपकरणे अभ्यंकर, अनिरुद्ध यो.
22. घरगुती क्षिद्युत उपकरणे हाताळणी दुरूस्ती निगा शेकटकर, मु. र.
23. डोमेस्टीक अप्लायन्सेस भाग १, लाल, के . सी.
24. मोटर रिवाईडींग रेडीओ अँड टेलीविजन थ्योरी
25. वायरमन, शहा, प्रकाश
26. विद्युत अभियांत्रिकी परिभाषा कोश, शहा, प्रकाश
27. विद्युत मोटारीची निगा, दुरूस्ती पिटके, श्याम

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For

65) Certificate Course inCosmetology

Unit –I : Overview of Cosmetology

- Introduction to cosmetics :-
  1. Introduction to basic Cosmetic formulation
  2. Oil
- **Analysis of basic raw material**
  Analysis of oil and fat as per BIS / official Book (Staric oil/ Lanolin / Bee wax/ Caster oil and oliveoil)
- **Study of common perfumes used in cosmetics:**
  1) Rose
  2) Lavander
  3) Jasmine
  4) Mogra
  5) Kewada
- **Study of principles from Herbs for beauty care:**

1) Henna, 2) Aloe, 3) Shikakai, 4) Tulsi, 5) Turmeric

- **Introductory study of Aroma therapy**
  1) History of Aroma therapy
  2) Importance of Aroma therapy
  3) Essential oils used for Aroma therapy
  4) Common Herbs used for Aroma therapy

Unit –II :- Practicals on Cosmetology

- Project: The project work shall be based on above syllabus.

Recommended Books/References :-

1. Text Book of Cosmetology- Harrys
2. W.A.Poucher: Perfumes, Cosmetics &; Soaps, Vol. I,II,III- Chapman & Hall
3. Beauty and Skin Care- Indu puri
4. A guide for Health & Beauty therapeutics- Gaynor Winyard
5. Manufacture of Perfume, cosmetic and Detergent- Giriraj Prasad
6. Perfume, flower and essential oil industries- S. B. Shrivastava
7. Cosmetics: Science & Technology- Sagrin

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For

66) Certificate Course inUrdu Language

Unit – I :- Overview of Urdu Language

Tamheed -
A) Tarjume yani kya ?
B) Tarjume ka fann kise kahete hai.
C) Fann-e- tarjuma nigari ki tareef bayan kijiye.
D) Fann-e- tarjuma nigari mein kamiyab tarjume ke liye kya shart hai.
Tarjume Ki Qismein-

A) Tarjume ki kitni qismein hain.
B) Tarjuma nigari ke fann per roshni daliye.
C) Azad tarjuma kise kahete hain.
D) Lafzi tarjuma kise kahete hain.

Unit –II :- Urdu Language Rules

Urdu Mein Tarjume Ki Riwayat -
A) Urdu mein tarjume ki rewayat per note likhiye.
B) Tarjume ki ahmiyat aur ifadiyat per roshni daliye.
Tarjume Ki Zaroorat –O- Ahemiyat -
A) Tarjume ki zaroorat kis wajah se hai.
B) Tarjume ki kya ahmiyat hai.
Tarjume Ke Usool -
A) Tarjume ke kya usool hai.
B) Tarjume ke usool ki kitni kismein hain.
Tarjume Ke Masael-
A) Tarjume ke kya masael hain.
Tarjume Ke Faide Aur Nuksan –

Recommended Books/References :-

1. Qawaide urdu __Maulwi Abdul Haq
2. Nigaristaan ___Munsif khan
3. Urdu zubaan ki panch kitaben _ Maulwi Mohammad Ismail
4. Urdu zabaan ka qaida___ Maulwi Mohammad Ismail.

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For

67) Certificate Course in Persian Language

UnitI: Introduction of the Course

- Importance of Composition
- Types of Communication
  - Verbal
  - Non-Verbal
  - Styles of writings
    - Nastalique
    - Shikastah
    - Nazneen

Unit II: Types of Writings

- **Essay Writing**
- **Letter writing**
  - Official Letter
  - Unofficial Letter
- **Report Writing**
  - News paper Event Report
  - Spot Visit Report
- **Dialogue Writing**
- **Writing formats**

Recommended Books/References :-

1. Game Awwal Reza Sahrai . Faize Marsoos, Dawood Maliklu Offline
2. Amozish Zubane Farsi By Dr . Zargamiyan Vol.I,Vol,II ,VOl, III
3. Farsi Bi Aamozeem Vol. I by Behrooz Mahmoodi –Bakhtiyari Online Academiya.
4. Farsi Bi Aamozeem Vol. II by Behrooz Mahmoodi – Bakhtiyari Online Academiya.
5. Farsi Bi Aamozeem Vol III by Behrooz Mahmoodi – Bakhtiyari Online Academiya.
6. Amozish Zuban E farsi Vol. I & II by Dr. Syed Tanveruddin Saif Khudnumai Off line
7. FARSI Bolchal Dr. Chaudhri Wahaj Ahmad Ashraf.

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For

68) Certificate Course inEnglish Language for Competitive Exams

Unit I: Introduction

- Introduction to Competitive Exams
- Need of advanced English in present era
- Difference between basic English and advanced English
- How to overcome the fear of English

Unit II: Advanced English for Competitive Exams

- Advanced Grammar for Competitive Exams
- Advanced Vocabulary for Competitive exams
- Advanced Writing for Competitive exams
- Advanced reading for Competitive exams

Recommended Books/References :-

1. Advanced English usage by sitalaxmi T.K.
2. Advanced communication in English by Mohan, Krishna
3. Advanced communication skills in English byDas, Savyasachi
4. Advanced English grammar by Hewings, Martin
5. Advanced essays by Bhatia, M. P.
6. Advanced essays by Malhotra, R. K.
7. Advanced essays for college and competitive exams by Ahuja, B. N.
8. Advanced methods of English writing by Raghupathi, Seema
9. Advanced skills of essay writing by Raghupathi, Seema
10. Advanced spoken English skills by Banerjee, Latika
11. Advanced writing skills and English grammar by Raghupathi, Seema

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For

69) Certificate Course inMedicinal Plant Traditional uses and Career Opportunities

Unit - I: Role of Medicinal Plants in Human Life

- Importance of Plants in Ayurveda: History and Current World
- Life Style Diseases and Home remedies
- Immunity and medicinal Plants
- Use of wild vegetables and medicinal plants by Tribal community
- Herbal Technology
- Types of Medicinal Plants (Vegetables, Fruits, Spices, Grasses etc.)

Unit - II: Medicinal Plants: Description and Medicinal Uses

- Moringa oleifera
- Rauvolfia serpentina
- Murraya koenigii
- Bacopa monnieri
- Zingiber offincinale
- Aegle marmelos
- Adhatoda vasica
- Gloriosa superba

Recommended Books/References :-

1) Indian Ethnobotany: Emerging Trends, A. K. Jain (2016), Scintific Publisher, Jodhpur. PP 331
2) Medicinal Plants, S. K. Jain (2006), National Book Trust India pp 216.
3) Bibliograpgy of Indian Ethanobotany, S. K. Jain (2002), Scientific Publisher India, Jodhpur, 144
4) Glimps of Indian Ethanobotany, S. K. Jain (1981), oxford and IBH Publication, New Delhi, 365
5) Handbook of Ayurvedic Medicinal Plants, L. D. Kapoor (2000), Herbal Reference Library
6) Indian Medicinal Plants. A Compendium of 500 Species. Vol.1; Edited by P. K. Warrier, V. P. K. Nambiar and C. Ramankutty

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For

70) Certificate Course in Health, Safety and Environment

Unit I: Introduction to Health Safety and Environment

- Industrial Hazard Identification and Preventive Technique,
- An understanding of the ISO 14001 (Environmental Management System)

Unit II: Practical, Industrial visit and Project Work

- Industrial Visit
- Project Work

Recommended Books/References:-

1. Industrial safety management By: L.M. Deshmukh, Publishers: Tata Megraw Hill, New Delhi.
2. Industrial safety health and environment Management system By: R.K. Jain &; Sunil S. Rao, Publishers: Khanna Publishers.
3. Design of Water Based Fire Protection Systems By: Robert M. Gagnan, Publishers: South Western Dujebury
4. Electrical Safety, Fire Safety Engineering and Safety Management By: Rao.S /Saluja H.L, Publishers: Khanna Publishers.
5. Safety Management in The Construction Industry Publishers: A Guide Published by National Institute of Construction.
6. Hand Book Of Fire and Explosion Protection Engineering By: Dennis P Nolan, Publishers: Crest Publishing House.
7. Environmental Pollution Control By: Rao CS, Publishers: New Age International Pvt. Ltd Publishers.
8. Risk assessment- A Practical Guide, 1993, Institution of Occupational Safety and Health, United Kingdom.

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Department of Lifelong Learning & Extension

Short Term Certificate Course

(3 Months)

Syllabus

For

71) Certificate Course inCyber Forensic and Related Law

Unit - I: Basics of Computer and Cyber Forensics

- Fundamental of Cyber Crime and Related Law,
- Basics of Network Security,
- Intellectual Property Rights in Cyber Space

Unit - II: Practical's based on Computer and Cyber Forensics

- Fundamental of Cyber Crime and Related Law,
- Basics of Network Security,
- Intellectual Property Rights in Cyber Space Practical on it

Recommended Books/References:-

1. Computer Forensics: Computer Crime Scene Investigation by John R. Vacca
2. Computer Fundamentals by Anita Goel, Pearson India, ISBN: 9788131770948
3. Computer Fundamentals: Concepts, Systems &; Applications- 8th Edition by Priti Sinha and Pradeep Sinha, BPB Publication
4. Chad Steel, "Windows Forensics", Wiley, 1st Edition, 2006.
5. Robert M Slade, "Software Forensics: Collecting Evidence from the Scene of a Digital Crime", Tata McGraw Hill, Paperback, 1st Edition, 2004.
6. Practical windows Forensics by Ayman Shaaban, Konstantin Sapronov
7. Anton Chauvakin, Kevin Schmidt, Christ Phillips, Logging and Log Management:
8. Authorative Guide to understanding the Concepts Surrounding Logging and log Management, Syngress, 2012

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Short Term Certificate Course

(3 Months)

Syllabus

For

72) Certificate Course inSericulture

Unit - I:- Introduction of Sericulture.

- Introduction to sericulture:
- Cultivation of food plants.

Unit - II:- Rearing of silkworms & Harvesting.

- Rearing of silkworms.
- Equipment's or requirements for rearing.
- Harvesting and processing of cocoons.

Recommended Books/ References :-

1. Secrets of Diagnosis by Dr Goel Brij Bhushan
2. The Guidebook for Patient Counseling Book by Tracey S. Hunter
3. CURRENT Medical Diagnosis and Treatment 2022 (61st Edition), 28 October 2021 by Maxine A. Stephen J. McPhee Michael W. Rabow, Kenneth R. Mc Quaid
4. Combining Old And New: Naturopathy For The 21st Century Paperback Import, 30 January 2000by Robert J. Thiel

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Short Term Certificate Course

(3 Months)

Syllabus

For

73) Certificate Course inHuman Rights

Unit - I:- Concept, Meaning, Nature, Origin & Development of Human Rights

1. Meaning & Nature of Human Rights
2. Origin & Development of Human Rights
3. Human Rights A- Universal concept
4. Natural Law and Natural Rights
5. Role of Law

Unit - II:- Human Rights –National/ International Perspective

1. Universal Declaration of Human Rights.
2. International Covenant on Civil & Political rights
3. National Human Rights Commission of India.
4. Seminar

Recommended Books/ References :-

1. Human Rights Activation & Role of NGO'S, Rajat Publications New Delhi2000, Ashish Chandra.
2. Human Rights, ISHA Books, Delhi 2000, Prakash Talwar.
3. Human Rights, Allahabad Law agency Publication, 1999, Dr. U. Chandra.
4. National Human Rights Commission of India, Atlantic Publications Distributers 1999, Arun Kumar Palai.

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Short Term Certificate Course

(3 Months)

Syllabus

For

74) Certificate Course in Tourism: Historical Places of Buldana District

Unit I : Background of Historical Places in Buldana District

- S, Raja, Jijau Birth Place as inspiration For Hindavi Swarajya.
- Concept of Secularism and Justice, equality, Frantarnity.
- Lonar Lake,.as scientific, Biological, Geographical, international Importance
- Hemad Panthi Temples, a historical review among various places of Buldana District

Unit II: Background of Historical Places in Buldana District

- Ajanta Caves,Historical Heritage of culture.
- Dongarsevli, Mahadev Temple, historical importance
- Vivekanand Aashram Hiwara.
- Kanchan icha Mahal, Mehakar

Recommended Books/ References :-

1. Maharashtra Tour & Tourism by Dr.yogesh Korde
2. Maharashtra Tourism by Dr.Sayajirao Deshmukh
3. Tourism of Fourt by Dr.Amit Borle
4. History of Maratha by S.G.Kolaharkar
5. Rashtramata Jijau by Dr.Vikas Bahekar
6. Lonar Lake by Shrikant Watawe
7. Kanchani Mahal by R.J.Dipak
8. History of Sindhkhed Raja by Purushottam Khedekar

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Short Term Certificate Course

(3 Months)

Syllabus

For

75) Certificate Course inStudy and Identification of Electronic Components and Measuring Instruments

Unit - I: Study of identification of basic components

- Study of identification of basic components Resistor, Capacitors, Inductors, Transformer, Diode, Transistors, LED and IC
- Study of basic instruments voltmeter, multi range Voltmeter, Ammeter, Multi range Ammeter, Ohm Meter, and Multi meter.
- Study and Application of CRO, CRT, and AFRF function generator, Dual power supply and IC regulated power supply.
- Study of Heart Beat meter, Diastolic and Systolic Blood pressure, Oximeter and Stethoscopes

Unit - II:Practical on Study and Identification of Electronics Components and Measuring Instruments

- Study and Identification of Electronics components and testing using multimeter.
- Study of measuring instruments, Voltmeter, Ammeter and Multimeter and Ohm meter
- Study of CRO and Measurement of Amplitude, frequency and phase of signals.
- Study and measurement heart beat and blood pressure with help of oximeter and Stethoscope.

Recommended Books/ References :-

1. Basic electronics by B.L.Thereja (S.Chand and Company)
2. Digital and Analog technique by Navneet, Kale and Gokhale
3. Element of electronics by Bagde and Singh (S.Chand and Company)
4. Principles of electronics by V.K.Mehta
5. Introduction to digital electronics by Mohinder Singh
6. Electrical and electronics measurement and Instrumentation by A.K.Sawhney
7. Text book of Electrical Technology by B.L.Thereja

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Short Term Certificate Course

(3 Months)

Syllabus

For

76) Certificate Course in Yoga and Meditation

UnitI:Yogic Therapy through Traditional Understanding

- Asanas
- Pranayama
- Kriyas
- Bandhas and Mudras
- Yogic Therapy

UnitII: Asanas , Pranayama

- Theprojectwillgivethemafirst-handexperienceofsolvingtheclinicalissuesinpatientcounselingandpatientnavigation.

Recommended Books/ References :-

1. Introduction to Physical Education, Exercise Science, and Sport, Lumpkin, Angela, McGraw-Hill Education
2. My First Gymnastics Class Capucilli, Alyssa Satin Simon and Schuster
3. Sports & Exercise Nutrition William D McArdle, Frank I Katch, and Victor L Katch Lippincott Williams
4. Measurement and Evaluation in Human Performance James R. Morrow Human Kinetics
5. Norms for Fitness, Performance, and Health Jay Hoffman Human Kinetics

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Short Term Certificate Course

(3 Months)

Syllabus

For

77) Certificate Course in Rahat (Disaster Management)

Unit - I :- Over view of Disasters

- **Disasters :-**

a) Meaning, Definition, Nature, Scope and Types of Disasters.
Review of the global and national current disasters

- **Risk Assessment and Vulnerability Analysis :-**

a) Risk : Concept, Elements, Reduction and Analysis
b) Observation and perception of vulnerability- Vulnerability identification, types and dimensions
Vulnerability: Social factors and economic factors.

- **Administration of Disaster Management :-**

a) Disaster Management Act, 2005
b) National Disaster Management Authority (NDMA)
c) National, State, District Disaster Management Plan Including livestock management

Unit - II :- Recovery, Rehabilitation and Reconstruction from Disaster

- **Disaster Preparedness and Response**

a) Disaster Preparedness : Concept, Significance, Measures
b) Disaster Preparedness Plan, Role of Different Organizations/Institutions
c) Disaster Response : Coordination, Psychological Intervention : Response and Management
d) Disaster Impact Assessment, Resource Mobilization & channelization of resourcesd

- **Recovery, Rehabilitation and Reconstruction :-**

a) Concept, Meaning, Types
b) Ethical Practices & Role of Search and rescue team in Disaster Management
c) Ethical Practices & Role of Social Media in Disaster Management
d) Ethical Practices & Role of People and Non-government organization, Industrial sectors/Clubs/Trusts, etc.
e) Ethical Practices & Role of Social Worker/Volunteer in Disaster Management

- **Demonstration & Required Skills ;-**

Demonstration on fire, earthquake, lightening, flood etc.

a) School Safety
b) Hospital Safety
c) Official Safety
d) Public Places (bus stand, mall, market etc.)
e) Family/Households Safety
f) Livestock Safety

Training Camp (Three Days)

Recommended Books/ References :-

1. Introduction to Disaster Management P. C. Sinha, Anmol Publications Pvt. Ltd. New Delhi110002.
2. IFRC, 2005 World Disaster Report.
3. Birnabaum, F, Coplon, J and Scharff, T 1976 Crisis intervention after a Natural Disaster
4. Gangrade, K.D. and Dhadde S, 1973 Challenge and response, Delhi Rachna Publication.
5. Shader, l and Schwartz a 1966 Management of reaction of disaster social work vol 11, no.2

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Short Term Certificate Course

(3 Months)

Syllabus

For

78) Certificate Course in Training of Barefoot Technicians in Field Based Cost Effective Watershed Development Technology

Unit –I :- Watershed Development Program

- Definition, introduction and importance, Ridge to valley treatment
- 'Historical backgroundof watershed development with special reference to Hanumantrao committee report. Reflections on success stories.
- Conservation of naturalresourses (5J) with special references to soil and water conservation.
- Applicationofwatershed principal invillage development. Kurhadbandi, charai bandi.,nasha bandi, nasbandi.
- A brief reviewof WesternVidarbhawatershed developmentprogram
- Evaluation reports-National level.
- Role and importance of barefoot technicians in watershed development.
- Participatory Tools and Strategies of Participation
- Watershed Technology and Protective irrigation for Dryl and Agriculture.

Unit –II :- Watershed treatments& Soft skills required

Role and schemes of government agencies in watershed development:

- Agriculture department, Forest department Animal husbandry, MEDA, Tribal development department, BDO office, C.S.R. Funds,
- Process of IEC material formation and presentation in watershed,film, shortfilm, success story.
- Street playscript writing

Recommended Books/ References:-

1. Conjuctive use of water resources in Deccan trap India by sohani G.G., BAIF Development Research foundation.pune.
2. Soil and water conservation research in India by V.V. Dhruva Narayana, National Institute of Science Communication & information, New Delhi.
3. Watershaed Management by by V.V. Dhruva Narayana, National Institute of Science Communication & information, New Delhi.
4. Watershed Approach in Rainfed Agriculture by Bharad G. M, Panjabrao Krishi Vidyapeeth, Akola
5. Multipurpose Tree Species for Smal Formers by Hegde & Daniel BAIF Development Research foundation.pune.

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Short Term Certificate Course

(3 Months)

Syllabus

For

79) Certificate Course inSolar Photovoltaic System

Unit –I :- Solar Photovoltaic System

- Fundamentals of Electricity, Batteries and Solar Radiation
- Solar Photovoltaic and Module Array
- Solar PV System Design and Integration
- Electric wiring, Installation and Trouble shooting

Unit – II :- Practical : Solar Photovoltaic System

- Practical+ Field Work / Onsite training

Recommended Books/References :-

1. Renewable Energy Sources and Emerging Technologies by D P Kothari, K.C.
2. Singal, Rakesh Ranjan, PHI Learning Pvt Ltd -2011
3. Solar Photovoltaic Technology and Systems: A manual for Technicians, Trainer, Engineers by Chetan Singh Solanki, PHI Learning Pvt Ltd -2013
4. Solar Photovoltaic: Technology and Applications by Chetan Singh Solanki, PHI Learning Pvt Ltd -2015
5. Solar PV Power: Design and Manufacturing byRavindra Satpathy, Venkateswarlu Pamru, Elsevier Publications.2020
6. Science and Technology of Solar Photovoltaics by Jayarama Reddy, Book Syndicate: 2nd Edit.
7. Solar Photovoltaics: A lab Training ManualChetan Singh Solanki, Brij M arora, JUzer Wasi, Mahesh Patil, Cambridge University Press India (p) Ltd.2012
8. Solar Photovoltaic Power Systems by Sundaravadivelu S, Suresh R Norman, Notion Press-2017

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Department of Lifelong Learning & Extension

Short Term Certificate Course

(3 Months)

Syllabus

For

80) Certificate Course in Ayurveda: Traditional Medicinal Plant

Unit - I : Ayurveda & Herbal Practices

- Ayurveda: Introduction and History
- Role of Ayurveda for human Society
- Ayurvedic Products
- Herbal Medicinal plants in health care Ayurvedic Treatments of Digestive and Respiration,Orthopedic Diseases.
- Ayurvedic Treatments in Immune, Neurological and Cardiac Diseases
- Ayurveda education and Sustainable Development

Unit - II: Case Study & Field Visit

- Case Studies and Field visits

Recommended Books/References:-

1. Textbook of Ayurveda, Ayurvedic Press, Vasant Lad
2. Ayurveda And The Mind: The Healing Of Consciousness MLBD Publications,
3. David Frawley Ayurveda Beginner's Guide: Essential Ayurvedic Principles and Practices toBalance and Heal Naturally, Callisto Media Incorporated, 2018, Susan Weis-Bohlen

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Short Term Certificate Course

(3 Months)

Syllabus

For

81) Certificate Course inBasics of Nanotechnology

Unit - I : Introduction to Nanotechnology

1. Importance of nanomaterials
2. Micro and Nanofabrication Techniques
3. Nanomaterials Synthesis
4. Nanomaterials Applications

Unit - II: Synthesis & application of nanomaterials

1. Sol-gel synthesis of metal oxides (CuO, ZnO, TiO 2)
2. Hydrothermal synthesis of metal oxides (CuO, ZnO, TiO 2)
3. Photo catalytic applications of metal oxides
4. Tribological applications of nanomaterials

Recommended Books/References:-

1. Nanotechnology: Principles and Practices by Sulabh K Kulkarni.
2. Nanoscience: The Science of the Small in Physics, Engineering, Chemistry, Biology, and Medicine by Hans-Eckhardt Schaefer.
3. The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies byErik Brynjolfsson and Andrew McAfee.
4. The Nature of Technology: What it is and How It Evolves by W. Brian Arthur.

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Short Term Certificate Course

(3 Months)

Syllabus

For

82) Certificate Course inFrench Language

Unit - I: Introduction to French language

- Alphabet in French
- Number in French
- Days in French
- Months in French
- Weather and season in French
- Day times
- Greeting in French
- How to introduce yourself in French
- Use of article in French
- Body parts in French
- Fruits in French
- Vegetables in French
- Food items in French
- Family and relationships
- Clothes and accessories
- Verb group in French
- First group verb conjugation
- Vocabulary-color in French
- Vocab-shape in French
- Nationality in French

Unit II: Practical speaking

- Communication skill – how to greet a person.
- Talking about your family.

Recommended Books/References:-

1. An Introduction To The French Language: Being A Practical Grammar With Exercises (1893 by Alphonse Naus Van Daell
2. Easy French Step By step by Myrna Bell Rachester, Mcg raw Hill Education

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Short Term Certificate Course

(3 Months)

Syllabus

For

83) Certificate Course inProcess Improvement Using Lean Six Sigma

Unit - I: Lean Six Sigma Methodology – tools and concept

- Introduction to LSS, Basic Statistic, measures and graphical tool
- Introduction to a5 stage of DMAIC Mythology – DFFINE, MEASURE ANALYZE, IMPROVEAND CONTROL
- Fundamentals of Lean , history and origin of lean 5 lean principles
- Level I and Level II lean Tools
- Value Stream Mapping -15 step VSM Process

Unit - II:LSS Project – Application of DMAIC and Lean

- Student to work on I end DMAIC Project – either allotted by the instruction or identified by the student
- Prepare complete documentation of the project for all 5 phases of DMAIC using the tools and techniques learned to demonstratrate understanding and application
- Caching , Mentoring and continuous guidance provide by the instructors
- Final project presentation to the certification Panel – evolution as per Lean Six sigma Methodology

Recommended Books/References:-

1. Lean six sigma Academy's black belt curriculum handouts
2. Lean six sigma body of knowledge (Book)- General Electric
3. Certified six sigma Black belt Handbook – American Society for quality (ASQ)(2009)
4. Six sigma for Dummies – Craihg Gygi, Neil Decarlo , Bruce Williams
5. The six sigma Handbook- THOMAS PYZDEK
6. The six Sigma way – Team Field book

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Short Term Certificate Course

(3 Months)

Syllabus

For

84) Certificate Course inPower of Mind

Unit I : Power of Mind Theory

- Introduction of Mind Power
- Brain and Mind Theory
- Brain Power Training
- Visualization Techniques
- Musical Meditation Theory

Unit II: Activity Sessions

- The project will give them a first-hand experience of solving the psychological issues in power of mind training.

Recommended Books/References:-

- The 7 Real Mind Power Secrets by Jim Francis
- 4 Simple Ways to Master Your Mind by Dr. Robert Anthony
- Alpha Brain Wave research by Dr. James V Hardt
- General Psychology by Dr. David Feinstein

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Short Term Certificate Course

(3 Months)

Syllabus

For

85) Certificate Course in Acting

Unit - I: Literature, Theater history and Play analysis

- Introdution to the form of Drama (Western and Indian)
- Introduction of Bharata Muni "Natya Shastra"
- Introduction of Media (news channel)
- Story Writing
- Screen Play Writing
- Dialogue Writing

Unit - II: Acting techniques (practical)

- An Actor's Art
- Traning of the vaice
- Speech Traning and vacal expression
- Mime and movement
- Improvisation

Recommended Books/References:-

1. ACTING TECHNIQUE: THE ESSENTIALS (By - Uta Hagen)
2. Stella Adler: The Art of Acting, (By- Howard Kissel)
3. An Actor Prepares, (By Constantin Stanislavski)
4. Memorization for Actors, (By-Alexa Ispas)

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Short Term Certificate Course

(3 Months)

Syllabus

For

86) Certificate Course inFashion Designing

Unit - I: Design Concept.

- Element of Design
- Fashion Cycle
- History of Fashion
- Textile Science
- Illustration

Unit - II: Design Concept.

- Clothing Construction
- Construction of Skirt, Kurta, Salwar
- Surface ornamentation

Recommended Books/References:-

1. Fashion: The Definitive History of Costume and Style by Kathryn hennessy, Anna Fischel
2. The Fashion Designer Survival Guide by Mary Gehlhar
3. Fashion Design Essentials: 100 Principles of Fashion Design by Jay Calderin.
4. Patternmaking for Fashion Design (Ring-bound)by Helen Joseph Armstrong
5. The Fundamentals of Fashion Design (Paperback) by Jenny Udale
6. Fashion Illustration: Inspiration and Technique (Paperback) by Anna Kiper
7. Fabrics A to Z: The Essential Guide to Choosing and Using Fabric for Sewing by Dana Willard

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Short Term Certificate Course

(3 Months)

Syllabus

For

87) Certificate Course inAdvance Surveying - GIS + GPS + T T SURVEY

Unit I: Theory – GIS & GPS

- Short Term Training Program on Geographical Information System (GIS)
- Short Term Training Program on Total Station and GPS

Unit II: Practical – T T Surveying

- **Software Use:** Arcgis, Erdas, Autocadmap, Global Mapper, Ms Office
- **Instruments:** Total Station, DGPS (RTK)

Recommended Books/References:-

1. Application of remote sensing and GIS by Sachin M. Pore
2. Global Positioning System, 2nd Edition by Ahmed EI Rabbany
3. Textbook of Surveying by C. Venkatramaiah
4. Surveying – Vol – I – By S.K.Duggal, Tata McGraw Hill Book Co.
5. Surveying – Vol – II – By S.K. Duggal, Tata McGraw Hill Book Co.

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Short Term Certificate Course

(3 Months)

Syllabus

For

88) Certificate Course inBIM Architecture

Unit I: BIM Architecture Essential

- Introduction to BIM, introduction to families.
- Modelling building elements, modelling Curtain system, interior circulation, views and visualization, introduction to construction management.

Unit II: Architecture Practical

- Creating 3D views
- Detailing
- Text
- Elements & View Tags
- Symbols
- Inserting sheets.

Recommended Books/References:-

1. Delivering Value with Bim by Adhiana Sanchez
2. Building information modelling by Dana K. Smit
3. Beyond BIMArchitecture Information Modeling By Danelle Briscoe
4. Bim for Architectural Firms: A Short Introductionby Faisal U-K

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Short Term Certificate Course

(3 Months)

Syllabus

For

89) Certificate Course inZW CAD(AutoCAD)

Unit I: ZW CAD (Auto CAD)

- Introduction to ZW CAD (Auto CAD), File Management, drawing tools/ Modify tools, Object properties, Dimensioning and detailing Dimensions.
- Introduction to become good Professionals.

Unit II: Practical Final project

- Final project – interior exterior, modeling exterior design - bed, sofa, room design, door, window, wall.
- Site visits, visits to interior shops.

Recommended Books/References:-

1. CAD Artifex by Brian c. Benton and George Omura
2. Autocad Reference Guide Book by Cad Desk
3. Introduction to Autocad 2017

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(3 Months)

Syllabus

For

90) Certificate Course in Sketch - Up

Unit I: Introduction of Sketch Up (Theory)

- Introduction of Sketch Up, understanding interface and navigation, create shortcuts, set geo location, file import, modify tools - move, copy, rotate, scale, mirror, offset linear array, polar array, push pull, follow me, make component, make group, solid tools, section plane & so many things.
- Introduction to become good Professionals.

Unit II: Practical- Final Project

- Final project – interior exterior, modeling exterior design - bed, sofa, room design, door, window, wall.
- Site visits, visits to interior shops.

Recommended Books/References:-

1. SketchUp: Step By Step Guide To Start SketchUp For Beginners: SketchUp Book by Errin Esquerre
2. SketchUp For Dummies, 2nd Edition (For Dummies (Computer/Tech) by Bill Fane, Mark Harrison, Josh Reilly

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Short Term Certificate Course

(3 Months)

Syllabus

For

91) Certificate Course in Revit Architect

Unit I: Revit Architect (Theory)

- Revit File Types, GUI, Building Elements, Grids, Construction Modeling Tools, Array, customizing stair documentation, Modifying Continuous wall, Rendering, Solar study, working with linked models, Working with adaptive components & so many things.

Unit II: Practical Interior Exterior

- Final project – interior exterior, modeling exterior design - bed, sofa, room design, door, window, wall.
- Site visits, visits to interior shops.

Recommended Books/References:-

1. Revit Architecture: Learn Designing with Ease (For Beginners) [Print Replica] Kindle Edition by Madhumita Kshirsagar (Author)
2. Revit Architecture By Prof. Sham Tickoo and CADCIM Technologies

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Short Term Certificate Course

(3 Months)

Syllabus

For

92) Certificate Course in Computer Added Structural Engineering

Unit I: Computer Added Structural Engineering

- Introduction, basic and all advance about CSI ETABS
- Validation of CSI ETABS, STADD RCDC
- Complete structure design using EXCEL SHEETS
- Complete structure design using STADD RCDC

Unit II: Practical

- Sample Project - 01

Modeling, Analysis and Design of practice projects

- Real Life Project 02 – Medium Rise Structure
  a) Modeling
  b) Analysis
  c) Design
  d) Schedule
  e) Detail
  f) Final Sheet Preparation (IS 456-2000, SP-34, IS 875 etc.)
- Real Life Project 03 – High-Rise Structure
  a) Earthquake / Wind Static Analysis
  b) Earthquake / Wind Dynamic Analysis
  c) Modeling
  d) Analysis
  e) Design
  f) P-Delta Analysis
  g) Property Modification Factors
  h) Stability check as per IS 1893-2016 and IS 16700-2017

Recommended Books/References:-

1. Computational Structural Engineering: Automatic calculation of mechanical structuresby Claudio Gianini
2. Engineering with the Spreadsheet: Structural Engineering Templates Using Excel by Craig Christy

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Short Term Certificate Course

(3 Months)

Syllabus

For

93) Certificate Course inStadd Pro, Steel Design with IS 800-2007

Unit I: Introduction to STAAD Pro

- About Bentley STAAD Pro
- Starting STAAD.Pro
- Graphical User Interface
- Starting a New Project
- Working with User Interface: Menu Bars Tool Bars Tabs Snap Node / Beam Window
- Data Area Main Window
- Opening and Existing Project
- Saving a Project
- Configuring Units
- Keyboard Shortcuts
- Importing Model in StaddPro
- Coordinate Systems

Unit II: Structural Modeling (Practical)

- Structural Modeling using STAAD Editor
- Structural Modeling using the Structure Wizard
- Adding Beams using Tools
- Creating Beams (Colinear, Along Axes)
- Creating Plates
- Creating Surfaces
- Creating Solid Elements
- Creating Structure
- Shifting, Rotating & Mirroring Structure
- Stretching and Intersecting Members
- Merging Members and Nodes
- Renumbering Nodes, Members and Elements
- Splitting and Breaking Beams at Selected Nodes
- Cutting Sections

Recommended Books/References:-

1. Design of Industrial Steel Buildings Using Staad Pro : With Indian Examplesby T. S. Sarma
2. Stadd.Pro by C.s changeriya
3. Guide to structural engineering using STADD.PRO connect by Sukanta Adhikari, Dr. Alka Pisari)

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Short Term Certificate Course

(3 Months)

Syllabus

For

94) Certificate Course inBIM Structure

Unit I: BIM Structure Essential

- Introduction to BIM
- Modelling building elements in Structural elements
- Introduction to Structural families
- Interior circulation,views and visualization,
- Introduction to construction management.

Unit II: Practical –

- Creating plan views and setting view properties,
- Creating elevation and section views,
- Creating 3D views

Recommended Books/References:-

1. Structure Engineering (by J E. Gordan)
2. Fundamentals of Sturctural Analysis (by Kenneth Leeth and chia ming Uang)

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Short Term Certificate Course

(3 Months)

Syllabus

For

95) Certificate Course inBIM

Unit I: BIM MEP Essential

- Introduction to BIM.
- Modelling building elements in mechanical & electrical, plumbing, views and visualization, introduction to construction management.

Unit II: Practical –

- Creating plan views and setting view properties
- Creating elevation and section views
- Creating 3D views

Recommended Books/References:-

1. MEP Databook by Sydney M. Levy
2. MEP Planning and Installation manual(by Minor Scope)

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Short Term Certificate Course

(3 Months)

Syllabus

For

96) Certificate Course inIT Security Management

Unit -1 : CybersecurityAnalysis

- **IntroductiontoCybersecurityAnalysis**
  - Importanceof Security
  - ITFunctions&Roles
  - ThePieces
  - Using&Managingthe Pieces
  - Advancement
  - TheRoleofBusinessAnalysisin Cybersecurity
  - GovernancePerspectivesofCybersecurity

- **EnterpriseCybersecurity Concepts**
  - SecurityAccountability
  - CostofSecuringan organization
  - OutsourcingforCybersecurityExpertise&Services
  - RiskTolerance
  - Compliance
  - BestPractices&Benchmarking
  - DataPrivacy-1:Basics
  - DataPrivacy -2:Nuances
  - DigitalRightsManagement
  - Audit:Internal&External

- **Enterprise Risk**
  - RiskManagement&ControlAssuranceFramework
  - OrganizationalRiskAssessment
  - RiskAnalysis:ThreatRiskAssessments
  - RiskAnalysis:VulnerabilityAssessments
  - BusinessCaseDevelopment
  - DisasterRecovery&BusinessContinuity

- **CybersecurityRisksandControls**
  - UnderstandingSecurityControls&ITRisk-1
  - UnderstandingSecurityControls-2
  - CIATriad
  - ApplyingControls
  - CybersecurityThreats-1
  - CybersecurityThreats-2
  - CybersecurityVulnerabilities-1
  - CybersecurityVulnerabilities-2
  - AdverseImpacts
  - Risks&Controls:PuttingitallTogether

Unit -II : Security&Operations

- **Securing the Layers**
  - PhysicalSecurity
  - EndpointSecurity
  - NetworkSecurity:SecurityArchitecture
  - NetworkSecurity:Firewalls
  - NetworkSecurity:Anti-Virus/Anti-Malware
  - NetworkSecurity:Segregation
  - SystemSecurity:Servers
  - PlatformSecurity
  - ProductSecurity:ThreatModels
  - ProductSecurity:EmbeddedSystems
  - ProductSecurity:InternetofThings
- **Data Security**
  - DataSecurity–AtRest:InformationClassification& Categorization
  - DataSecurity-InTransit:Encryption& Keys
  - DataSecurity-InTransit: SSL/TLS
  - DataSecurity-InTransit:DigitalSignature&Identification
- **User Access Control**
  - DirectoryManagement
  - Authorization
  - AuthenticationandAccess Control
  - PrivilegedAccountManagement
  - UsersandSecurityAwareness Module 8 - Solution Delivery
  - SDLC&SolutionSecurityPlanning
  - Requirements&SecurityEngineering
  - Requirements&SolutionDevelopment
  - SolutionSecurity:Applications
  - SolutionSecurity:Databases
  - SolutionSecurity:Web
  - ChangeImpactAnalysis
- **Operations**
  - IncidentResponse,Recovery&Remediation
  - Metrics&Reporting
  - RiskLogging&MitigationTracking
  - OperationalRiskOwnership
  - OperationalRiskOwnership
  - ComputerForensics:SOC,SIEM
  - FutureProofingyourSecurityPosture

Recommended Books/References:-

1. IT Security Management: IT Securiteers by Alberto Partida

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For

97) Certificate Course inWeb Application Development Using .Net

Unit -I : **Programming**

- ObjectOrientedProgramming,
- IntroductiontoNetFramework

Unit- II :Practical – Application Development

- C# language
- Errors & Exception Handling
- Collections
- Threading
- Windows Forms
- ADO .Net, ASP.Net
- Web Services
- LINQ
- Re-Testing

Recommended Books/References:-

1. ASP.NET: THE COMPLETE REFERENCE by Matthew Macdonald

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For

98) Certificate Course inSoftware Testing

Unit - I:Introduction of Software

- **Introduction of Software Testing**
  - What is Software testing
  - What is Quality
  - Importance of testing
  - Tools used for Testing
  - Manual and Automation Testing
  - Principles of Software Testing
- **Software Development Life Cycle**
  - SDLC and SDLC Phases
  - Requirements and Analysis
  - Design
  - Development
  - Testing
  - Deployment
  - Operation and Maintenance
- **SDLC Models**
  - Waterfall Model
  - V Model
  - Spiral Model
  - Iterative Model
  - Agile Model

- **Development Architectures**
  - One Tier Architectures
  - Two Tier Architectures
  - Three Tier Architecture
  - N-Tier Architecture
- **Software Testing Life Cycle**
  - What is STLC?
  - Entry and Exit Criteria
  - STLC Phases
  - Requirement Analysis
  - Test Planning
  - Test Design
  - Test Execution
  - Sign Off
  - Test Scenario Preparation
  - Test Case Preparation
  - Test Environment and Test Data Preparation
  - Requirement Traceability Matrix
- **Levels of Testing**
  - Testing Techniques used in Levels of Testing
  - White Box Testing Technique

- Black Box Testing Technique
- Unit Testing
- Integration Testing
- System Testing
- Functional Testing
- NonFunctional Testing
- User Acceptance Testing

- **Types of testing**
- Functional Testing
- White Box Testing
- Black Box Testing
- Positive Testing
- Negative Testing
- Beta Testing
- Live Environment Testing
- Smoke Testing
- Sanity Testing
- Regression Testing
- Formal Testing
- Informal Testing
- Monkey Testing
- Re-Testing
- Risk Based Testing
- NonFunctional Testing
- Performance Testing
- Load/Stress Testing
- Usability Testing
- Accessibility Testing
- Security Testing

- **Effective software metrics**
- Test Case Productive Preparation
- Test Execution Summary
- Test Case Coverage
- Defect Acceptance
- Defect Rejection
- Test Efficiency
- Effort Variance
- Schedule Variance

- **Requirements Traceability Matrix (RTM)**
- Forward Traceability
- Backward Traceability
- Bi-Directional Traceability
- Examples Of RTM
- Test Coverage

- **Testing Techniques**
- Equivalence Case Partition
- State Transition Technique
- Decision Table Technique
- Boundary Value Analysis
- Error Guessing Technique
- Adhoc Testing

- **Defect Management**
- Difference between Defect and Bug
- Defect Life Cycle
- Defect Tacking Tools
- Create a Bug Report
- Raise a Bug in JIRA

- Severity & Priority
- **Agile methodologies**
- Agile Methodologies Overview
- Agile Scrum
- Agile ceremonies
- Agile artifacts
- Kanban
- Adaptive Project Framework (APF)
- Extreme Project Management (XPM)
- **Agile Scrum**
- Why we go for Agile?
- Agile Manifestos and Scrum
- Roles involved in Agile
- Terminologies used in Agile
- **Ceremonies in Agile**
- Sprint Grooming
- Sprint Planning
- Daily Scrum Meeting
- Sprint Review
- Sprint Retrospective

Unit -II : Practical onSoftware

- **QTest**
- Test plan: Releases and Builds
- Requirements
- Creating Testcases
- Creating and using parameters
- Using data query
- Executing test runs and submitting defects
- Complex scenario
- Setting up qTest explorer(web and desktop)
- using qTest Explorer(Web and Desktop)
- **Bugzilla**
- Log-in to Bugzilla account
- Creating a BugReport
- Create graphical reports
- Using Browse Function
- Simple Search Option in Bugzilla
- Add or remove column to default search screen
- Advance Search Option in Bugzilla
- Using Preferences in Bugzilla
- **ALM**
- Introducing HP ALM
- Release Specifications
- Requirements Specifications module in HP ALM
- Test Plan Modules
- Defect Management Life Cycle
- Report & Analysis
- **JIRA**
- Introduction To JIRA
- Test Management In JIRA
- Advanced Search and Introduction To JQL (JIRA Query Language)
- Generating Reports In JIRA
- Introduction To JIRA Agile
- Create an issue in JIRA
- Sub-Task
- **WorkFlows**
- Plug-ins in JIRA, JIRA Agile, Creating issue in Agile
- How to create an Epic in Agile, Use of Clone and Link in JIRA
- Reports in JIRA, Kanban Board and Managing issues, JIRA Scrum Vs JIRA Kanban

Recommended Books/References:-

1. Testing Computer Software by C Kaner

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For

99) Certificate Course inData Security

Unit – 1: Data Security Tools

- Introduction
- Data Privacy
- Device Security Tools
- Cyber Crimes

Unit - 2 : Cyber Law

- Common Attacks
- Mitigation
- Social Eng. Threats
- Cyber Law

Recommended Books/References:-

1. Cybersecurity: An Essential Guide to Computer and Cyber Security for Beginners by Lester Evans

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Syllabus

For

100) Certificate Course inWeb Application Security Penetration Testing

Unit – I : Web Application Security Penetration Testing

- Fundamentals of Application and Network
- Information Security Basics
- Application Security Basics
- Different Vulnerability Standards
- Tools Introduction
- Broken Authentication
- Session Management
- Privilege Escalation Attack
- Browser Based Attack

Unit-II : Practical

- Cross Site Scripting Attack
- SQL Injection Attack
- Cross Site Request Forgery
- Security Misconfigurations
- Sensitive data exposure vulnerabilities
- Malicious File Upload
- Server-Side Request Forgery
- Advanced Attacks

Recommended Books/References:-

1. How to Break Web Software: Functional and Security Testing of Web Applications and Web Services by Mike Andrews

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For

101) Certificate Course inMobile Application Penetration Testing (Android, IOS)

Unit –I : Android Pentesting

- Android Architecture
- Setting up a Test Environment
- Android Build Process
- Reversing APKs
- Device Rooting
- Android Application Fundamentals
- Network Traffic
- Device and Data Security
- Tap jacking
- Static Code Analysis
- Dynamic Code Analysis

Unit – II : IOS Pentesting

- iOS Architecture
- Device Jailbreaking
- Setting up a Testing Environment
- iOS Building Process
- Reversing iOS Apps
- iOS Application Fundamentals
- iOS Testing Fundamentals
- Network Traffic
- Device Administrator
- Dynamic Analysis

Recommended Books/References:-

1. Learning Pentesting for Android Devices by Aditya Gupta

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Syllabus

For

102) Certificate Course inMachine Learning

Unit - I : Machine Learning
Introduction to Machine Learning
• Introduction to Machine Learning
• Types of Machine learning
• Data understanding: real-life example
• Application of Machine Learning
• Discussion on different packages used for ML
• Related concepts: Splitting the dataset into train set and test set

Introduction of Statistics
• Descriptive statistics: Measure of Central Tendency, Measure of Dispersion, Measure of Shape
• Probability and sampling: Conditional probability, Bayes theorem
• Probability Distribution
• Hypothesis Test
Packages of Machine Learning
• Numpy
• Pandas
• Matplotlib
• Seaborn

Exploratoy Data Analysis
• Introduction to Graphs
• Description about data
• Visualisation
• Data cleaning
Data Prepressing
• Scaling
• Normaliztion
• Standardization
Regression Techniques
• Linear Regression Technique
• Dataset with problem description
• Non- Linear Regression Techniques
• Logistic Regression Technique
Unit - II :Practical-
K-Nearest neighbors
• K-Nearest Neighbors
• Concept and theory
• Distance functions: Euclidean, Minkowski
• Why should we use KNN?
• Mathematical approach
• Dataset with problem description

Support Vector Machine
• Support Vector machine
• Introduction to Support Vector Machine
• Mathematical Approach
• Theory on hyperplane
• Dataset with problem description

Decision Tree
• Introduction to Decision Tree
• Significance of using Decision Tree
• Different kinds of Decision Tree
• Procedure and technique of Decision Tree

Random Forest
• Random Forest
• Theory and mathematical concepts
• Entropy and Decision Tree
• Dataset with problem description
• Classification using random forest on Python

Naive Bayes
• Introduction of Naïve Bayes
• Theory of classification
• Concept of probability: prior and posterior
• Bayes Theorem
• Mathematical concepts
• Limitation of Naïve Bayes
• Dataset with problem description

Clustering
• Introduction of clustering
• K-mean clustering
• Hierarchical Clustering
• Dataset with problem description

Gradient Descent
• Gradient descent
• Stochastic Gradient Descent
• Gradient boosting
• Types of boosting
• Bootstrapping

Dimensionality Reduction Techniques
• Linear Discriminant Analysis (LDA)
• Principal component Analysis (PCA)
• Business case study

Time Series Analysis
• Introduction to time series
• Components of Time Series: Trend, Seasonal, Cyclical
• Types of Forecasting methods: Autoregressive Model, Moving Average Model, Autoregressive Integrated Moving Average Model, Seasonal Autoregressive Integrated Moving Average Model

Recommended Books/References:-

1. Understanding Machine Learning: From Theory To Algorithms by Shai Shalev Shwartz
2. Machine Learning: A Probabilistic Perspective by Kevin P. Murphy

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For

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103) Certificate Course inDevOps

Unit – I: DevOps

- Section 1: Introduction Section
- Section 2: Linux Basics I
- Section 3: Networking Basics
- Section 4: Applications Basics
- Section 5: GIT Introduction
- Section 6: Jenkins Introduction
- Section 7: Docker Overview Introduction
- Section 8: Kubernetes Overview
- Section 9: CI/CD pipeline using Git, Jenkins and Maven
- Section 10: Integrating Tomcat server in CI/CD pipeline
- Section 11: Integrating Docker in CI/CD Pipeline
- Section 12: Integrating Ansible in CI/CD pipeline
- Section 13: Integrating Kubernetes in CI/CD pipeline

Unit - II: Practical

- Common Attacks
- Mitigation
- Social Eng. Threats
- Cyber Law

Recommended Books/References:-

1. The Devops Handbook by Gene Kim
2. Learning DevOps by Mikael Krief

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Syllabus

For

104) Certificate Course in AWS

Unit –I: Cloud Computing

- Section 1: Introduction
- Section 2: What is Cloud Computing?
- Section 3: IAM - Identity and Access
- Section 4: EC2 - Elastic Computer Cloud
- Section 5: EC2 Instance Storage
- Section 6: ELB & ASG - Elastic Load
- Section 7: Amazon S3

Unit - II : Practical

- Section 8: Databases & Analytics
- Section 9: Other Compute Services: ECS, Lambda, Batch, Lightsail
- Section 10: Deployments & Managing Infrastructure at Scale
- Section 11: Cloud Monitoring
- Section 12: VPC & Networking Basic
- Section 13: Security & Compliance Basic
- Section 14: Account Management, Billing & Support

Recommended Books/References:-

1. AWS Certified Cloud Practitioner by Anthony J. Sequeira
2. Cloud Computing with AWS by Pravin Mishra

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For

105) Certificate Course inAzure Fundamental

Unit – I: Azure architecture

- Section 1: Introduction
- Section 2: Describe Azure architecture and services - Azure compute
- Section 3: Describe Azure architecture and services Networking
- Section 4: Describe Azure architecture and services - Storage
- Section 5: Describe Azure architecture and services - Databases
- Section 6: Describe cloud concepts
- Section 7: Describe Azure architecture and services - Other services
- Section 8: Describe Azure architecture and services - Identity and Access

Unit - II : Practical

- Common Attacks
- Mitigation
- Social Eng. Threats
- Cyber Law

Recommended Books/References:-

1. Microsoft Azure Architect by William Panek
2. Exam Ref AZ -900 Microsoft Azure Fundamentals by Jim Cheshire

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For

106) Certificate Course inAndroid Application Development

Unit I : Android Fundamental

- IntroductiontoAndroid
- Fundamentals
- ApplicationStructure
- Emulator-AndroidVirtualDevice

UNIT 2. Practical

- BasicUIdesign, Intents, Preferences/DataStore, Menu, UIdesign, Fragments,Tabsand View Pager, Styles&Themes, ContentProviders, ListView/Recycler View/Table View, Communication/DataPassing, Advanced, Threads.

Recommended Books/References:-

1. Android 9 Application Development Cookbook by Rick Boyer

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For

107) Certificate Course inArtificial Intelligence

Unit I. Deep Learning

Introduction -
• Introduction to Artificial Intelligence
• Applications of Artificial Intelligence
• Keras
• Tensor flow

Deep Learning –

• Introduction to Deep Learning
• Application of Deep Learning
• Types of Deep Learning Algorithms: ANN, RNN, CNN

Unit II:. Artificial Neural Network –

• Plan of attack
• Activation function
• Gradient descent
• Stochastic Gradient Descent
• Backpropagation

• **Recurrent Neural Network-**

• Introduction of Recurrent Neural Network
• Application of RNN
• Simple RNN
• GRU
• LSTM

Convolution Neural Network-
• Introduction of Convolution Neural Network
• Plan of attack
• Convolution Operation
• ReLU layers
• Pooling
• Flattening
• Different layers

• **Reinforcement Learning-**
• Agent environment problem
• Reinforcement process
• Q-learning

Natural Language Processing-

• Introduction of NLP
• NLTK
• Application of Natural Language Processing
• Regular expression
• Feature Extraction
• Text mining
• Phases of NLP
• NLTK: Tokenizer, Count Vectorizer
• Sentiment Analysis
• **Image Processing & Computer vision-**
• Introduction of computer vision
• Application of Computer Vision
• What is OpenCV
• Image Processing with OpenCV

Recommended Books/References:-

1. Artificial Intelligence: Concepts and Applications by Lavika Goel

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Syllabus

For

108) Certificate Course inMEP Modeling & Drafting

Unit I: Revit MEP and AutoCAD

- **Revit MEP: -**Project management, Family Creation, HVAC System, Plumbing System, Electrical System, Fire Protection System, Outputs.
- **AutoCAD:** -

  Essentials – Coordinate system, drawing toolbar, modifying toolbar, object properties, drawing precision, orthographic view, isometric views, dimensions study, inquiry tools, design center, tool pallet, template creation, printing & plotting, text & styles, hatching, tables.

  Professionals – Quick selection, filters, block & attributes, external references, parametric medeling, block editing, express tools, advance objects, advance layouts.

Unit II: Practical Final project

- interior exterior
- modeling exterior design

Recommended Books/References:-

1. Exploring Autodesk Revit 2023 for MEP by CADCIM Technologies and Prof. Sham Tickoo
2. Autodesk Revit 2022 MEP Fundamentals by ASCENT

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For

109) Certificate Course inSolid Works

Unit I: Essentials

- Sketch Entities
- Sketch Tools
- Blocks, Relations &Dimensioning
- Sketcher: 2d & 3D Sketching
- Part Modelling: Basic
- Planes Creation
- Curves, Fillet features
- Hole types
- Assembly: Bottom Up
- Sheet metal
- Weldments
- Evaluate Measurement
- Evaluate: Mass Properties
- Forming Tools
- Surface Modelling
- Tables & BOM
- Drafting: Generating Drawing Views
- Angle of Projection
- Generation of Views
- Printing & Plotting
- Standard Mates

Unit II: Practical on Professionals

- Part Modelling: Advance Modelling
- Assembly: Top Down
- Advance & Mechanical Mates
- Smart Components & Smart Fasteners
- Motion Analysis
- Animation Study
- Rendering Tools &Rapics
- Forming Tools
- Freeform Surfacing
- Pack and Go
- Solidworks Explorer
- Solidworks Task Scheduler

Recommended Books/References:-

1. David C. Planchard, CSWP, Solid work Accredited Educator
2. A handbook On Introduction to Soild work 2024 by Kirstie Plantenberg

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For

110) Certificate Course inNon - Destructive Testing (NDT)

Unit I: Types of Test (Theory)

- **Rebound Hammer test**
  - Basic principles of Test and its Significance
  - Mechanism of Equipment
  - Demonstration of Equipment
  - Understanding of Various axes
  - Understanding of Graph and Units
  - Understanding of Preparation of the Graph
  - Reporting Method

- **Ultrasonic pulse velocity**
  - Basic theory of ultrasound and its application in concrete
  - Significance and purpose of the test
  - introduction of the apparatus and it's parts
  - Demonstration of the apparatus
  - Various modes like Direct, Semi-Direct, & Indirect
  - Velocity calculation and Correction factor
  - Results interpretation

- **Half Cell Potential Test**
  - Basic theory of Half Cell Potential and its application in concrete
  - Significance and purpose of the test
  - Introduction of the apparatus and it's parts
  - Demonstration of the apparatus
  - Various modes like Direct, Semi-Direct, & Indirect
  - Velocity calculation and Correction factor
  - Results interpretation

- **Carbonation Test**

  - Basic theory of Carbonation and its application in concrete
  - Significance and purpose of the test
  - Introduction of the apparatus and it's parts
  - Demonstration of the apparatus
  - Various modes like Direct, Semi-Direct, & Indirect
  - Velocity calculation and Correction factor
  - Results interpretation

- **Cover Meter**
  - Basic theory of Cover Meter and its application in concrete
  - Significance and purpose of the test
  - Introduction of the apparatus and it's parts
  - Demonstration of the apparatus
  - Various modes like Direct, Semi-Direct, & Indirect
  - Velocity calculation and Correction factor
  - Results interpretation

- **Concert Core Cutting & Test**
  - Basic theory of Concert Core Cutting and its application in concrete
  - Significance and purpose of the test
  - introduction of the apparatus and it's parts
  - Demonstration of the apparatus
  - Various modes like Direct, Semi-Direct, & Indirect
  - Velocity calculation and Correction factor
  - Results interpretation

Unit II: Practical on Non - Destructive Testing (NDT)

- Demonstration
- Demonstration of the apparatus,
- Velocity calculation and Correction factor

Recommended Books/References:-

1. Non Destructive Testing (by Ravi Prakash
2. NDT and Evalution of materials(by J. prasad)

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For

111) Certificate Course inTablet Manufacturing Technology

Unit I : Tablet as a solid dosage form

- Introduction Tablets, ideal characteristics of tablets, classification of tablets.
- Excipients, Formulation of tablets, granulation methods, compression and processing problems.
- Equipment and tablet tooling.
- Tablet coating: Types of coating, coating materials, formulation of coating composition, methods of coating, equipment employed and defects in coating. c. Quality control tests: In process and finished product tests.

Unit II:Practicals on tablet manufacturing

- Preformulation studies on paracetamol drug
- Preparation Paracetamol tablets by direct compression
- Preparation Paracetamol tablets by wet granulation
- Evaluation of Paracetamol tablets
- Preformulation studies on aspirin drug
- Preparation aspirin tablets by direct compression.
- Preparation aspirin tablets by wet granulation.
- Evaluation of aspirin tablets.
- Preparation of film coated tablets.
- Evaluation of film coated tablets.

Recommended Books/References:-

1. Pharmaceutical dosage forms - Tablets, volume 1 -3 by H.A. Liberman, Leon Lachman & J.B.Schwartz
2. Modern Pharmaceutics by Gilbert S. Banker & C.T. Rhodes, 3rd Edition
3. Remington: The Science and Practice of Pharmacy, 20th edition Pharmaceutical Science (RPS)
4. Theory and Practice of Industrial Pharmacy by Liberman & Lachman
5. Pharmaceutics- The science of dosage form design by M.E.Aulton, Churchill livingstone, Latest edition
6. Introduction to Pharmaceutical Dosage Forms by H. C.Ansel, Lea & Febiger, Philadelphia, 5thedition, 2005

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For

112) Certificate Course inTeaching Learning Process

Unit I: Introduction

- Concept of Education
- Role of Teacher
- Teaching Techniques
- Class Room Management
- Presentation Skill
- Teaching – Leaning harmony concept
- one theory paper based on Syllabus (aforesaid)

Unit II: Practical – Practical Test on

a) Presentation Skill
b) Communication Skill
c) Classroom management
d) Concept of ideal Teacher

Recommended Books/References:-

1. Teaching Learning Process [Paperback] Dr. Richa Sharma and Seema Sharma

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For
113) Certificate Course inWord Press & CSS

Unit – I :- WORD PRESS

- **Basics**
  Website Domain Name
  What is Domain name, Types, how to select Domain names, How to register a domain
  Web Hosting
  What is Hosting space, Hosting plans, Features, Relation with Hosting server and Domain Name, How a Domain is added in the Hosting space.
  Cpanel Overview
  What is Control Panel, Admin previledges, File Manager, Important tabs
- **Themes and Forms**
  Themes
  Type of themes, Need of themes, Basic and advanced Themes, How to install default and chosen theme, How to configure website theme.
  Pages and Posts, categories
  Difference between pages and posts, Creating pages, creating posts, Editing pages, editing posts, Categorize posts
  Website formats & Menus
  Understanding different types of websites, planning menus, Creating Menus, Editing Menus at different locations
- **Widgets and Plugins**
  Widgets
  Enhancing website with widgets, installing widgets, configuring widgets
  Plugins
  Customizing website with different plugins, How to search, download, buy and install plugins, configuring plugins
  Gallery
  Displaying purpose of the website through media galleries, Creating, editing and configuring gallery

- **Social Media And Blogging**
  Social Media Links
  How to enroute website visitors to other social media platforms, How to link social media users to website

  Attaching Images and videos
  How to insert videos and images in the side bar, pages or posts.
  Blogging
  What is blogging, Type of blogs, Advantages of blogging, creating a blog, Adding posts to blog, Designing and configuring blog?
- **Website & Search Engine**
  Website & Search Engine
  What is the relation between search engine, website domain and website content, How to link website with search engine indexing, what is Search engine optimization, Understanding Importance of content and keywords.

Unit II: CSS

- **CSS-Introduction**
  In this module CSS is used to style and lay out web pages — for example, to alter the font, colour, size and spacing of your content, split it into multiple columns, or add animations and other decorative features. This module gets you started on the path to css..Benefits of CSS,CSS Versions History,CSS Syntax, External Style Sheet using <link>,Multiple Style Sheets, Value Lengths and Percentages

- **CSS-Syntax**
  In this module, the basic goal of the Cascading Style sheet (CSS) language is to allow a browser engine to paint elements of the page with specific features, like colors, positioning, or decorations. The CSS syntax reflects this goal and its basic building blocks arecas Syntax, single Style Sheets, Multiple Style Sheets, Value Lengths and Percentages
- **CSS-Selectors**
  In this module, CSS selectors define the elements to which a set of CSS rules apply. In this module, you will find how many selectors are there how to use it,ID Selectors, Class Selectors, Grouping Selectors, Universal Selector, Descendant / Child Selectors, Attribute Selectors
- **CSS-Color Background Cursor**
  In this module, CSS Backgrounds and Borders is a module of CSS that lets you style elements backgrounds and borders. Backgrounds can be filled with a color or image, clipped or resized, and otherwise modified. Borders can be decorated with lines or images, and made square or rounded. Background-image, background-repeat, background-position, CSS Cursor
- **CSS-Text Fonts**
  In this module, CSS Fonts that defines font-related properties and how font resources are loaded. It lets you define the style of a font, such as its family, size and weight, line height, and the glyph variants to use when multiple are available for a single character
- **CSS-Lists Tables**
  In this module, lists table that defines how to lay out table data., list-style-type, list-style-position, list-style-image, list-style
- **CSS Tables**
  Border, width & height, text-align, vertical-align, padding , color

- **CSS-Box Model**
  In this module, CSS box model that defines the rectangular boxes—including their padding and margin—that are generated for elements and laid out according to the visual formatting model. Borders & Outline, Margin & Padding, Height and width, CSS Dimensions

Recommended Books/References:-

1. Kumar, Dr.Ritish. Learn WordPress in Easy Way. 1st ed., Ganpati Book Centre, p. 161.
2. Dowden, Martine, and Michael Dowden. Architecting CSS. Apress, 2020.
3. Krol, Karol. WordPress Complete - Sixth Edition. Packt Publishing Ltd, 2017.
4. Williams, Brad, et al. Professional WordPress. John Wiley & Sons, 2015.
5. Lemay, Laura, et al. Mastering HTML, CSS & Javascript Web Publishing. BPB

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Short Term Certificate Course
(3 Months)
Syllabus
For
114) Certificate Course in HTML, Java Script & PHP

Unit I :- HTML Basics

- **Introduction To Html, Overview Of Html:** Hypermedia, Meaning of HTML Markup, Document structure, Overview of HTML, Choosing a text editor, Starting Notepad,
- **Content And Character Formatting:** Headings, Paragraphs, Breaks, Horizontal Rule, Bold, Italic and Other Character Formatting Elements, Alignment, Special Characters and Symbols
- Creating Web Pages Using Links, Lists and Images
  - **Working With Lists:** List Elements, UL: Unordered List, OL: Ordered List, DL: Definitions List, Nesting Lists
  - **Working With Images:** Supported Image Formats, Limited Support or Non Supported Image Formats, Inserting Images, Additional Image Attributes
  - **Working With Links:** Link Elements, Link Types 2
- **Working With Tables:** Table Attributes,
- **Working With Forms:** Form Element, The Attribute soft he Form Element
- **Use Of Animated Pages:** Uses of the Meta Element, Adding Sound to an HTML Page, Animation Elements

Unit II:- JavaScript

- **Introduction to Client Side Scripting**
  - Syntax Basics, JS Statements, JS Comments, JS Variables, JS Data types, JS Operators, JS Comparisons, JS Conditional Statements, JS Loops, JSEvents,
  - JS Objects, String Functions (Most Used),
  - **Java Script Implementations**
    - Implementing a Simple Calculator Using Java Script
    - JS Validations using Object Functions, Validations using Regular Expressions
- **Basics of PHP**
  - **Introduction To Php:** Introduction, Syntax, Various applications done inPHP
  - **Working Building Blocks I:** Variables, String, Operators, Conditions
  - **Working With Building Blocks Ii:** Switch, Arrays, Loops and Functions.
- **MySQL**
  - **Web Database:** Relational Database Concepts, Designing Web Database, Web Database Architecture, Creating Web Database, MySQL privilege System, Creating Database Tables, MySQL Identifiers
  - **Working with MySQL Database:** SQL – Quick Recap, Working with MySQL and PHP

Recommended Books/References:-

1. Davis, Michele E., and Jon Phillips. Learning PHP and My SQL. “O’Reilly Media, Inc.,” 2006.
2. Holzner, Steven. PHP: The Complete Reference. McGraw Hill Professional, 2017.
3. Kogent Learning Solutions Inc. HTML5 BLACK BOOK: COVERS CSS3, JAVASCRIPT, XML, XHTML, AJAX, PHP AND JQUERY (With CD). 2016.
4. Lemay, Laura, et al. HTML, CSS & JavaScript Web Publishing in One Hour a Day, Sams Teach Yourself. Sams Publishing, 2015.
5. Nixon, Robin. Learning PHP, MySQL & JavaScript. “O’Reilly Media, Inc.,” 2018.

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Short Term Certificate Course

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Syllabus

For

115) Certificate Course in Python & SQL

Unit – I :-Python

- **Introduction To Python**
  Installation and Working with Python, Understanding Python variables Python basic Operators, Understanding python blocks
- **Python Data Types**
  Declaring and using Numeric data types: int, float, Using string data type and string operations, Defining list
- **Python Program Flow Control**
  Conditional blocks using if, else and else-if, Simple for loops in python, for loop using ranges, string, list and dictionaries Use of while loops in python**,** Loop manipulation using pass, continue, break and else Programming using Python conditional and loops block
- **Python Functions and Modules**
  Organizing python codes using function organizing python projects into modules importing own module as well as external modules, Programming using functions, modules

Unit-II:- SQL

- **Introduction to Basic Database Concepts**
  What is Data, Field, Record and database?
  Limitations of File Management System.
  Basic Concepts of Advantages of DBMS.
- **Normalization**
  First Normal Form
  Second Normal Form
  Third Normal Form Practically Normalizing Tables
- **Introduction to SQL**
  Basics of SQL Types of SQL Statements, DDL, DML, DQL, DCL and TCL, Data types in SQL Server
- **DDL and DML Statements**
  Create, Alter, Drop Table, Insert, Update, Delete, Select
- **Exploring Where Clause with Operators**
  Sorting data using Order By clause, working with basic of Sub Queries
- **Aggregate Functions**
  Using functions in Queries, Using predefined functions, Count, Sum, Min, Max, Avg, Group By. Having Clause

References/Recommended Books:-

1. Brown, Martin C. Python. McGraw-Hill Osborne Media, 2018.
2. Groff, James, et al. SQL the Complete Reference, 3rd Edition. McGraw Hill Professional, 2017.
3. Johnson, Bryan. SQL AND PYthon Programming. 2019.
4. Kanetkar, Yashavant, and Aditya Kanetkar. Let Us Python (Second Edition). BPB Publications, 2020.
5. Rungta, Krishna. Learn Python in 1 Day. 2018.

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Short Term Certificate Course

(3 Months)

Syllabus

For

116) Certificate Course in Adding Dimension & Introducing Career Techniques

Unit – I :- Introduction of career thechniques.

- **Personality Development:**
  - What is Personality? , Definition, Types of Personality, Self-Image, Personality Traits, Outward and Inward Appearances
  - Confidence Building: Self-Motivation, Role of Reading, Express Yourself.
  - Time Management: How to Plan Your Day, Making Time Table.
  - Stress Release Management: Concept of Stress, Understanding Stress, Effects of Stress on Personality and Work,
  - Anger Management: What is Anger? , Concept of Anger, Is Anger Good or Bad? Effects of Anger - Psychological, Physiological etc.
  - Self-Control: What is Self-Control? , Concepts of Control, Mind Control,
  - Leadership: Concept, Types, Qualities
  - Health Management: Physical Health, Psychological Health, Exercise, Diet, Cleanliness Habits.
  - Decision Making

- **Towards Career Building:**
  - Team Building
  - Goal Setting, How to Achieve Goals?, Setting Short Term and Long Term Goals , Importance of Continuous Efforts, Creating Future Opportunities
  - Interview techniques, Self-Introduction, Style, Body language,
  - SWOC Analysis.
  - Preparing for Competitive Exams.

Unit – II :- Mind Empowerment&Language Development

- **Mind Empowerment:**
  - Meditation, Yog, Pranayam, Dhyan, Dharna, Concentration, Development of Focus, Obstructions in Developing Concentration.
  - Positive Thinking, Positive Approach, Positive Attitude, Body Language, Gestures, Mind set.
  - Intelligent Quotient, Emotional Quotient, Spiritual Quotient, Creativity Quotient, Adversity Quotient, Open Quotient.

- **Language Development:**
  - Communication Skills, Role of Effective Communication in Career Building, Career Opportunities through Languages
  - B. Reading Skills, Writing Skills, Listening Skills, Speaking Skills

References/ Recommended Books:

1. Personality Development, Techmedia, New Delhi, 2002
2. An Approach to Communication Skills, Indrajit Bhattacharya, Dhanpat Rai & Co. Pvt. Ltd. Delhi, 2011.

3. Entrepreneurial Development, Dr. S. S. Khanka, S. Chand & Co. Ltd., New Delhi, 2010.
4. Entrepreneurial Development, Vasant Desai, Appnnaiah, Reddy, Gopala Krishna, Himalaya Publishing House, Mumbai. 2009
5. Who Will Cry When You Will Die?, Robin Sharma, Jaico Publishing House, India, First Edition 2006.
6. Attitude Is Everything: Change Your Attitude… Change Your Life!, Keller Jeff, Collins India, First Edition 2015
7. The Power of Your Subconscious Mind, Joseph Murphy, BeThink Books, India 2020.
8. समुद्रपक्षी जोनाथन, रिचर्ड बाख, छात्र प्रबोधन, पुणे.
9. भाषाव्यवहार व भाषा शिक्षण, संपादक सुरेंद्र ग्रामोपाध्ये, मौज प्रकाशन गृह, खटाव वाडी, मुंबई, पहिली आवृत्ती 2006.
10. व्यावहारिक मराठी, डॉक्टर लीला गोविलकर, डॉक्टर जयश्री पाटणकर, स्नेहवर्धन पब्लिशिंग हाऊस, पुणे, दुसरी आवृत्ती 2009.
11. जीवन विद्या एक परिचय, ए नागराज, जीवन विद्या प्रकाशन, अमरकंटक, दुसरी आवृत्ती 2011.

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Department of Lifelong Learning & Extension

Short Term Certificate Course

(6 Months)

Syllabus

For

117) Diploma in Hospital Management

Unit I: Introduction to medical terminology, Anatomy, Physiology, Common diseases and procedures

- **Fundamentals of Medical Terminology**
  Word Root, Prefix, Suffix, Abbreviations & Symbols
- **Introduction to Anatomy & Physiology (Organs & Systems)**
  Gastrointestinal, Respiratory, Circulatory, Renal, Reproductive , Nervous ,Endocrine, Musculoskeletal
- **Common Diseases & Procedures –**
  Gastro Intestinal
  Cholecystitis and Cholelithiasis, Appendicitis, Intestinal Obstruction, Hernia, Peritonitis, Gastroscopy, Colonoscopy, Laparoscopy, Loparotomy
  Respiratory
  Tuberculosis,Bronchial Asthma, Respiratory Failure, Pulmonary Embolism, Pneumonia, Bronchosopy, Pulmonary – Function Tests, Cardio – Pulmonary Resuscitation (CPR)
  Circulatory
  Hypertension, Coronary Artery Disease, Cardiac Arrest , Shock, Deep Vein Thrombosis (DVT), ECG, 2D Echo Cardiogram, Coronary Angiography and Angioplasty, Cardiac Catheterization ,Stress Test (TMT), Pacemaker.
  Renal
  Urinary Tract Infection, Renal Failure, Renal / Bladder Stones, Intravenous Pyelography, Cystoscopy, Urinalysis, Hemodialysis, Dialysis
  Reproductive
  Female :- Menstrual Disorders, Fibroids, Malignancy – Breast Cancer & Self – examination, Infertility and IVF, Mammography, Ultra Sound, Laparoscopy, Tubectomy, D & C
  Male ;- Prostate Enlargement, Hydrocele, Transurethral Resection of Prostate (TURP)
  Nervous
  Stroke (Cerebrovascular accident – CVA), Brain Tumor, Brain Injuries, Spinal Cord Injuries 5. Lumbar Puncture, Myelography, CT Scan, MRI, EEG,EMG
  Endocrine
  Thyroid disorders, Diabetes mellitus,
  Musculoskeletal
  Osteoporosis, Fracture and treatments, Implants
  Oncology
  Investigations, FNAC, Histopathology and frozen section, Application of nuclear medicine in oncology

Unit II: Hospital Administration

- History of hospital as organization and its structure
- Department of hospital
  Outpatient department and front office,Nursing services, Radiology and Imaging services , Pathology and Clinical Laboratory services, ICU/CCU/NICU/PICU/Cardic Catheterization services, Emergency Medical services, Blood bank services, Surgical and Medical ward, Obstetric and Gynecologic ward and Labor room suite, Central Sterile Supply Department, Medico legal service, Laundry and Line service, Housekeeping, Biomedical waste disponal, Kitchen and Catering, Medical Record Department 18) Account and Billing department
- Routine Admission / Discharge Procedures/Discharge Summary
- Daily Reports/Return
  Hospital Census, Matron's Report, Medical Officer's Reports, Casulty Report, Medico-Legal Cases, Report from ICU/ICCU, Security Report, Maintenance Department Report, OT List
- Patient's Complaints
- Medical Certificates
- Hospital Committees
  Role, Composition, Frequency of Meetings, Minutes of the Meeting, Follow up Actions.
- Patient Relation Management
- Interviews, Questionnaires, Observation, Exit Interviews, Reporting and Compliance
- Duties and Responsibilities of the Hospital Administrator/CEO
  In profit making hospitals, In Non profit making hospitals
- Marketing of Hospital
  Guest Lectures, Seminars, Workshops, Continuous Medical Education, Organization of Camps, Public Participation, International Marketing and medical tourism
- Hospital Security
  Staff, Patients, New born babies, Stores
- Hospital waste
- Methods of Infection Control

Unit III: Internship

The Following Department should be studies:

1. O.P.D. amd Front officer
2. Clinical Laboratories
3. Radiology and Imaging Departments
4. Casualty/EMS 5. Store
5. Marketing Services
6. Operation Theater 8. Critical care areas
7. CSSD
8. Wards
9. Maintenance Departments
10. Physiotherapy
11. Bio-Medical Departments
12. .Human ReCourses Departments
13. Catering and Kichen Service
14. Pharmacy

Recommended Books/References:-

1. Pricipal of Anatomy & Physiology – By Gerard J. Yortora
2. Anatomy & Physiology in Health & Illness – By Anne Waugh Churchil Lovingstone
3. Anatomy & Physiology for Nurse – By Evelyn Pearce – Indian Edition – Jaypee Brothers, New Delhi
4. Dorland's Pocket Medical Dictionary
5. Taber's Cyclopedic Medical Dictionars- Fadavis Phiuladephin
6. Medical Manual of Anatomy – By Sampath Madhyastha – CBS Publication.
7. Sana's Guidline for hospital infection control - by Mohd. S. Khan Jaypee Brothers, New Delhi.
8. Hospital Waste Managements & it's Monitoring - by Madhuri Sharma Jaypee Brothers, New Delhi. 3. Medical Store Management - By Shakti Gupta & Sunil Kant - Jaypee Brothers, New Delhi.
9. Medical Records Organisation & Management- By G.P. Mogli- Jaypee Brothers, New Delhi.

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Short Term Certificate Course

(6 Months)

Syllabus

For

118) Diploma inOdissi Dance

Unit - I: Historical and thereotical study of Indian Classical Dance

- Origin
- development of and techniques of odissi dance
- Names of Hand gestures
- Body positions
- feet positions

Unit – II :- Definations and Basic of odisi

- Asanyukta Hasta Mudras (Single Hand gestures)
- Sanyukta Hasta Mudras (Two hands Gestures)
- Shiro Bhedas (Head positions)
- Drishti Bhedas (Positions of eyes)
- Griva Bhedas (Positions of neck)
- Pada Bhedas (Positions of feet)
- Bhramari Bhedas (Various round moves)
- Mandala Bhedas (Various Positions of Moving round
- Chari Bhedas (different walking styles
- Taal Ektali (Basic Rhythm)

Unit - III: Padanyas

- Chauka Steps (10 Steps in Chauka/square bending position)5 Steps of Tribhangi postion
- Tribhandi Steps (10 Steps in Chauka/square bending position)

Unit - IV: Odissi Dance repertoire

- Mangalacharan (A beginning presentation of Odissi performance)

Recommended Books/References:-

1. Oddisi Indian Classical Dance – Sunil Kothari/ Parsicha
2. Ins and Outs of Oddisi Dance – Guru Ashis Kumae Das
3. Abhinaya – chandrika ans Oddisi Dance – Maya Das

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Short Term Certificate Course

(6 Months)

Syllabus

For

119) Diploma inAstronomy

Unit-I: History of Astronomy, Sky observations at night

- Pre-historicist astronomy, Early ideas of heavens, Astronomy as a tool in everyday life
- Contributions by ancient Hindu, Arabic, and Greek astronomers or thinkers like Ptolemy,Aryabhatta, Varahmir, Nicolas Copernicus, Johannes Kepler, Galileo Galili, TychoBrahe, Issac Newton etc.
- Ideal sky for astronomical observations: Identify prominent stars in the night sky.
- Constellation including Zodiac belt and Sky charts.
- The motion of the Moon, Planets, and apparent motion of the Sun.
- Application of Star walk-2 App/Sky Map

Unit-II: Sky Coordinate system in Astronomy and Astronomical Instruments

- Latitude and longitude at a place on the earth, Celestial coordinate system (RA andDec).
- Concept of celestial equator, elliptic, and equinoxes. Precession of equinoxes
- Astronomical definition of time, Visual magnitude system for stars and planets.
- Introductions about lenses and mirrors.
- Types of Telescopes, Constructions Working, Handling the Telescope, Binocular.
- Telescope with DSLR Camera, Telescope with a Mobile Camera, Connection BetweenTelescope and Computer.

Unit-III :Hands-on Projects

Practical Work

The distribution of marks for Practical:

Practical-I:

➢ Students must be performing hands-on Projects. (100 marks)

➢ Students give a Seminar on the selected hands-on projects and submit it report (50 marks)

List of hands-on Projects:

• Measuring the Diameter of the Sun
• Planets and Planetary Systems
• Mechanism of the Seasons
• Constellation including Zodiac belt
• Telescope Making
• Rocket Launcher
• Artificial Satellite
• History of Astronomers

Unit-IV :Observatory Projects

Practical-II:

➢ Students must be performing observatory Projects. (100 marks)

➢ Students give a Seminar on selected observatory projects and submit it report (50 marks)

List of Observatory Projects:

• Phases of the Moon
• The apparent motion of the sun
• Polari the north star/Ursa Major
• Solar or Lunar eclipse

Recommended Books/References :-

1. A History of Astronomy - David Leverington
2. Textbook of Astronomy and Astrophysics - S. Chandra, M. Sharma
3. Fundamental of Astronomy - Flavio Salvati.
4. The Joy of Star Watching - Biman Basu
5. Quiz Book of Astronomy - Dr. R. K. Sharma
6. A Quick Guide of Astronomy - Jim Stephens
7. Spherical Astronomy - Robin M. Green
8. Observational Astrophysics - Danie Rouan
9. Astronomy for Beginners - Sally R Ball
10. Becoming an Astronomer - Gourav Banerjee
11. Handbook of Astronomical Instrumentation - David N Burrows
12. Telescopes and Techniques - C. R. Kitchin
13. The Telescope - Louis Bell
14. Reflecting Telescope - Raymond N. Wilson
15. Telescope Optics: A Comprehensive - Harrie G. J. Rutten

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Syllabus

For

120) Diploma Course inSericulture

Unit - I: Introduction to sericulture: Mulberry& Non-Mulberry sericulture

- Introduction to sericulture: Mulberry & Non-Mulberry sericulture: 20 M
- Cultivation of food plants.
- Bioecology of mulberry silkworms.
- Tasar sericulture, Muga sericulture and Eri sericulture
- Rearing of silkworms
- Equipment's or requirements for rearing.
- Favorable Climatic conditions for rearing.
- Harvesting of Cocoons

Unit - II: Harvesting and Marketing of Cocoons

- Processing of cocoons.
- Stifling and reeling of cocoons
- Reeling's selling to Textile mills through Government sanctioned rates.
- Government Subsidies and Schemes for Sericulture farming.
- Reeling appliances, Stifling, Hot air drying, Wet air drying of cocoons.

Unit - III: Control and Preventive measures of Diseases Infection.

- Diseases of Bombyx mori
- Preventive measures for disease free cocoon production.
- Predators and parasitoids of silkworm and their management

Unit - IV: Sericulture organization and economics

- Marketing of silk, organizational set up of sericulture, economics of mulberry cultivation,
- Economics of cocoon production, economics of seed cocoon,
- Economics of silk production, extension education,
- Scope and Career Opportunities in Sericulture.
- Marketing and Maintenance of Seri Products.
- Utilization and recycling of Seri-Waste.

Practical Work:

The distribution of marks for practical-I:	(150 Marks)
➢ Students must be performing hands-on Projects/ Internships.	(100 marks)
➢ Students Seminars and report submission on hand-on trainings.	(50 marks)
The distribution of marks for practical-II:	(150 Marks)
➢ Dissertation and Project Submission on allotted topic.	(100 marks)
➢ Students presentation on the project and Dissertation submission.	(50 marks)

Recommended Books/References :-

1. An Introduction to Sericulture G. Ganga and Sulochana Chetti, OXFORD & IBH Publishing Co. Pvt. LTD. New Delhi ISBN 81-204-1179-X
2. Sericulture Manual R. K. Patnaik, Biotech Publisher, New Delhi, ISBN10 81-7622-188-0ISBN13 978-81-7622-188-7
3. Sericulture And Pest Control T.V. Sathe &; A.D. Jahav Daya Publishing House, Delhi, ISBN 81-7045-241-X
4. Sericulture Dr. Rajendra Reddy &; Dr. J.P. AbhayShankarCommonwealth Publishers, New Delhi, ISBN 978-81-311-0095-0
5. Comprehensive Sericulture, Vol. II. Silkworm Rearing and Silk Reeling, Ganga G. 2003.Oxford & IBH, New Delhi.Singh S. 1975.
6. Principles of Sericulture. Aruga H. 1994, Oxford&IBH, New Delhi.

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Short Term Certificate Course

(6 Months)

Syllabus

For

121) Diploma in Japanese Language and Culture

Unit - I:-Basic Japanese language

- Introduction to Japanese language and daily conversation.
- Basic pronunciations and introduction of alphabets (Hiragana, katakana, kanji)
- Vocabulary of Japanese words.

Unit - II:-Grammar and sentence structure

- Basic Japanese grammar: Verbs, Nouns, Adjectives, Adverbs, Clauses.
- Sentence structure
- Comparative study of English and Japanese Wh-type of Question and Answers.

Unit - III: Japanese language (Practical - I)

A) Reading (Minna No Nihongo Lessons 1-25)
Sentence reading (Hiragana, katakana, kanji)

B) Writing (Minna No Nihongo Lessons 1-25)
Sentence writing
Kanji Writing

Unit-IV: Japanese language (Practical- II)

A) Communication
Greetings and dialogue practice
Daily communication sentences

B) Listening
Shadowing (Listening practice and test of 25 lessons of Minna no nihongo)
Chokkai optional test (Chokkai – Listening in Japanese language)

Recommended Books/References :-

1. Minna No Nihongo (vol – 1.1)
2. Minna No Nihongo (vol – 1.2)
3. Genki 1
4. Genki 2
5. Soumatome N5

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Syllabus

For

122) Diploma Course inMedicinal Plant Propagation

Unit - I:- Introduction to Ethnobotany-

- Definition, history of ethnos botany.
- Indian scenario of ethno botany role of e ethno botany in medicinal plants knowledge and Ayurveda.
- Important of ethno botany

Unit - II:-Introduction to Medicinal Plants-

- System of Classification of Plants – Bentham and Hookers System for classification.
- Plants bionomical system,
- Identification of plants by flora.

Unit - III:- Plant Morphology –

- Morphology of root, leaf, flower, seeds.
- Modification of roots, Stem, leaf, flower

Unit - IV:- Medicinal Plants Propagation method –

- Definition Scope,
- Traditional and advance method of plant propagation
- Merits and demerits vegetative method for plants propagation
- Preparation by seeds managements practices
- Invitro Propagation

Application of medicinal plants –

- Study of local forest medicinal plants,
- Uses of medicinal plants.
- Role of medicinal plants in Ayurveda
- Production of herbal remedies from plants
- Marketing of medicinal plants products.

Practical Course:

- Study of morphology medicinal plants by using the stateflora.
- Identification of the local medicinalplants.
- Study of vegetative plants Propagation techniques in thefield.
- Study of tuberous medicinalplants
- Preparation of Herbarium of medicinal plants of local area.
- Collection of medicinal plants, seeds from local forestareas

Recommended Books/References :-

1. Hand book of Indian Medicinal Plants by M.C.Joshi
   Photo medicine by Ven Hari
2. Introduction to Ethno botany Definitions Methods- by Jain S.K
3. Indian Medicinal Plants: Uses and Propagation Aspect - by Akula Ramakishan
4. Herbarium Techniques by Pavel Paul, Savantan Dhar
5. Variant Book of Medicinal and Aromatic Plants by Mounika Y & K Mounika

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Short Term Certificate Course

(6 Months)

Syllabus

For

123) Diploma inNaturopathy and Yoga Therapy

Unit - I:- Basis of Yog and Yogasana.

1. Ashtanga yog Patanjali yog SutraF
2. Yogasana :Trikonasana, Bhadrasan, Ustrasan, Shashankasan, Vakrasan, Bhujangasana, Shalbhasan, Setubandhasan, Pavan muktasan, Dhanurasan,Naukasan, Uttanpadasan, Chakrasan.
3. Shuddhi Kriya, Six Karmas, Shankha Prakshalana.
4. Surya Namaskar : Benefits Of Suryanamaskar, Efficiency and Care While Performing Suryanamaskar, Treatment By Surya Namaskar.
5. Yoga and Mental Health,Mental Health Rajyoga, Tratak, Benefit of Tratak.

Unit - II:- Naturopathy Treatments.

1. Treatment Through Naturopathy
2. Mud Therapy
    a. Selection Of Mud
    b. Procedure of making Mud Pack
    c. Benefits of Mud Plaster
3. Massage Therapy
    a. Principal Of Massage
    b. Treatment Modalities of Massage
    c. Benefits of Care
4. Diet Therapy - I
    a. Moderate Food (Matanor)
    b. Wrong Procedure of diet
    c. Procedure of Making Nutritious Diet
5. Diet Therapy - II
    a. Fasting Therapy
    b. Type of Fasting
    c. Benefits Of Fasting

Unit - III:- Wellness with Naturopathy and Yog (Practicals I)
A. Examination of

a) Trikonasana Bhadrasan Ustrasan Shashankasan
b) Six Karmas, Shankha Prakshalana
c) Mental Health Rajyoga

Unit - IV:- Naturopathy through Lifestyle changes (Practicals II)

A. Examination of

a) Selection Of Mud
b) Procedure of making Mud Pack
c) Benefits of Mud Plaster
d) Massage Therapy
a) Principal Of Massage
b) Treatment Modalities of Massage
c) Benefits of Care

Recommended Books/References :-

1. Health Care Medicine - Madhav Chaudhary
2. Yoga Health Protect Keys - Dr Arun Khodaskar
3. Naturopathy System - Dr Gala
4. Dawas Nature Guide - Dr. Dawas
5. Therapeutics Treatment - Lila Madiwale
6. Naturopathy Treatment - Dr. Bhakru
7. Prakrutik Chikitsa Ek Rashtrabhav - Dr. Kranti Mahajan
8. Prakrutik Ayurvigyan - Dr. Rakesh Jindal
9. Nature Cure Its Science An Philosophy - Dr. N. P. Singh

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Short Term Certificate Course

(6 Months)

Syllabus

For

124) Diploma inComputerized Accounting

Unit – I :- Brief study - Accounting Introductions

- Definition- objectives of accounting, Branches of accounting, accounting process- Accounting cycle concept and conventions, principles of accounting, advantages of accounting
- Recording transactions and ledger posting Golden rules of Accounting- Double Entry System Single Entry System, Journal, Ledger, Balancing the Ledgeraccounts Subsidiary Books, Rectification of Errors.
- A) Trial Balance: - Definition, objectives, limitations, preparation.

B) Final accounts: - Preparation of Trading accounts, Profitand Loss Accounts, Balance sheet with Adjustment Entries.

C) Corporate Banking: - Introduction, Bank Pass Book, Negotiable Instruments, Bank Reconciliation Statement, Internet Banking- RTGS-NEFT

Unit – II :- Taxation Fundamentals: [Basic Concept]

- Direct and Indirect Taxations, Value Added tax, Income Tax and TDS, Goods and Service Tax.
- Analysis of Financial Statement: - Basic Concept Analytical Tools, Ratio Analysis, Fund Flow Statement, Cash Flow Statement, Inventory and Costing

Unit – III :- Accounting software tally 9.0/ higher (Practical)

- Introduction, Features, Company Info Menu, Gateway of Tally, Button Bar, Calculator
- **Working in Tally**
- **Company Creation: -** Accounts only and Accounts withInventory **Groups: -** Concepts, Creation of Group, Display alterationand Deletion of Groups
- **Ledgers: -** Concepts, Single ledgers Creation, Displayalteration and deletion
- **Vouchers: -** Concept, Types of Vouchers, features andconfiguration of Accounting Vouchers
- **Transaction: -** Accounting Vouchers, Inventory

Unit – IV :- Report and Advanced Features in Tally(Practical)

- **Reports Display Printing: -** Balance sheet, Profit and loss accounts Ratio analysis, Stock summary, Trial Balance, PayBook and Account Book.
- **Data Export and Import: -** ODBC, Outward and Inward,Connectivity, Data Import and Exports, Email, Upload, Backup, Restore.
- **Seminars**

Recommended Books/References :-

1. Financial Accounting Mr. R. L. Gupta.
2. Accounting for Business by Genesis.
3. Information technology and business data.
4. Processing-II by S. M. Kolte, Pimpalpure and Co Nagpur.
5. Company Accounts by Dr. Sanjay Kale, Jyoti Publication.
6. Company Accounts by A.S. Ukhalkar, Pimpalpure and Co Nagpur.
7. Financial Accounting by M.C. Shukla, Mayur Paper Back, Noida.
8. Financial Accounting by V. R. Mohota, Payal Publication, Nagpur
9. Advance Accounting by M.C. Shukla
10. Financial Accounting by Mr. R. L. Gupta

Sant Gadge Baba Amravati University

Department of Lifelong Learning & Extension

Short Term Certificate Course

(6 Months)

Syllabus

For

125) Diploma in Mahanubhav Sahitya & Philosophical Study

(महानुभावसाहित्यआणितत्वज्ञानाचाअभ्यास)

Unit – I :– महानुभावसाहित्य (लीळाचरित्रातीलनिवडकलीळा)

अ) महानुभावसाहित्यनिर्मितीचीमिमांसावपाश्वभूमीलीळाचरित्रनिर्मितीचाइतिहास. भाषाव रचना

आ) लीळाचरित्रातीलसमाजजीवनदर्शनसामाजिकस्वरूप, सन-वार-पर्व, जीवनव्यवहार, धर्मव्यवहार

इ) श्रीचक्रधरस्वामीयाकथानायकाचेव्यक्तीमत्वस्वभाव, संवादवैशिष्ट, सामाजिकसमरसता, उपदेश

ई) लीळाचरित्रातूनअभिव्यक्तहोणारेजीवनमूल्यअहिंसा, समता, प्रियभाषण, सत्यार्जव, अपरिग्रह

Unit – II:– महानुभावतत्वज्ञान – (निवडकप्रकरणवसूत्रे)

अ) सूत्रपाठाचापरिचय, ग्रंथवसंकलक

आ) अवतारसंकल्पना, पंचकृष्णअवतारवपंचकृष्णअवतारगुरू-शिष्यपरंपरा

इ) अद्वैततत्वज्ञानाचीसंकल्पना, परिचय, जीवदेवताप्रपंचवपरमेश्वरयाचारघटकांचीस्वरूपचिकित्सा

ई) समाजमूल्यांच्याअंगानेअसलेलीसूत्रांचीशिकवण

Unit – III:-प्रात्यक्षिक 1

अ) महानुभावसाहित्यपेपर, स्थानभेटीवसहल)

Unit – IV:–प्रात्यक्षिक2

अ) पोथीश्रवण : निवडकवसंतव्याख्याताभेटी

Recommended Books/References :-

1) लीलाचरित्र-प्रा. पुरुषोत्तम नागपुरे
2) लीलाचरित्र-माधवराज पंजाबी
3) गोविंदप्रभू चरित्र-डॉ. व्ही.बी. कोलाटे, शेहवर्धन, पुणे.
4) स्मृतीस्तल, व्ही. एन. देशपांडे, विनास प्रकाशन, पुणे.
5) महानुभावांची अनन्वयस्थले-डॉ. रमेश आवळणगावकर, चंद्रकलाप्रकाशन, पुणे.
6) महानुभाव तत्वध्यान-डॉ. व्ही.बी. कोलाटे, राऊळ, प्रकाशन, औरंगाबाद.
7) राष्ट्रयात्रा प्रबोध, डॉ.लासूरकर महानुभाव, नाशिक.
8) सूत्र प्रकाश, प्रा.पुरुषोत्तम नागपुरे, अमरावती.
9) वचनमाला-भाग-1 व 2, B. B. शात्री, चिंतन प्रकाशन, औरंगाबाद.

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Department of Lifelong Learning & Extension

Short Term Certificate Course

(6 Months)

Syllabus

For

126) Diploma inSamarth Krushi(समर्थकृषी)

Unit -I:-Introduction of Samarth Krushiand Need of it.

- Way of natural forming according to today's climate change.
- Use of various modern techniques.

Unit - II :- Today's available toxic food

- Residues of chemicals fertilizer, pesticide and insecticide in present available food material.
- Effect of toxic food on ecosystem, food chain and environment
- Effect of toxic food on health
- problem arisesCause of various diseases due to toxic food

Unit-III- Way of Samarth Krushi

- Use of various natural source
- Study of climate and techniques use as per climate change.

Unit- IV:- Various Bio fertilizer, insecticides, growth promoter, pesticides.

- Content of bio fertilizer, Insecticide and growth promoter from natural product, plants.
- Profitable way of marketing & Process on food material

To improve farmers economy and to create job work to young generation of India

Practical Session :-

1. Method of preparation of bio fertilizer, insecticides, growth promoter, pesticides.
2. Method preparation "Amrut Mati and Amrut Jal"
   Amrut Jal – It is growth promoter as well as Nutrient of crop.
   Amrut Mati – It is means pollution free, toxic residue free soil. For preparation of this toxic residue free soil we have process it by specific scientific method. This soil become fertile like forest soil. It requires 140 days for preparation.
3. Testing of vegetables containing residue of chemicals which are available in market.
4. Testing soil quality by simple laboratory method before and after treatment.

Recommended Books/References :-

1. Biological and chemical hazards in food and food products (prevention , practices and management) Santosh k Mishra, Megh R Goyal, ManjuGaare) CRC Press (Taylor& Francies group) prize-13080 INR
2. Chemistry of fertilizers and manure including information on the chemical constituents and types of fertilizer and manures – 738 INR
3. Methods of Physical and Chemical Analysis of Soil (Arun Kumar Saha) Kalyani Publishers – 369 INR
4. Agricultural Chemical Analysis (Palala Prints)– 1720 INR
5. Introduction to Soil Chemistry: Analysis and Instrumentation (Alfred R. Conklin Jr.) Wiley – 4320 INR
6. Textbook of practical for testing soil texture – PDKV Akola, Agriculture college Sangli

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Short Term Certificate Course

(6 Months)

Syllabus

For

127) Diploma Course inNanotechnology

Unit- I :- Nanotechnology & Nanomaterials:

- Nano science, nanoparticles, history of nanoparticles, nanotechnology, effect of size on nanoparticles. Types of nanomaterials, properties of nanomaterials (structural, morphological, electrical, magnetic, optical, superconductivity) application and drawbacks of nanomaterials

Unit- II :- Preparation method:

- Synthesis of nanomaterials, types of synthesis method, physical method, chemical method, weight chemical method, green synthesis, application and drawbacks of synthesis methods.

Unit- III :- Characterization techniques and practicals.

- TG -DTA, XRD, FTIR, SEM, TEM, 2/4prob method (DC Resistivity), LCR- Q Meter (Dielectric), VSM etc**.**

Unit- IV:- Case Study

- Case study of nanomaterial: oxides, ferrites, perovskite, graphene base etc

Practical on Nonotechnology

- Synthesis of oxide using hydro thermal method
- Synthesis of ferrites using sol-gel method
- Synthesis of perovskite using solid state method
- Synthesis of nanomaterials using chemical bath deposition method.
- Analysis of nanomaterials.

Recommended Books/References :-

1. Introduction to Nanoscience & Nanotechnology by K. K. Chattopadhyay and A.N.Banerjee, Publisher: PHI Learning and Private Limited
2. Nanotechnology, Rakesh Rathi, S Chand &; Company, New Delhi
3. Nanotechnology: Principles and Practices by Sulbha K Kulkarni, Capital
4. Publishing Co. New Delhi

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Short Term Certificate Course

(6 Months)

Syllabus

For

128) Diploma Course inNature and Wildlife Photography

Unit I: Fundamentals and Basics of Wildlife Photography

- History of Wildlife Photography
- File format (JPEG &; RAW)
- Understanding subject
- Mirror and Mirrorless DSLR camera
- Lenses (50mm, 18-55mm, 55-250/300mm, 105mm Macro lens, 150-600mm)
- Introduction and application of accessories

Unit II: Camera Settings and Post Processing

- Full Automatic Mode (A-mode)
- Program Mode (P-mode)
- Aperture Mode (Av)
- Shutter Priority Mode (Tv)
- Manual Mode (M)
- Macro Mode
- Exposure
- White Balance
- Shutter speed
- Aperture
- Focus
- ISO
- Processing RAW image
- Understanding Software (Adobe Light room, Photoshop)
- Participation in exhibition and competitions

Unit III: Experiment on camera setting and Image Editing (Practical - I)

- Students must be performing Experiment on camera setting (Different Modes
- Students must be performing Experiment on camera setting (Different Functions).
- Students must be performing Experiment on Image editing.

Unit IV : Project and Field Work (Practical - II)

- Students must be Submitted project report.
- Students must be Submitted field visit report.

Recommended Books/References :-

1. The Complete Guide to NaturePhotography: ProfessionalTechniques for Capturing DigitalImages of Nature and Wildlife by Sean Arbabi, Amphoto Books
2. Wildlife Photography Richard Bernabe Ilex Press
3. Wildlife Photography at Home: Take Great Photos in Your Own Backyard by Richard Peters Ilex Press
4. Wildlife of Central India: Photographic Field Guide by David Raju Notion Press

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Department of Lifelong Learning & Extension

Short Term Certificate Course

(6 Months)

Syllabus

For

129) Diploma Course inDisaster Management andMitigation

Unit I: - Disaster Management act and Types of Disasters

- Disaster Management Act 2005
- Natural Disasters- Flood, Earthquake, Landslides, Draught. Heat and cold waves
- Manmade Disasters- Fire, Road accident, Rail accidents, Air accidents, Terrorismand Riots.
- First aid- Introduction to first aid and EMS.
- CBRN- Chemical, Biological, Radiological and Nuclear Disasters.

Unit II: -Disaster Management and Standard operating system, Case studies. Flood

- Disaster Management Plan:- Table Talk, Rescue Plan
- Role of multiple stake holders:- Para military forces and NGO's
- Communication system
- Disaster response:- Before Disaster, During Disaster and After Disaster.
- Case Studies:- Earthquake, Flood, Tsunami and Cyclone.

Unit - III :- Practical – I :- First Aid

- First aid and PPEs.
- CPR (Cardiopulmonary Resuicitation)
- Body Assessment
- Bandages and Splinting
- Snake Bite management
- Casualty carrying, Lifting and Moving
- Bandages and Splinting

Unit - IV :- Practical - II: - Improvised Devices and Life saving techniques.

- Water rescues
- Earthquake and rescue
- Fire Extinguishers and its applications
- Ropes and Roping
- Improvised floating devices
- Inflatable rubber boat
- Earthquake response
- College/School safety plan

Recommended Books/References :-

1. Natural Hazards and Disaster Management: Vulnerability and Mitigation by R. B. Singh World Focus
2. DISASTER MITIGATION: EXPERIENCES AND REFLECTIONS by Alka Dhameja and Pradip Dhameja, Prentice Hall India Learning Private Limited
3. Disaster Management: Disaster Management and Mitigation approaches in india, Paritosh Srivastava Kindle Edition
4. Management and Mitigation of Natural Disasters by Rajan Kumar Sahoo, Regal Publications
5. Disaster Education and Management" by Rajendra Kumar Bhandari, Springer

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Short Term Certificate Course

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Syllabus

For

130) Diploma Course inDiploma in Mythological Studies

Unit I : Research Methods for Mythology

- Linguistics
- Psychology
- Archetypical Criticism
- Sociology
- Anthropology
- History
- Archeology
- Political Science
- Astronomy
- Geography

Unit II : Western Mythology

- Introduction of Western Mythology
- History of Mythical Studies
- Myths and Culture in West
- Myths and Arts in West
- Myths and literature in West
- Myths and Philosophy
- Archetypal Criticism
- Scope of Mythical Studies
- Significance and Relevance of Mythical Studies in Modern Context
- History and Myths
- Pseudo science and myths
- Creative writing and Myths

Unit - III:- Myths of Mother Goddess.(Practical -I)

- Introduction
- Concept of Mother Goddesses
- Indian Myths: Mother Goddesses

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- Global Myths : Mother Goddesses
- Comparative Study of Myths of Mother Goddesses
- Ways of Worship
- Archeological and anthropological perspective
- Cultural heritage of Mother Goddesses
- Goddesses worship in Modern Context
- Feminism and Mother Goddesses

Unit - IV :- Myths and Iconography (Practical -II)

- Introduction
- Correlation between myths and Iconography
- Mythical incarnation in Iconography
- Ancient Symbology
- Symbols and Myths
- Archeological Symbology
- Mythical influence on Modern and ancient Architecture
- Myths : Modern and Ancient Art.(Practicals)

Recommended Books/References :-

1. Northrop Fry: Anatomy of Criticism
2. Stephen Fry: Mythos
3. James Frazer : The Golden Bough
4. रा. चिं. ढेरे - लज्जगौरी
5. मंगलासामंत - स्त्रीपर्व
6. अशोकराणा - आदिमाया
7. अशोकराणा - भारतीयमातृदेवता
8. अशोकराणा - असत्याचीसत्यकथा
9. अशोकराणा - सणांचीसत्यकथा
10. शरदपाटील - प्रिमीटिव्हकम्युनिजम, स्त्रीसत्ता, मातृसत्ताआणिभारतीयसमाजवाद
11. शरदपाटील - दासशूद्रांचीगुलामगिरी
12. शैलालोहिया - भूमीआणिस्त्री
13. सुकन्याआगाशे - मिथकांचामागोवा.

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For
131) Diploma in Clinical Laboratory Technology

Unit - I :- Clinical Biochemistry and Microbiology (Paper –I)

- Haemoglobin, Enzymes & Coenzymes, Gastric Juice - constituents, collection – Acidities, Hormones - Definition, functions, Blood and cerebrospinal fluid, function.
- Urine-formation, renal function test, Liver function test, Carbohydrate Metabolison, Glycolysis, glycogenolysis, gluconeogenesis, ketosis, glycosuria, renal glycosuria, ketonuria, Metabolisms of lipids, Triglyceride, cholestrol, plasmalipoprotein- ketone bodies, & ketonuria.
- Protein metabolism: urea, creatine, Creatinine, protein urea, edema, transaminases.
- Water & mineral metabolism - dehydration- calcium, phosphorous, sodium, potassium, chlorides, iron, iodine, etc.
- Introduction to Microbiology, Morphological classification of bacteria, Cultivation of bacteria aerobic and anaerobic, Culture media, types of media, special media, Sterilization and Disinfection (Physical and Chemical methods)
- Morphology and Pathogenicity of Staphylococci, Streptococci, Salmonella. Shigella, and Vibrio, Morphology, Pathogenicity and methods of isolation of Mycobacterium Tuberculosis and Mycobacterium laprae, Antimicrobial susceptibility test, Preservation of stock cultures.
- **Immuno Hematology and Clinical Pathology**
  Introduction to hematology, Collection of blood - ways of collection, Anticoagulants, Red cell count – Haemocytometry, White cell count – TLC, Differential white cell count. (DLC), Absolute Eosinophil count, ESR, Haematocrit - Packed cell volume, Haemoglobin estimation, Red cell Indices MCV, MCH, MCHC, Reticulocyte count, Sickel cell preparation, Osmotic Fragility test, Preparation of Bone Marrow, Morphology of Normal and Abnormal cells, Coagulation test, Bleeding time, clotting time, Urine analysis (Normal constituents, Physical examination, chemical examination & Microscopic examination.), Stool Examination (Normal and Abnormal constituents.), C.S.F. Examination (Normal and Abnormal Cell counts and different counts.), Semen Analysis: (Physical examination, Mortality and Morphology), Blood grouping, Coombs tests

Unit - II :- Histotechnology, Blood Banking Technology Autopsy Technique (Paper - II)

- Introduction, Cell, Tissue & their function, Methods of examination of tissue and cells Fixation of tissue, Tissue processing, Section Cutting, Staining, Decalcification, Blood collection:a) Selection & screening of donor, b) Collection of blood, c) Various anticoagulants used, Storage of blood, Cell separation and transfusion of various components of blood. Organization, operation, and administration of blood bank.
- **Autopsy Technique :-** a) Assisting in Autopsy. b) Preservation of organs & processing of the tissue.
- **Advance Techniques and Future Trends in Microbiology :-** Electrophoresis Technique, Immunologic methods, Chromatographic Technique, Radio-isotopic Technique, Rapid diagnostic technique, Glucometer Cholesterol strip, Use of Autoanalyzer.
- **Advance Techniques and Future Trends in Biochemistry :-** Rapid diagnostic technique, ELISA and its modification, Gel Immuno electrophoretic technique, Electron microscop, Hospital infection and its laboratory investigation, Laboratory investigation of Immunodeficiency patient & HIV patient.

- **Advance Techniques and Future Trends in Clinical Pathology :-** Rapid test in urine analysis - Dip stick/multistick, Rapid test of urine culture. - Dip slide culture, Rapid test for stool analysis- Ocult blood, Rapid test for stool culture. - Rota virus test, Rapid test for semen analysis. - Total count, Molecular diagnostic Technique &Tele pathology.

Unit –III :- Practical - I

- **Clinical Biochemistry :-** Diagnostic test of urine; collection & preservation, physical characteristic, Normal constituents (a) Qualitative test of urea, uric Acid, Creatinine, calcium phosphors.sodium chloride (b) Titrable acidity (c) Urea clearance & Creatinine clearance, Abnormal constituents of urine.(a) Qualitative test for sugar, Albumin, ketone, blood, bile salts and pigments (b) Determination of sugar, albumin (c) Test for lactosuria, Pentosuria, fructosuria a) Collection and preservation of blood, b) Blood glucose test, c) G.T.T.
- Non-protein Nitrogenous compounds - Determination of serum urea; uric acid; Creatinine.a) Determination of SGOT and SGPT, b) Determination of Phosphatase (Acid & Alkaline), Serum bilirubin total & Direct, Serum lipids: Cholesterol, Triglyceride, HDL & LDL.
- **Microbiology :-** Gram staining technique, Acid fast staining (Z-N), Motility by hanging drop method, Cultivation of UTI isolates, Culture and sensitivity test (Kirby-Bauer method), Biochemical test (Glucose, Lactose, Mannitol, Indole, MR, V.P.Citrate)
- **Hematology and Clinical Pathology :-** Haemoglobin estimation by Sahli's method,R.B.C. count, TLC, DLC, Platelet count, Reticulocyte count, Bleeding time, clotting time, Examination of blood smear (Peripheral smear), Eosinophil count: LE cell test, E.S.R. sickle cell test, Stool examination for ova, cyst, Amoeba, Exudate, fat globule, Routine Urine analysis, Sputum Analysis, Semen Analysis.

Unit –IV :- Practical - II

- **Immunology and Serology :-** Agglutination, precipitation and complement fixation reaction, Widal test, Weil Felix test, Bacterial slide Agglutination test., ASO test. (Latex Agglutination test) Wasserman test, Mauntoux test., Agar gel diffusion test (AGD); counter immuno Electrophoretic test (CIEP)., single Radial Immuno diffusion test (SRID), Enzyme Linked Immuno Sorbent assay (ELISA).
- **Parasitology :-** Collection, preservation and Transportation of faecal material and its physical, chemical, and parasitic examination, Preparation of stained and unstained slide for detection of larvae/ova or cysts, Concentration methods for ova & cysts, Demonstration of gross specimen of Hook-worm, Round-worm, Whip-worm, Thread-worm, Pinworm & Tapeworm., Demonstration of following parasites/ova / cyst under microscope a) Gardia lamblia, b) T. Vaginalis, c) Malarial parasites, d) Lieshmenia, e) Round worm, f) Whip worm, g) Thread worm
- **Mycology :-** Collection and processing of skin scraping/ nail clipping/hair pieces/ clinical Material for demonstration of fungal elements., Microscopy for fungal elements: unstained preparation., Microscopy for fungal elements: stained preparation. (Lactophenol cotton blue) 4) Demonstration of common fungal media with and without antibiotics.
- **Virology :-** Instruments/Equipments and glassware used in viral diagnostic laboratory., Inoculation of chick embryo and other cell/tissue culture media
- **Field Work :- The project work / field work** involving minimum 15 days on job training in laboratory, hospital or institution / industry and critical observation along with the Certificate of institution concerned be submitted.

Recommended Books/References :-

1. Textbook of microbiology by Ananthanryan and Panikar's
2. Microbiologicl application by benson
3. Biochemistry by Lehninger.
4. Manual notes provide.

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Short Term Certificate Course

(6 Months)

Syllabus

For

132) Diploma in French Intermediate Level

Unit - I: Communication skill

- Communication skill – talking about your hobbies
- Physical description description
- Ask someone for something
- How to shop
- Talk about where you live.

Unit - II: Accept and refuse

- Talk about your likes and dislikes
- Accept and refuse
- Ask about the day. The time and the date
- Engage in a simple buy and sell situation
- Second group verb.

Unit - III: Sentence formation

- Sentence formation
- Adjectives in French
- Preposition
- Articles
- Pronouns

Unit – IV: Accents in French

- Adverbs
- Accents in French
- How to form negative sentences
- Describe event and daily activities.

Recommended Books/References:-

1. An Introduction tothe French Language: Being a Practical Grammar with Exercises (1893 by Alphonse Naus Van Daell
2. Easy French Step By step by Myrna Bell Rachester, Mcg raw Hill Education
3. Fluent in French: The most complete study guide to learn French by Frederic Bibard
4. SHORT STORIES IN FRENCHby Olly Richards

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Syllabus
For
133) Diploma in Process Improvement using Lean Six Sigma

Unit - I: Introduction to Lean Six Sigma and Basic Statistics

- Introduction to LSS
- Lean six sigma –history and background
- Basic statistics
- Types old data –Continuous and discrete
- Data distribution types-shape od data
- Key statically measures for central tendency and variation
- Measures of variation –variance, standard deviation and inter quartile range (IQR)
- Basic Graphical tools (praetor and Box plot)

Unit - II: Lean six sigma DMAIC Approach

- Introduction to 5 stage DMAIC Methodology
- **Define**-phase-ctqs, ctq Drill down, threat opportunity matrix , keno model, project charter, ARMI,communication plan , project plan SIPOC
- **MEASURE**- Phase-statically problem solving , fishbone analysis, data collection, sapling techniques types of variation ,MSA, discrete gage Run , continuous , Gage Run
- **ANALYZE**- phase – data stability and normality, normal distribution run chart, box plot process capability, statistical target setting, inferential statistics, hypothesis testing(1sample test , 2 sample test ANOVA , homogeneity of variance, Mann Whitney test moods median test, 2 sample test 1p and 2p tests , chi square test and regressions) nominal Group technique, process map analysis
- **IMPROVE**- phase –root cause analysis, design thinking tools, solution generation, ideation matrix prioritization matrices, failure mode effect analysis (FMEA), PUGH Matrix solution story boarding, pilot implementation.
- **CONTROL**- phase – implementation plan , process monition, statistical validation of impotents, statistical process control, control charts (X-bar s chart, X –Bar chart IMR chart, C chart , P Chart, NP chart , U chart) control plan escalation metric, business impact calculation, project closure s

Unit - III: Lean Methodology- Basic and Advanced lean tools

- Fundamentals of lean , history/ origin of methodology and 10 commandments of lean
- Lean principles – specify value, map the value stream, establish flow implement at pull, work towards perfection
- The 3 most wanted in lean – muri , muda
- 8 types of wastes
- 5s tool
- Mistake proofing
- Jidoka (Autonomation) ANDON (visual signals) Heijunka (level loading)
- Just in Time (JIT) and TAKT time
- Valu stream mapping-15 VSM process
- Kaizens- types, kaizen workouts and prioritization
- Toyota lean house of qualit

Unit – IV: LSS project- Application of DMAIC and lean

- Students to work on 1 end to DMAIC project – either allotted by the instructors or identified by the students
- Prepare complete documentation of the project for all 5 phases of DMAIC using the tools and tech and techniques learned and continuous guidance provided by the instructors
- Coaching , mentoring and continuous guidance provided by the instructors
- Final project presentation to the certification panel- evalution as per lean six sigma methodology

Recommended Books/References:-

1. Intliri Lean Six Sigma Academy's Black Belt curriculum handouts
2. Lean Six Sigma Body of Knowledge (BoK) – General Electric
3. Certified Six Sigma Black Belt Handbook - American Society for Quality (ASQ) (2009)
4. Six Sigma - A Complete Step by Step Guide - Council for Six Sigma Certification
5. Six Sigma for Dummies - Craig Gygi, Neil DeCarlo, Bruce Williams
6. The Six Sigma Handbook - THOMAS PYZDEK
7. The Six Sigma Way - Team Fieldbook

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Syllabus
For
134) Diploma in Memory Improvement & Speed Reading

Unit-I :-What Is Memory Power?
- Human Memory: Meaning, concept.
- Self Assessment of Memory
- Memory Power Improvement through::
  - Memory Warm Up Exercise.
  - Audio Visual Memory Training.
  - Remembering the Names & Faces
  - Linking Method Training
  - Acronym and Acrostics Techniques
  - Keyword Techniques
  - Chunking Techniques
  - Musical Walk Memory System
  - Alphabet & Month PEG System
  - The Rhyming & Number Shape System

Unit- II :- How To Improve Memory Skills?
- Applying Memory Techniques in Studies.
- Exercise to Improve Memory
- Audio Visual Training of Memory Games.
- Remember the Items Exercise

Unit- III :- What is Speed Reading?
- Meaning, Concept
- Self Assessment of Reading.
- Meaning of Comprehension
- Meaning of Retention
- Habits of Reading
- Effective Reading System:
  - Speed Reading Test
  - Speed Drill Technique
  - Skim Reading Technique
  - Two Stop Method

Unit- IV :- Improve Reading Speed, Comprehension ,Retention
- Application of Speed Reading in Academics.
- Eye Exercises
- Vision Exercises
- Eye Movement Exercises
- Grabbing of Words for Fluency
- Reading Strategy

Recommended Books/References:-

1. The 7 Real Mind Power Secrets by Jim Francis
2. 4 Simple Ways to Master Your Mind by Dr. Robert Anthony
3. Alpha Brain Wave research by Dr. James V Hardt
4. General Psychology by Dr. David Feinstein
5. How to Develop Super Power Memory
6. Secrets to Super Memory
7. Be a Speed Reader
8. What is Speed Reading

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Short Term Certificate Course

(6 Months)

Syllabus

For

135) Diploma in Acting

Unit - I: Literature, Theatre History and play Analysis

- Introduction to the form of Drama (Western and Indian)
- Introdution of Bharata Muni “ Natya Shastra”
- Introduction of Media (news channel)
- Indtroduction to Hind one – Act play
- Story Writing
- Screen Play Writing
- Dialogue Writing

Unit - II: Literature, Theatre History and play analysis II

- Introdution to traditional theatre form of india
- Brief study of play ’s based on Traditional theatre forms of india
- Introdution to western theatre – greek and ro Roman
- Introduction to western theatre – till Elizabethan
- Media (news channel)
- Creative writing
- Introductions of song and poem writing

Unit - III: Acting techniques (Practical -I)

- An Actor ’s Art
- Training of the voice
- Speech Traning and Vocal Expression
- Mime and Movement
- Improvisation

Unit - IV: Theatre Technique (Production) (Practical - II)

- Role of Director in Modern Theatre.
- Theatre Management
- Principales of paly Production
- Media of the Director
- Stage Craft: Drawing and practical
- Camea Handling

Recommended Books/References:-

1. ACTING TECHNIQUE: THE ESSENTIALS (By - Uta Hagen)
2. Stella Adler: The Art of Acting, (By- Howard Kissel)
3. An Actor Prepares, (By Constantin Stanislavski)
4. Memorization for Actors, (By-Alexa Ispas)
5. Vachik Abhinay” – by Dr Shriram Lagoo.
6. Abhinay Sadhna” – by A Narayan Kale
7. An Actor Prepares” – by Constantin Stanislavski
8. Acting for Animators” – by Ed Hooks
9. Acting- the first six lessons” – by Richard Boleslavsky
10. Natyashastra” – by Bharat Muni

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Syllabus

For

136) Diploma in Fashion Designing

Unit - I: History of world Fashion.

- Design Consept.
- Elements Of Design
- Color Theory, Egypt, China, Japan etc.

Unit - II: TextileScience

- Fabric Finishes
- Methods of dying
- Methods of printing.

Unit - III: Illustration

- Types of Kurtas
- Types of skirts
- Pattern making
- Types of Kurtas
- Types of Skirts
- Types of shorts /Long one piece

Unit IV: Surface Oranamentation

- Differents Draping techniques
- Traditional Hand work of Different Areas.
- Zari Work

Recommended Books/References:-

1. Patternmaking for Fashion Design (Ring-bound)by Helen Joseph Armstrong
2. The Fundamentals of Fashion Design (Paperback) by Jenny Udale
3. Fashion Illustration: Inspiration and Technique (Paperback) by Anna Kiper
4. Fabrics A to Z: The Essential Guide to Choosing and Using Fabric for Sewing by Dana Willard

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Syllabus

For

137) Diploma in Entrepreneurship Development

Unit – I- Who is an Entrepreneur?

- Entrepreneurship character ship, Necessity, objectives.
- Leadership, Decision Making, swot analysis, Motivation, ideal model.

Unit - II- Attitude, Environment Task

- Attitude, Environment Task, satisfaction knowledge, Harmon, acceptance dedication & devotion.
- System planning objectives STP, MTP, LTD Relevant model, Limitations, Execution, feedback conformation.

Unit - III – Communication

- Communication 6C 7 habits Concept of scientific system model Japanese 5S.
- Role of DIC ---> Pioneer task, SST, MSI, LSI, incentive organization DRDA, MSSIDC, MITCON, MIDC, MEEB, Rolled, ZDM.
- Ways to raise finance, finance Role of each agency's parameter with role concept of production planning.

Unit - IV - Project.

- Project preparation, capital cost, fixed running, and production planning BEP success stories.

Recommended Books/References:-

1. Success story for worth survival
2. Pioneer point presentation prepared
3. Seminar with practical task
4. MCED manual / magazine
5. Chamber of commerce manual
6. Production management by G. R. Shekapure

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Syllabus

For

138) Diploma in Architectural Software & Interior

Unit I: ZW CAD(AutoCAD)

Introduction to ZW CAD(AutoCAD), File Management, drawing tools/ Modify tools, Object properties, Dimensioning and detailing Dimensions & so many things.

Unit II: Revit Architecture &Sketch-Up

Revit Architecture - Revit File Types, GUI, Building Elements, Grids, Construction Modeling Tools, Array, customizing stair documentation, Modifying Continuous wall, Rendering, Solar study, working with linked models, Working with adaptive components& so many things.

Sketch-Up - Introduction of SketchUp, understanding interface and navigation, create shortcuts, set geo location, file import, modify tools - move, copy, rotate, scale,mirror, offset linear
array, polar array, push pull, follow me, make component, make group, solid tools, section plane & so many things.

Unit III: 3ds Max-&V-Ray

3ds Max-Introduction, about 3ds Max Project work flow Modeling, Texturing, Lighting, Animation, Rendering and Compositing Definition for Max for Engineers/Architects. Creating Relax, Skew, a Chair Stretch, model Mirror. - Modeling Slice, using Shell, Parametric Displace, Noise, Modifiers Spherify, - Bend, Lattice, Taper, Ripple, Twist, Wave, Affect
Region. Squeeze.

V-Ray – V-Ray Introduction, Global Illumination in V- Ray, Image Sampling, V -Ray Lights, V- Ray Camera, V- Ray Materials, Rendering an interior scene using V-Ray, Rendering an exterior scene using V-Ray

Unit IV: Practical –

Final project – interior exterior, modeling exterior design - bed, sofa, room design, door, window, wall, Site visits, and visits to interior shops.

Recommended Books/References:-

1. Software Architect's Handbook: Become a successful software architect by implementing effective architecture concepts by Joseph Ingeno
2. Software Architecture: Foundations, Theory, and Practice Hardcover – by Richard N. Taylor, Nenad Medvidovic, Eric Dashofy.

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Syllabus

For

139) Diploma in Full Stack Developer

Unit – I : Hyper Text Markup Language (HTML5)

- Introduction to HTML
- Browsers and HTML
- Editor's Offline and Online
- Tags, Attribute and Elements
- Doctype Element
- Comments
- Headings, Paragraphs, and Formatting Text
- Lists and Links
- Images and Tables

Unit – II : Cascading style Sheet (CSS)

- Introduction CSS
- Applying CSS to HTML
- Selectors, Properties and Values
- CSS Colors and Backgrounds
- CSS Box Model
- CSS Margins, Padding, and Borders
- CSS Text and Font Properties

Unit – III : JavaScript

- Introduction to JavaScript
- Applying JavaScript (internal and external)
- Understanding JS Syntax
- Introduction to Document and Window Object
- Variables and Operators
- Data Types and Num Type Conversion
- Math and String Manipulation
- Objects and Arrays
- Date and Time
- Conditional Statements
- Switch Case
- Looping in JS
- Functions

Unit – IV :Bootstrap

- Introduction to Bootstrap
- Bootstrap Basics
- Bootstrap Grids
- Bootstrap Themes
- Bootstrap CSS
- Bootstrap JS

Recommended Books/References:-

1. The Full Stack Developer: Your Essential Guide by Chris Northwood
2. Full Stack AngularJS for Java Developers by Ravi Kant Soni

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Syllabus

For

140) Diploma in Ethical Hacking

Unit - 1 Hacking & Legal Parameters

- Principles of Hacking & Legal Parameters
- Viruses, Trojans, Malwares and OS Level Attacks and Counter Measures.
- Malware Analysis.

Unit - II : SQL

- Foot printing, Enumeration, Scanning, Sniffing, Social Engineering Foot printing through Search Engines, Web Services,
- SQL Injection, DOS Attacks, Session hijacking and System hacking, SQL Injection.

Unit – III : Web Applications

- Web Applications and Web Servers attacking methodology and Counter measures.

Unit -IV Practical

- IOT and Cloud Attacks and Defense Mechanisms,
- Mobile & Wireless Networks Hacking and Counter measures.

Recommended Books/References:-

1. Gray Hat Hacking The Ethical Hacker's Handbook by Allen Harper

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Syllabus

For

141) Diploma in Data Science

Unit – I : Data Science Essentials & Data Engineering Foundation

DATA SCIENCE ESSENTIALS

- Introduction to Data Science
- Data Science Terminologies
- Classifications of Analytics
- Data Science Project workflow

DATA ENGINEERING FOUNDATION

- Introduction to Data Engineering
- Data engineering importance
- Ecosystems of data engineering tools
- Core concepts of data engineering

Unit – II : Python For Data Science

- Introduction to Python
- Python Data Types, Operators
- Flow Control statements, Functions
- Structured vs Unstructured Data
- Python NumPy package introduction
- Array Data Structures in NumPy
- Array operations and methods
- Python Pandas package introduction
- Data Structures: Series and Data Frame
- Pandas Data Frame key methods

Unit – III : Visualization With Python & R Language Essentials

VISUALIZATION WITH PYTHON

- Visualization Packages (Matplotlib)
- Components of A Plot, Sub-Plots
- Basic Plots: Line, Bar, Pie, Scatter
- Advanced Python Data Visualizations

R LANGUAGE ESSENTIALS

- R Installation and Setup
- R STUDIO – R Development Env
- R language basics and data structures
- R data structures, control statements

Unit – IV : Statistics & Machine Learning Introduction

- Descriptive and Inferential statistics
- Types of Data, Sampling types
- Measures of Central Tendencies
- Data Variability: Standard Deviation
- Z-Score, Outliers, Normal Distribution
- Central Limit Theorem

- Histogram, Normality Tests
- Skewness & Kurtosis
- Understanding Hypothesis Testing
- P-Value Method, Types of Errors
- T Distribution, One Sample T-Test
- Independent and Relational T Tests
- Direct and Indirect Correlation
- Regression Theory

MACHINE LEARNING INTRODUCTION

- Machine Learning Introduction
- ML core concepts
- Unsupervised and Supervised Learning
- Clustering with K-Means
- Regression and Classification Models.
- Regression Algorithm: Linear Regression
- ML Model Evaluation
- Classification Algorithm: Logistic Regression

Recommended Books/References :-

1. Probability and Statistics for Data Science by Norman Matloff
2. DATA SCIENCE WITH PYTHON : A Beginner's Guide by Wade Briggs

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Syllabus

For

142) Diploma in Machine Design and Drafting

Unit – I :– Solid Work –

Essentials – Sketch entities, sketch tools, block, relations & dimensioning, sketcher 2D & 3D sketching, part modeling, planes creations, Curves filet features, sheet metals, assembly- bottom up, weldments, Evaluates measurements & mass property, forming tools, surface modelling, table & BOM, angle of projection, generation of views, printing & plotting, standard mates

Professionals- part modelling- advance modelling, assembly top down, advance & mechanical mates, smart components & smart fasteners, motion analysis, animation study, rendering tools & rapics, forming tools, freeform surfacing, pack and go, solidworks explorer, solidworks task scheduler.

Unit - II :– AutoCAD

Essentials – Coordinate system, drawing toolbar, modifying toolbar, object properties, drawing precision, orthographic view, isometric views, dimensions study, inquiry tools, design center, tool pallet, template creation, printing & plotting, text & styles, hatching, tables.

Professionals – Quick selection, filters, block & attributes, external references, parametric medeling, block editing, express tools, advance objects, advance layouts.

Unit - III :– Ansys Workbench (Practical -I)

Engineering Data, ANSYS Design Modeler, Static structural Analysis, Static structural Analysis, Steady State Thermal, ANSYS Meshing I, Modal (Vibration Analysis), Explicit Dynamics, Doubt Session, Advance Post Processing

Unit - IV : – Thermal Analysis (**Practical - II**)

Linear Bucking, Rigid Dynamics, Transient Structure and Thermal Analysis

Recommended Books/References :-

1. The Guidebook for Students.
2. CURRENT Market software's and Project.
3. Combining Old and New software's.

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Syllabus

For

143) Diploma in Teaching Learning Process

Unit – I :- Concept of Education

- Concept of Education&training pioneers of Education
- Correlation between Education & training importance of skill development.
- Role of HRD/ VGC / AICTE/ DGNET/NCET/VET/Skill Development needs Accreditation Grading, NBA.

Unit - :- Role of Government , Role of Teacher &Teaching Techniques

- **Role of Government**
  - Central / State / Regional office / District office, Duties, Inspection & Monitoring.
- **Role of Teacher**
  - Ideal Teacher, best Teacher award
- **Teaching Techniques**
  - Social & Moral Values / Quantity concept

Unit - III:- Class Room Management

- Class Room Management
- Presentation Skill, Teaching – leaning Harmony
- Communication Skills
- Creative Skill
- Evaluation
- Methods.

Unit - IV : Project & Seminar

- Project display / Completions problem solving
  - train of personality
  - Life Skill development.
  - Seminar on ---> any one Topic on Syllabus
- **Practical ---->**
  - Presentation Skill
  - Communication Skill
  - Project Task
  - SWOTAnalysis

Recommended Books/References :-

1. The Guidebook for Students.
2. CURRENT Market software's and Project.
3. Combining Old and New software's.

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Syllabus
For
144) Advance Diploma in Acting

Unit-I: History of Acting and Communication

- Introduction to Acting
- Various kinds of Acting
- Early Communication
- Purpose of Communication
- Real communication, false communication
- Purpose of Entertainment
- Early Dramas, Journey of Drama to Film, Today's Dramas & Film Scenario.

Unit- II: Navrasa & Rules of Acting

- Basic of Nav Rasa
- Creating illusion Through Acting
- Acting through Experience
- Rules of drama, Rules of films
- Actor's Body & Voice, Actor & His acting

Unit-III: Seven Essentials Acting Concepts

- Thinking tends to lead to conclusions
- Emotion tends to lead to action
- Acting is reacting, Acting is doing
- Your character need to have an objective, Your character should play an action until something happens to make him play a different action
- All Action begins with movement, Empathy is the magic key audiences empathize with emotion, a scene is a negotiation.

Unit-IV: Moment/speech/cameras & Techniques

- Body language
- Psychological gesture
- Laban movement theory
- Acting for camera
- Delivering speech& dialogues
- Camera& techniques for acting.

Unit - V: Practical & Presentations

- Creating characters
- acting for various media
- acting for green screen
- project & presentations

Recommended Books/References:-

1. Vachik Abhinay" – by Dr Shriram Lagoo.
2. Abhinay Sadhna" – by A Narayan Kale
3. An Actor Prepares" – by Constantin Stanislavski
4. Acting for Animators" – by Ed Hooks
5. Acting- the first six lessons" – by Richard Boleslavsky
6. Natyashastra" – by Bharat Muni

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Syllabus

For

145) Advance Diploma in Cinematography

Unit-I: Information of Cinematography

- History of Photography & Motion
- Difference between Photography & Cinematography
- Basic Information About shooting cameras
- Uses of Cinematography

Unit - II: Cinematography

- Information about shooting Cameras & Its Application
- Information about shooting Lights and Its Application
- Information about Shooting Material & Its Uses
- Basic Rules of screen composition according to scene and sequence.

Unit III: Camera Angles & Lighting

- Basics of camera angles& lighting
- Dynamic Camera Angles Shot By Shot
- According To Story & Screenplay
- Creating lighting according to scene & sequence

Unit-IV: Applications of Cinematography

- Ads
- Short Films
- Television
- Feature Films
- Documentary

Unit -V : Project & Presentation

- Experience of Cinematography by Doing Films
- Presentation on cinematography.

Recommended Books/References :-

1. Paul Wheeler - Practical cinematography-Elsevier_Focal Press
2. Motion Picture Filming Techniques - The Five C's of Cinematography-Silman-James Press
3. Film directing, shot by shot: : visualizing from concept to screen-Steven D. Katz- 978-0941188104
4. Setting up your shot -Jeremy Vineyard-978-1932907421

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Syllabus

For

146) Advance Diploma inFilm Making

Unit-I: History of Film

- Information
- Early film making scenario
- Step by step procedures of film making.

Unit-II: Pre-production

- Idea & Researches story development
- Conceptual story board, deciding star cast & location
- Final story board shot by shot
- Production
- Preparation for shooting films.

Unit-III: Production

- Shooting indoor & outdoor
- Green screen shoots for VFX
- Information about dynamics (Computer effects)
- Information about VFX& SFX (Digital & Physical)

Unit-IV: Post production

- Offline & online editing
- Dubbing
- Music
- SFX
- Final online effects
- Rendering for films & Video.

Unit -V: Marketing& Merchandising

- Making film promo, film display & distribution
- Print& digital promotion & presentation
- Merchandising for film promotion& creating business from various medium.

Recommended Books/References :-

- The Filmmaker's Handbook: Fifth Edition -Steven Ascher-978-0452297289
- The Complete Film Production Handbook-Eve Light Honthaner-978- 0240811505
- Film directing, shot by shot: : visualizing from concept to screen-Steven D. Katz-978-0941188104
- Setting up your shot -Jeremy Vineyard-978-1932907421

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Syllabus

For

147) Advance Diploma in Music & Sound

Unit-I :- Introduction of Music

- What is music, Indian Music, Western music,
- History of Indian and Western Music
- Folk music, Classical Music
- Fusion, Rhythm: Indian Rhythm, Western Rhythm

Unit –II:- Introduction to Instruments

- Study of Indian Instruments
- Study of Western Instruments
- Uses of Different instruments
- Uses of Instruments in Live Performance
- Film & Drama

Unit- III :- Uses of Music

- Music for Film &Television
- Music for Advertisements, Music For jingles, Music for Drama, Music for Animation Films, Music for Songs
- Folly Music, Music Effects.

Unit 4: Introduction to Recording and Editing

- Music Production Process, Basic studio introduction, Sound design and dubbing, Music Production Tools. Record enabling a track, setting up track, setting input levels, recording with effects, Tools, Vocal track and multi-track editing
- Panning, Import & Export Files, Copy &; Paste, Fades EQ type, Filters, setting up send effects, using various effects, setting effect levels, VST channel Mixer
- Working with video files, Plugins, Inserts, Automation tracks

Unit 5: Project

- Compositing music for Music video /Ads (Jingles)/ Film (Short Film/ long Film)

Recommended Books/References :-

1. Bharatiya Sangit Gurupushpa, Devendra N. Deshmukh, Swaranjali Prakashan Akola
2. Listen Joseph Kerman, Gray Tomlinson, Sant. Martins Publication

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Syllabus

For

148) Advance Diploma inDrawing & Painting (For Animation, Fashion and Architecture)

Unit-I:- Basics of Drawing and painting

- Line of action with rhythm force
- Balance, Gesture drawing & Sketching
- Colour and perspective
- Composition rules

Unit-II:- Drawing and painting

- Figure drawing
- Faces
- Hand
- Leg study
- Animal & bird study
- Still life, Pictorial design

Unit -III: Drawing for Painting

- Riyaz (Indoor & Outdoor)
- Figurative painting
- Nonfigurative painting.

Unit-IV: Drawing for Fashion

- Riyaz (Indoor & Outdoor)
- Fashion figure drawing
- Fashion figure illustrations

Unit -V: Drawing for architecture

- Riyaz (Indoor & Outdoor)
- Perspective drawing
- Building design& composition
- Architecture view composition.

Recommended Books/References :-

1. Dynamic Figure Drawing:- Burne Hogarth, Watson-Guptill Publications, 1996, 1st Edition
2. Force character Design from Life Drawing:- Michael Mattesi, Focal Press, 2008,ISBN-9780240809939
3. Figure Study Made Easy :- Aditya Chari, GraceTM Prakashan, 2005, 1st Edition
4. Bridgman's Life Drawing:- Bridgman George B Bridgman, Dover Publications,
5. Animal Drawing Manual:- Gleann Vilppu, G.V. Vilppu publication, 2000, 1stEdition.

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Syllabus

For

149) Advance Diploma in Nursing

Unit – I :- सामुदायिकआरोग्यपरिचारिका (Community and Health Management)

1) सामुदायिकआरोग्यपरिचारिका
2) आरोग्यव्यवस्थापन
3) बालआरोग्यपरिचर्या

Unit –II :- प्रसुतीशास्त्रआणिप्राथमिकआरोग्यप्रोत्साहन
(Mid wifery and Primary Health Promotion)

1) प्राथमिकआरोग्यपरिचर्या
2) आरोग्यसंवर्धन
3) प्रसुतीशास्त्र

Unit –III :- Mid wifery(प्रसुतीशास्त्र) (Practical-I)

1) प्रसुतीपुर्वपरिचर्या
2) प्रसुतीचीमाहिती
3) बाळाचीकाळजी
4) स्त्रीक्टीर
5) गर्भमस्तक
6) अबॉर्शन / सुतिकावस्था

Unit – IV :- (प्राथमिकआरोग्यसंवर्धन)Primary Medical care (Practical-II)

1) सांसर्गिकआजार्वअसांसर्गिकआजाराचीओळख
2) निर्जंतुकीकरण
3) औषधांचीमाहिती
4) प्रथमोपचाराचीमाहिती

Unit – V :- सामुदायिकआरोग्यपरिचारिका(Community health Nursing) (Practical-III)

1) लसिकरण
2) कुटुंबनियोजन
3) मातावबालआरोग्य
4) गृहभेट
5) सर्वेक्षण
6) समुपदेशन

Unit –VI :- प्राथमिकआरोग्यप्रोत्साहन (Primary Health Promotion) (Practical-VI)

1) समतोलआहार
2) अशिष्यदाहीसवयी
3) विविधप्रकारचेट्रे
   अ) पाठीचीकाळजी
   ब) डोळयाचीकाळजी
   क) स्पंजबाथ
   ड) केसांचीकाळजी
   ई) मासिकपाळीस्वच्छता
   ई) मासिकपाळीस्वच्छता

Recommended Books/References :-

1) Easy ANM Ist Year by Shri Birudev Kate
2) Midwifery by Shri Birudev Kate

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Syllabus

For

150) Advance Diploma in French Language

Unit 1: Tense

- Past tense
- Future tense
- Present conditional
- Passive voice

Unit II: Speaking Topics

- Conjunction
- Speaking topics- Talk about the world around you
- Describe a person

Unit III: Issues

- Talk about health issues
- Daily life
- People

Unit IV:Feelings

- Feelings
- Places
- Events

Unit V:Work

- Work
- School
- Media

Unit VI: Learn

- Current affairs
- Arts
- Develop speaking, writing and listening comprehension
- Learn to make simple arguments.

Recommended Books/References :-

1. An Introduction to The French Language: Being A Practical Grammar With Exercises (1893 by Alphonse Naus Van Daell
2. Easy French Step By step by Myrna Bell Rachester, Mcg raw Hill Education
3. Fluent in French: The most complete study guide to learn French by Frederic Bibard
4. SHORT STORIES IN FRENCH by Olly Richards
5. French Complete Course: This Book Includes: Vocabulary and Grammar, Common Phrases and Short Stories. The Best Guide for Beginners to Learn and Speak French Language Fast and Easy. by Paul Bonnet

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Syllabus

For

151) Advance Diploma in Quantum Speed Reading, Advanced PhotographicMemory and D.M.I.T (Dermatoglyphics Multiple Intelligence)

Unit I: Introduction to Quantum Speed Reading

- What is Quantum Speed Reading (QSR)?
- Theory of implementing QSR
- Left-Right brain activation concept
- The base of musical Meditation
- Brain activation exercises benefits

Unit II : What is Photographic Memory?

- Introduction to Photographic Memory
- Uses and application of Photogenic memory in education
- Difference between Logical and Photographic memory
- Audio-Visual training of photographic memory
- EFT tapping exercise for memory power

Unit III : ESP Brain Window (Practical)

- Introduction to ESP Brain Window
- ESP training for Midbrain Activation
- Logical brain activity
- Key Concepts in Imagination
- Implementation of Meditation

Unit IV : ESP Quantum Speed Reading (Practical)

- Application of QSR
- How to use Left-Right brain
- Flip reading to understand the summary
- Unit V: ESP Brain Enhancement (Practical) □ Right brain activation program
- Sensory activity by using 10 senses of both brains □ Implementation of Right brain for visualization

Unit VI: Theory of Dermatoglyphics Multiple Intelligence Test (DMIT)

- What is DMIT?
- Fingerprint Analysis Theory
- Benefits of DMIT
- What is Multiple Intelligence?

Recommended Books/References :-

1. The 7 Real Mind Power Secrets by Jim Francis
2. 4 Simple Ways to Master Your Mind by Dr. Robert Anthony
3. Alpha Brain Wave research by Dr. James V Hardt

4. General Psychology by Dr. David Feinstein
5. How to Develop Super Power Memory
6. Secrets to Super Memory
7. Be a Speed Reader
8. What is Speed Reading
9. The possibilities of Quantum Speed Reading by Ms Yumiko Tobitani
10. The EFT Wizards by Brad Yates
11. ESP in the Modern Society by Kamo. P. Chilingaryan
12. Research on Photographic Memory by Rechard Welch
13. Research report from University of Idaho
14. Mental Photography is your Birthright by Dr. Shannon Panzo
15. Fingerprints Palms and Soles by Dr Harold Cummins & Charles Midlo
16. Gardeners Theory of Multiple Intelligences by Dr Howard Gardner

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Syllabus

For

152) Advance Diploma in Fashion Design

Unit I: Design Concept.

- Drawing Different Shapes
- Sketching Basics

Unit II: Making of Historic Garment.

- World Fashion
- Fashion in Ancient Era

Unit III: Garment Industry

- Working in Industries
- Self-Employment
- Selling Skills

Unit IV: Illustration

- Sketching
- Draping Syles
- Ideation and innovation

Unit V: Pattern Making

- Garment Designing
- Stitching and Display

Unit VI: Portfolio Making

- Mood Boards
- Photo Shout
- Album Making

Recommended Books/References :-

1. Patternmaking for Fashion Design (Ring-bound)by Helen Joseph Armstrong
2. The Fundamentals of Fashion Design (Paperback) by Jenny Udale
3. Fashion Illustration: Inspiration and Technique (Paperback) by Anna Kiper
4. Fabrics A to Z: The Essential Guide to Choosing and Using Fabric for Sewing by Dana Willard

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For

153) Advance Diploma in Film & Television Production

Unit – I :- Introduction To Film

1. History of Film
2. History of Indian Cinema
3. Film Education & Training Institutes in India
4. Government / Semi Government / Privet Organizations Related To Cinema
5. Film Cities in India
6. Types of Films
7. Film Language (Shot, Scene, Camera Movements)
8. Process of Filmmaking
9. Pre-Production
10. Actual Production/ Shooting of Films
11. Post- Production
12. Various Departments in Films
13. Film Appreciation
14. Screenings of Short, Documentary & Feature Films
15. Film Analysis

Unit – II :- Basic Elements of Film Development

1. Introduction to Production Department
2. Production Team Members and Their Duties
3. Basic Thoughts of Script Writing
4. Developing a Story
5. Screenplay & Basic Structure of Screenplay
6. Basic Scene Cut Techniques
7. Shooting Script
8. Direction – Introduction
9. Duties of Director
10. Types of Asst.Directors & Duties of Each
11. Break Downs, Revisualization (Shot Division, Story Boarding)
12. Project Designing & Planning Scheduling (Creating Grid, Arranging Scenes, Characters & Crew Needed, Budgeting.)
13. Introduction to Art Direction
14. Important Of Arts Director in Film
15. Team Members and Their Duties
16. Important Skill for Art Director
17. Introduction to Make Up and Make Up Team
18. Important Of Make Up
19. Equipments for Make up And Their Uses
20. Types of Make Up

21. Process of Make Up
22. Introduction to Costume Design and Costume Director / Designer
23. Duties of Costume Director / Designer
24. Important Of Costume Design in Film
25. Characterizations to Costume
26. Costume Department Team and Their Duties – Continuity
27. Acting –
28. Introduction - Basic Concepts, Navrasas,
29. Types of Acting
30. Acting Style / Techniques
31. Acting Exercises
32. Characters Preparation
33. Acting for Films, Serials and Theatre,
34. Practical's, Mime,Skit, Street plays, One Act Plays Production,

Unit - III :-Technical And Business Elements Of Film

1. Camera – Photography and Cinematography
2. Types of Cameras, Intro to Cameras & Their Functions Types of Lenses
3. Lighting for Films Basic Lighting Techniques& Equipments
4. Types of Lights Light Accessories Interior &; Exterior Lighting
5. Creative Cinematography Characterization through Camera
6. Sound/Audio – Introduction
7. Work of Sound Recorders &; Boom Operator Recording Equipments,
8. Types of Microphones & Headphones, Their Qualities,
9. Mic Techniques Terminologies& Aspects of Audiography.
10. Sound Recording/Dubbing & Voice overTechniques
11. Editing – Introduction –
12. Editing Basics, Equipments, Creating Rough Cut, Fine Cutting, Applying
13. Transitions, Synchronization of Scenes, Color Correction, Titling,
14. Digital Integration, Creating Final Output for Cinema Theatres & TV.
15. Certification
16. Marketing
17. Cinema Distribution
18. Cinema Releasing Platforms

Unit - IV -Television Production

1. Introduction to Television
2. History of Television and Their Importance
3. History of Indian Television
4. Tree Stages of Television Broadcasting
5. Commercial Services
6. Privet Channels
7. Types of Television Programs
8. Entertainment Programs
9. Informative Programs
10. Educational Programs
11. Importance of Writing Skills
12. Communication Skill
13. Television News
14. Introductions of News
15. Types of News

16. News Sources
17. Duties of News Reporter
18. Editorial Department
19. News Editing
20. Television Studio Set Up
21. Television Studio
22. T.V., Camera, Lights, and Sound Equipments
23. Production Control Room
24. Shooting Location – Out Door Broadcasting
25. Stricture ofTV Program Production

Unit - V:-Final Practical Project – 5

1. Documentary Film
2. Ad Film
3. Short Film
4. News Bulletin
5. Video Song

Recommended Books/References :-

1. The Filmmakers Handbook – By Stevevascher
2. Shot By Shot – By Steven Katz
3. Making Movies - By Sudney Lumet.
4. On Directing Film – By David Mamet
5. Rebel without a Crew – By Robert Rodriguez
6. The Television Handbook – Patricia Holland
7. Studio Television Production – By Andrew Utter back
8. Introduction to Film – By Being Artist Academy
9. Basic Creative elements of Filmmaking – Being Artist Academy
10. Technical &; Business elements of Filmmaking - Being ArtistAcademy

Sant Gadge Baba Amravati University

Department of Lifelong Learning & Extension

Short Term Certificate Course

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Syllabus

For

154) Advance Diploma in Dramatics

Unit - I :-नाटक ओळख आणि स्वरूप

- **नाटक परिचय**
- **नाटकाची व्याख्या**
- **नाट्यकलेचा संक्षिप्त इतिहास**
- **नाट्य निर्मिती चे उद्देश**
- **नाटकाचे प्रकार**
- सुखात्मिका, शोकांतिका , फार्स , मेलोड्रामा
- **नाटकाचे इतर प्रकार**
- आशय आणि विषयानुसार नाटके
- पौराणिक नाटक , ऐतिहासिक नाटक , सामाजिक नाटक , राजकीय नाटक , दलित नाटक , अभिजात नाटक , भयनाट्य , कौटुंबिक नाटक
- **व्यक्तीनुसार नाटके**
- बालनाट्य , स्त्रीपात्रविरहित नाटक , पुरुषपात्रविरहित नाटक , नाट्य अभिवाचन
- साहित्यानुसार नाटके काव्यनाटक , संगीत नाटक , चित्रनाट्य , असंगत नाट्य - न /, बाहूलीनाट्य / तळीकठपु, फिजिकल नाटक
- **लांबीनुसार नाटके**
- नाट्यछटा , लघुनाटक , एकपात्री नाटक , एकांकिका , दिर्घांकिका , त्रिनाट्यधारा नाट्यत्रयी /, मूकनाट्य
- **स्थळानुसार नाटके**
- रिंगणनाट्य , पथनाट्य , महानाट्य , लोकनाट्य , विधिनाट्य , भक्तिनाट्य , समाजप्रबोधनपर नाट्य , रंजननाट्य
- **भारतातील आघाडीच्या नाट्य निर्मिती प्रशिक्षण संस्था**
- **नाट्य क्षेत्राशी निगडीत महत्वपूर्ण शासकीय अशासकीय संस्था-**
- **नाट्य महोत्सव व स्पर्धा**
- **नाटकातील विविध घटक विभाग व निर्मिती प्रक्रिया**

Unit – II :- नाट्य निर्मिती चे पायाभूत घटक

- **संहिता आणि नाटककार**
- **नाटककाराचे कार्य**
- **संहितेतील घटक**
- शीर्षक, कथानक, कथानकाची रचना , आशय आणि विषय, संवाद, भाषा, संघर्ष, व्यक्तिरेखा पात्र /
- नाटकातील पात्रांचे प्रकार नायक नायिका /, खलनायक, साहाय्यक पात्र, सूत्रधार, विश्वासघाती पात्र, विश्वासू पात्र, स्टॉक कॅरक्टर पात्र /

- **निर्मिती आणि निर्माता**
- निर्मिती व्यवस्थापक
- **दिग्दर्शन आणि दिग्दर्शक**
- दिग्दर्शकाचे कार्य
- दिग्दर्शनातील घटक
- रचना किंवा आकृतिबंध, चित्र, रंगमंचावरील हालचाल, तालबद्धता, मूकनाट्य
- दिग्दर्शकाची मर्यादा
- दिग्दर्शकाची दिग्दर्शन कार्यपद्धती
- **नट अभिनेता /**
- अभिनय, आंगिक अभिनय, वाचिक अभिनय, आहार्य अभिनय, सात्त्विक अभिनय
- नृत्य आणि नृत्य दिग्दर्शक नृत्य दिग्दर्शकाचे कार्य
- रस आणि भाव स्थायिभाव, विभाव, अनुभाव, संचारीभाव

Unit – III :- नाट्य निर्मिती चे सहाय्यभूत विकासात्मक घटक

- **वेशभूषा**
- **वेशभूषेचे घटक :**
- रेषा (लाईन), आकार (शेप), पोत (टेक्चर), नमुना (पॅटर्न)
- वेशभूषेची कार्ये वेशभूषाकाराची कार्यपद्धती
- विभागात काम करणाऱ्या महत्वपूर्ण व्यक्ती
- रंगभूषा आणि रंगभूषाकार
- **रंगभूषेचे प्रकार**
- पात्रानुसार रंगभूषा , साधारण रंगभूषा , वास्तविक रंगभूषा , अवास्तविक रंगभूषा , स्टाईलाइज रंगभूषा , क्लासिकल रंगभूषा , पारंपरिक रंगभूषा , फॅन्टसी रंगभूषा , मास्क रंगभूषा
- **रंगभूषेची कार्ये रंगभूषेसाठी लागणाऱ्या साहित्याचे प्रकार :**
- आईलबेस रंगभूषा , वॉटरबेस रंगभूषा
- रंगभूषेसाठी वापरण्यात येणारी सामग्री आणि उपयोग
- रंगभूषाकाराचे कार्य
- रंगभूषा करण्याची पद्धत
- विभागात काम करणाऱ्या महत्वपूर्ण व्यक्ती
- **नेपथ्य**
- नेपथ्याची व्याख्या
- नेपथ्यकार
- **नेपथ्याचे प्रकार :**
- एकक दृश्यबंध , अल्पतम दृश्यबंध , द्विमुख दृश्यबंध , प्रच्छद दृश्यबंध , त्रिपार्श्व दृश्यबंध , पुस्तक दृश्यबंध ,गगनिका दृश्यबंध, पडदा विंग दृश्यबंध /, स्थायि दृश्यबंध सरकता दृश्यबंध , बहुस्थळी दृश्यबंध , फिरता दृश्यबंध , प्रकाश दृश्यबंध , त्रिमिती दृश्यबंध , उद्रामी दृश्यबंध
- **नेपथ्याची कार्ये नेपथ्याचे गुणधर्म**
- **नेपथ्यकाराची कार्यपद्धती**
- **नेपथ्य तयार करण्यासाठी लागणारी सामग्री**
- **विभागात काम करणाऱ्या महत्वपूर्ण व्यक्ती**

Unit – IV :-नाट्य निर्मिती चे तांत्रिक घटक व व्यावसायिक घटक

- **संगीत -पार्श्वसंगीत आणि संगीतकार**
- पार्श्वसंगीताचे प्रकार :भावनाप्रधान संगीत , प्रासंगिक संगीत , प्रॉपर्टी संगीत
- पार्श्वसंगीताची कार्ये संगीतकाराची कार्यपद्धती
- विभागात काम करणाऱ्या महत्वपूर्ण व्यक्ती
- प्रकाश योजना आणि प्रकाश योजनाकार
- **प्रकाश योजनेची कार्ये**
- प्रकाश योजनेचे नियंत्रण, प्रकाशाची मात्रा , प्रकाशाचे रंग , प्रकाशाचे विभाजन
- प्रकाशाची दिशा : समोरील लाईट , तिरपे लाईट , वरील लाईट , मागील लाईट , खालील लाईट
- **प्रकाश योजनेसाठी लागणारी लाईटची सामग्री आणि वापर :**
- बेबी लाईट , फ्रेजनल लाईट , प्लेनो कन्व्हेक्स लाईट . सी . पी /, पार लाईट , डिग्री प्रोफाईल लाईट , फॉलो लाईट , हॉलेजन , मुव्हिंग लाईट , एलईडी लाईट , स्कुप लाईट , डिस्को लाईट , पावरपॅक , कन्सोलबोर्ड पल्सर /, गोबो , फोको , हुक , रिफ्लेक्टर परावर्तक /, वायर , मल्टी पिन , जेल कागज , शटर हँडल , स्टँड ,कटर , बॅर्न डोअर , यॉक
- प्रकाश योजनाकाराची कार्यपद्धती
- प्रकाश नियोजनेचे चित्र, प्रकाश नियोजन तक्ता
- विभागात काम करणाऱ्या महत्वपूर्ण व्यक्ती
- **नाट्य प्रयोग खेळ आयोजन /**
- आर्थिक नियोजन
- प्रसिद्धी
- तिकीट विक्री
- आर्थिक मिळकत अर्थार्जन /
- प्रेक्षक नाट्यरसिक /
- तज्ञ प्रेक्षक , सामान्य प्रेक्षक , तंत्रज्ञ प्रेक्षक , समीक्षक प्रेक्षक
- रसग्रहणसमिक्षण-

Unit – V :-प्रात्यक्षिक प्रकल्प नाट्य मंचन :

- मुक नाट्य, एकल अभिनय, प्रहसन,पथनाट्य, एकांकिका

Recommended Books/References :-

1. Natyashastra Of Bharat Muni - Bhartamini
2. Vaachik Abhinay – By ShriramLagu
3. AbhinaySaadhana Ani Swadhyaay – ShivajiDeshmukh
4. An Actor Prepares – Konstantin Stanislavaski
5. The Art Of Acting – By Stella Adler
6. Acting In Film – By Michel Caine
7. On the Technique Of Acting - By Michael Chek
8. Naaty Mimansa – Dr. Sheshpal Ganvir

Sant Gadge Baba Amravati University
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Syllabus
For
155) Advance Diploma in AI and Machine Learning for Non-Programmers

Unit - I:- Introduction to Machine Learning and Python

- Introduction to Machine Learning
- Overview of Python and Machine Learning Frameworks
- Various Machine Learning Libraries
- Key Concepts in Machine Learning
- Machine Learning Problem Definition and Use Cases

Unit - II :- Machine Learning Algorithms

- Introduction to Machine Learning Statistics
- Overview of Linear Algebra in Machine Learning
- Various Statistics Libraries
- Key Concepts in Linear Algebra
- Implementation of libraries

Unit - III :- Model Training and Optimization

- Introduction to Machine Model
- Consume the Machine Learning Model
- Model Customization
- Model Optimization
- Industrial cases studies

Unit - IV :-Machine Learning Use Cases

1. Machine Learning Problem Formulation
2. Identification of ML solution for a use case
3. Cases studies : Sustainable Development Goals, Amazon Cloud, GCP, Microsoft Cognitive

Unit - V :-Machine Learning Frameworks

- Over view of different ML frameworks
- Open source frameworks and use cases
- Implementation of solution for Sustainable Development Goals

Unit - VI :- Model Building, Deployment and API

- Over view of different ML frameworks
- Open source frameworks and use cases
- Cases studies : Sustainable Development Goals, Amazon Cloud, GCP, Microsoft Cognitive

Recommended Books/References :-

1. Linear Algebra for Machine Learning, Jason Brownlee 2020
2. Azure Machine Learning Documentation by Microsoft 2021
3. Master Machine Learning AlgorithmsJason Brownlee 2020
4. Deep Learning for Computer Vision, Jason Brownlee 2020
5. Deep Learning for Natural Language Processing, Jason Brownlee 2020
6. Python for Data Analysis: Data Wrangling with Pandas,Numpy and IPython,byMckinney Wes
7. Optimization for Machine LearningJason Brownlee

Sant Gadge Baba Amravati University
Department of Lifelong Learning & Extension
Short Term Certificate Course
(1 Year)
Syllabus
For
156) Advance Diploma in Data Science

Unit - I:- Introduction to Data Science and Python

- Introduction to Data Science and Statistics
- Overview of Implementing the Statistical Algorithms Using Libraries
- Various Data Analysis Algorithms
- Key Concepts in inference
- Problem Definition and Use Cases

Unit - II :- Statistics for Decision Making

- Introduction to Decision Statistics
- Overview of Statistical Algorithms for Data Science
- Data Representation and Visualization
- Key Concepts in Decision Making
- Implementation of libraries

Unit- III :- Data Visualization (Practical)

- Introduction to Data Visualization
- Types of Data Visualization
- Data Visualization Libraries
- Key Concepts in Visualization
- Implementation of libraries

Unit-IV :- Machine Learning Algorithms (Practical)

- Overview of Linear Algebra in Machine Learning
- Implementation of Various Machine Learning Algorithm (MLA)
- Various ML Libraries
- Implementation of libraries

Unit- V :- Data Analytics Use Cases (Practical)

- Data Science Problem Formulation
- Identification of ML solution for a use case
- Cases studies : Sustainable Development Goals, Amazon Cloud, GCP, Microsoft Cognitive

Unit-VI:- Model Building, Deployment and API (Practical)

- Over view of different ML frameworks
- Open source frameworks and use cases
- Cases studies implementation in line with Sustainable Development Goals

Recommended Books/References :-

1. Linear Algebra for Machine Learning, Jason Brownlee 2020
2. Python for Data Analysis: Data Wrangling with Pandas, Numpy and IPython ,by Mckinney Wes
3. Machine Learning Algorithms from Scratch Jason Brownlee 2020
4. Statistics for Making Decisions, by Nicholas T. Longford CRC Press, 29-Mar-2021
5. Fundamentals of Data Visualization, A Primer on Making Informative and Compelling Figures, By Claus Wilke · 2019
6. Python Data Science Handbook, Essential Tools for Working with Data by Jake VanderPlas · 2016

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Syllabus

For

157) Advance Diploma in Computer Vision

Unit 1: OpenCV Basics

- Loading and Displaying Images with OpenCV
- Image Fundamentals
- Drawing with OpenCV
- Translation
- Rotation
- Resizing
- Flipping
- Cropping
- Image Arithmetic
- Bitwise Operations
- Masking
- Splitting and Merging Channels

Unit II : Basic Image Processing Operations

- Kernels
- Morphological Operations
- Smoothing and Blurring
- Color Spacesx
- Basic Thresholding
- Adaptive Thresholding
- Image Gradients
- Edge Detection
- Automatic Edge Detection

Unit III : Face Applications — Face Detection (Practical)

- Introduction to Face Recognition
- Face Recognition with Local Binary Patterns
- OpenCV Eigenfaces for Face Recognition
- Deep Learning Face Detection with OpenCV
- Deep Learning Face Detection with Dlib
- Choosing a Face Detection Method

Unit IV : Deep Learning — Hands-on Experience with CNNs (Practical)

- Training CNN with Keras and TensorFlow
- Keras and TensorFlow Model to Disk
- Load a Trained Keras/TensorFlow Model from Disk
- LeNet: Recognizing Handwritten Digits
- MiniVGGNet: Going Deeper with CNNs
- Visualizing Network Architectures Using Keras and TensorFlow
- Pre-trained CNNs for Image Classification

Unit V : Fundamentals of PyTorch (Practical)

- Introduction to is PyTorch
- Neural Network with PyTorch
- Training CNN with PyTorch
- Image Classification with Pre-Trained Networks and PyTorch
- Object Detection with Pre-Trained Networks and PyTorch

Unit Vi: Object Detection (Practical)

- Shape Detection with OpenCV
- Jupyter Notebook Fundamental
- Template Matching with OpenCV
- Multi-template Matching
- Multi-scale Template Matching
- Haar Cascades with OpenCV
- Deep Learning Object Detectors with OpenCV
- Real-time Deep Learning Object Detection with Open CV

Recommended Books/References :-

1. Deep Learning for Computer Vision with Python – by Adrian PyImage University
2. OCR with OpenCV, Tesseract, and Python – by Adrian PyImage University Practical Python and OpenCV – by Adrian PyImage University
3. PyImage Search Gurus Course – by Adrian PyImage University
4. Raspberry Pi for Computer Vision – by Adrian PyImage University
5. Autonomous Drones with Computer Vision and OpenCV - by Adrian PyImage University
6. Computer Vision Mobile Apps Linear Algebra for Machine Learning, Jason Brownlee 2020
7. Analysis: Data Wrangling with Pandas, Numpy and IPython ,by Mckinney Wes
8. Machine Learning Algorithms from Scratch Jason Brownlee 2020
9. Statistics for Making Decisions, by Nicholas T. Longford CRC Press, 29-Mar-2021
10. Fundamentals of Data Visualization, A Primer on Making Informative and Compelling Figures, By Claus Wilke · 2019
11. Python Data Science Handbook, Essential Tools for Working with Data by Jake VanderPlas · 2016

Sant Gadge Baba Amravati University

Department of Lifelong Learning & Extension

Short Term Certificate Course

(1 Year)

Syllabus

For

158) Advance Diploma in Construction Technology & Management under Skill Development Program

Unit 1: Construction economics and similar topics

- Engineering Economics and Costing,
- Cost Estimation and Accounting,
- Investment Evaluation and Financing Projects,
- Financial Management,
- Public Private Partnership (PPP) Project.

Unit II: Construction Planning & Control

- Construction Planning
- Scheduling Procedures and Techniques
- Cost Control, Monitoring and Accounting
- Quality Control during Construction
- Organization and Use of Project Information

Unit III: Concrete Technology

- Introduction of Concrete materials, Admixtures, Fly Ash, Polymers, Early Age Properties,
- Fresh & Hardened Concrete

1. Strength, Durability and permeability of concrete:
2. Concrete in aggressive environment
3. Special concreting techniques
4. Concrete mix design
5. Repair and Re-habitation

Unit IV:Road & Pavement Technology

- Stages of Road Project Management, Planning Process, Establishing Project organization
- Pavement Materials and Characterization of Soil, material surveys, embankment and sub-grade materials, stabilized Soils, Road aggregates, aggregate for base courses, new materials as stabilizers,
- Remote Sensing & GPS for Transportation Engineering

Unit V:Construction Processes & Productivity

1. Improved methods of construction Processes & Productivity
2. Various techniques of work sampling and productivity measurement;
3. Current innovations in the construction industry for increasing efficiency

Unit VI: Quality, Repair & Safety in Construction

- Quality Management, Quality systems and Quality Planning

3. Quality assurance & improvement Techniques
4. Structural Repair and Retrofit Engineering
5. Fundamental of safety management, construction safety, fire safety.

Recommended Books/References :-

1. Construction Management and Finance by Abebe Dinku 2022
2. Construction Technology (Oxford Higher Education) by Subir K. Sarkar (Author), Subhajit Saraswati 2008
3. Bituminous Road Construction in Indiaby Prithvi Singh Kandal & et.al. PHI Learning 2020
4. Highway Engineering by L.R. Kadiyali , Khanna Publishers 2022
5. Construction Planning and Management, by P.S. Gahlot, New Age International 2020
6. Construction Project Management by K.K. Chitkara, McGraw Hill 2019
7. Construction Productivity by Eddy M.Rojas Kindle Edition - 2023
8. Quality Management in Construction Projects by Rumne CRC Press 2022

Sant Gadge Baba Amravati University

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Short Term Certificate Course

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Syllabus

For

159) Advance Diploma in 2D, 3D Animation

Unit-I: Introduction of Animation
i) Brief history of Animation
ii) Applications of Animations
iii) Basic Animation and effects

Unit -II: 2D Animation
i) Basic principle of Animation (2D)
ii) Lip sync character design
iii) Dialogues construction
iv) Dialogues with expression
v) Dialogues with action

Unit-III: Advanced Animation
i) Acting and Emotion
ii) Multi character acting

Unit - IV: Introduction to 3D Animation
i) Overview
ii) Path animation
iii) Animation principle

Unit V: 3D character design & animation
i) Advanced 3D Animation
ii) Advanced 3D Animation with dialogues and attitude

Recommended Books/References :-

1. Animator's Survival Kit:- Richard Williamson, Faber &; Faber, 2002,1st edition
2. Timing for animation:- Harold Whitaker, CRC press, 2009, 2nd Edition
3. Maya professional tips and techniques:- Lee Lainer, Sybex publication, 2007, ISBN:- 0470 107 405
4. 3DS Max 7.5 project Boris Kulagin, BPB Publication, 2006, ISBN: 1-931769-43-5

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Syllabus

For

160) Advance Diploma in Modelling, Texturing, Lighting, Rigging and Blend shapes

Unit -I:- Introduction to Modelling

- Nurbs and Surface modeling
- 3D Paint tool &; Application of basic materials
- Basic lighting and rendering

Unit -II:- Introduction of polygon modeling

- Polygon modeling
- UV's &; Texturing
- Advance lighting

Unit-III: Character & Prop Modeling, texturing & lighting

- Character modeling
- Character texturing
- Character lighting

Unit - IV:- Introduction to Rigging

- Rigging concept
- Introduction to rigging software (Interface &; tools)
- Fundamentals of rigging: Basic of rig tools, Constraints rigging, Direct & indirect connection

Unit -V: Advance rigging

- Realistic rig
- Muscle system
- Facial rig (utilization of Blend shapes)

Recommended Books/References :-

1. Maya Professional tips and techniques: - Lee Lanier, Sybex,2007,ISBN 0470107405
2. 3ds Max 7.5 Projects :- Boris Kulagin, BPB Publications, 2006, ISBN:1-931769 43-5
3. Character Rigging and Animation :- Alias, Wavefront Publication,2002, ISBN: 9780973005233

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Short Term Certificate Course

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Syllabus

For

161) Advance Diploma in Character, Props, Story boarding & Comic Design

Unit-I: Dynamic Drawing

- Understanding rhythm
- Force, balance in drawing
- Dynamic key poses
- Concept art by memory & from life.

Unit -II: Various Illustrative Styles and Design

- Simple line drawing with plain colors
- Dynamic drawing with tint, tones, shades
- Halftone illustration, various styles for illustration, illustrations for print media, illustration for digital media.

Unit -III: Drawing For Storyboard Illustration

- Frame composition with perspective
- Shade and light in frames
- Cinematic frames, editing rules and its Application in frame
- Color and style application for story boarding.

Unit IV: Comic Book Art & Design

- Information about comic book
- Cover design, page layout and design
- Appropriate place utilization for story information and dialogue writing
- Dynamic styles and color application. (Digital and physical).

Unit 5: Interactive Comic Book Art & Design

- Introduction, cover page layout
- Learning limited animation techniques
- Appropriate place utilization for story information and dialogue writing
- Dynamic styles and color application. (Digital).

Recommended Books/References :-

1. Maya Professional tips and techniques: - Lee Lanier, Sybex,2007,ISBN:- 0470107405
2. 3ds Max 7.5 Projects :- Boris Kulagin, BPB Publications, 2006, ISBN:1-931769-43- 5

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Syllabus

For

162) Advance Diploma in Layout, BG, Matte painting & Concept Art

Unit - I: Introduction of perspective & its application

- Perception of perspective
- Types of perspective
- Light and shadows
- Atmospheric perspective
- Color application

Unit - II: Basic of layout design

- Composition rules
- Types of layout
- Camera angles & editing rules

Unit - III: Concept art design

- Concept of design
- Basic of digital landscape

Unit - IV: Introduction to Matte painting

- Basic of matte painting
- Copy of matte painting
- Application of matte-painting in various fields.

Unit V: Applications of Matte painting

- Matte painting for TV serials
- Matte painting for Gaming
- Matte painting for reality TV show
- Matte painting for live shows

Recommended Books/References :-

1. Digital Matt painting handbook:- David B. Mattingly, Sybex,
2. Techniques of Dylan cole: Dylan cole, Gnomon workshop
3. Setting Up Your Shots: Great Camera Moves Every Filmmaker Should Know :-
4. Jeremy Vineyard,
5. Michael Wiese Productions,1999, ISBN :- 0941188736
6. Layout and Composition for Animation:- Ed Ghertner, Focal Press, 2010,1st Edition

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Short Term Certificate Course

(1 Year)

Syllabus

For

163) Advance Diploma in VFX, Compositing and Editing

Unit -I : Introduction to Compositing (VFX).

- Concepts
- features and uses of compositing.

Unit - II: Fundamentals of Compositing.

- Masking
- Roto
- Keying
- Wire Removal

Unit - III: Fundamentals of VFX.

- Tracking
- Plate Making
- Color Correction

Unit -IV: Compositing.

- 2D compositing
- 3D compositing
- Motion Graphic
- Special Effects Scene 1 (ExternalPlugins)

  Special Effects Scene 2 (External Plugins)

Unit V: Editing

- Layer management
- video & Music setup

Recommended Books/References :-

1. Maya Professional tips and techniques: - Lee Lanier, Sybex,2007,ISBN:-0470107405
2. 3ds Max 7.5 Projects :- Boris Kulagin, BPB Publications, 2006, ISBN:1-931769-43-5
3. Character Rigging and Animation :- Alias, Wavefront Publication,2002, ISBN:-9780973005233

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Syllabus

For

164)Advance Diploma in Gaming

Unit -I : Introduction to Game

- Overview
- History of game
- Visualization & story
- Story boarding
- Game documents

Unit -II : Drawing and Painting For Game Art

- Sketching
- Figure drawing
- Landscapes
- Digital Art
- Character design
- Matt painting

Unit -III: Digital Art

- Visual design
- Graphics software
- UI and UX design

Unit -IV : Game Assets creation and Animation

- Modeling
- Texturing
- Rigging and blend shapes
- Lighting, Skinning
- 2D, 3D Animation for gaming

Unit -V : Programming

- Basics of programming
- Introduction to Action script
- C# programming

Recommended Books/References :-

1. Fundamentals of Game design -2 nd edition - Adams, Ernest- 978-0-321-64337-7,0-321-64337-2
2. The Art of Game Design: Jesse Schell- 978-0123694966