

CURRICULUM WITH ASSESSMENT PROCEDURES: 2021-2022

Sl. No.	Name of the Certificate Course	Page No.
1	Certificate Course on Energy and Efficient Devices	2-3
2	Certificate Course on Applied Electronics	4-5
3	Value Added Course on Fresh Salad Making	6-7
4	Diploma in Computer Application (DCA)	8-22
5	Certificate Course on Course on Leadership and Management skills	23-26
6	Certificate Course on Communication Skills	27-29
7	Add on Course on English Essentials	30-31
8	Certificate Course in Green Accounting in Digital Era	32-33
9	Add on Course on Herbal Bathing Soap Making	34
10	Certificate Course in Computational Biology	35-36
11	Certificate Course in Nutrition and Dietetics	37-38
12	Certificate Course in Communicative Hindi	39-40
13	Certificate Course in Data Analysis using Statistical Package for Social Sciences	41-42
14	Certificate Course on Field Techniques in Archaeology	43-44
15	Certificate Course on Tribal Ethnography in India	45-47
16	Certificate Course in PageMaker	48-49
17	Certificate Course in CorelDRAW	50-51
18	Diploma in Indian and International Finance and Accounts	52-54
19	Certificate Course in Virtual Lab	55-56
20	Certificate Course in Energy Audit	57-58
21	Business and Sustainable Development (NPTEL)	59
22	MOOC on Organic Farming	60-63

Note: Curriculum of the Certificate Courses/MOOCs is given to the students prior to the commencement of the course. The assessment procedure (highlighted in yellow colour) of each course is included in the curriculum. We hereby submit the curriculum and assessment procedure of each Certificate Course/MOOC for your kind perusal.

2021 - 2022

1. Certificate Course in Energy Efficient Devices

Syllabus

Course Name: Certificate Course in Energy Efficient

Devices Course Code : MTCEED (Credit 30 hours)

Semiconductors: (8 hours)

Fundamentals of semiconducting materials, Band formation, Bonding, Forces, types of semiconductors, conductivity and resistivity, Intrinsic silicon, extrinsic n and p type silicon, mobility of carriers, carrier transport in semiconductors; p- n junctions diodes and other applications Semiconductor Materials.

Energy Efficient Technologies in Electrical Systems: (8 hours)

Maximum demand controllers, Automatic power factor controllers, Energy efficient motors, Soft starters with energy saver, Variable speed drives, Energy efficient transformers, Electronic ballast, Occupancy sensors, Energy efficient lighting controls, Energy saving potential of each technology
Maximum demand controllers, Automatic power factor controllers, Energy efficient motors, Soft starters with energy saver, Variable speed drives, Energy efficient transformers, Electronic ballast, Occupancy sensors, Energy efficient lighting controls, Energy saving potential of each technology

Light Emitting Diodes: (4 hours)

Light emitting diode symbol, working of light emitting diode, LED voltage and current, types of LED, characteristics of LEDs, advantages and disadvantages of LED, applications of light emitting diode

Practical (10 hours) LED bulb and star making

Course Objective is to get insight about major energy efficient devices, to learn theory of energy efficient energy devices, to learn energy saving mechanisms, Design and study LED bulbs, Stars etc.

Course Outcome is that after the completion of this Course, the students will be able to: Enhance their practical skills such as assembling of electronic circuits and easy mounting of LED's via simplified connections which lead them to make LED lights for their own household applications.

Assessment Procedure

Assessment of Course is done as per the following Scheme of distribution of marks. For each paper 30 marks are set apart for the evaluation. Total 50% marks should be secured for a pass in the course. Components of evaluation are

Paper	Marks
Test	10
Practical	10
Seminar/Viva Voce	10
Total	30



2. Certificate Course in Applied Electronics

Syllabus

Course Name: Applied Electronics

Total Hours: 30

Module I-Electronic Components-5 Hrs

Resistors-basic idea-types of resistor, Checking Resistors with an Ohmmeter – Measurement of resistance, Inductors-Basic Ideas— Series and Parallel combination of inductors, Capacitance-Basic ideas-Types of Capacitors– Checking Capacitors with Ohmmeter, Transformers-Auto, Audio, IF, RF and Power transformers-Common fault in transformers

Module II-Measuring Instruments-5Hrs

Tools for desoldering, Desoldering techniques, Soldering techniques, PMMC Multimeter – Digital Multimeter– Cathode Ray Oscilloscope (CRO), LCR circuits, Function generators, filters: low pass filter-high pass filter – band pass filter-band stop filter, JFET – Operation of JFET – Characteristics of JFET, Types of MOSFET, Unijunction Transistors (UJT), Operational Amplifiers, Multivibrators, IC 555.

Module III- Hands on Training-Practicals-20 Hrs

Zener Diode Characteristics, Rectifiers-Half wave and Full wave, RC Integrator, RC Differentiator, RC low pass filter, RC high pass filter, Op-amp – Summing Amplifier, Multivibrators-astable&monostable using IC 555.

Course Objective: The objective of this Course is to explain the nature and scope of electronic components and measuring instruments.

Course Outcome: After the completion of this Course, the students will be able to: Identify and explain the functions of important electronic components including resistors, capacitors and inductors. Also to explain the operation, maintenance and repair of a range of electronic devices.



Assessment Procedure

Assessment of Course is done as per the following Scheme of distribution of marks. For each paper 30 marks are set apart for the evaluation. Total 50% marks should be secured for a pass in the course. Components of evaluation are

Paper	Marks
Test	10
Practical	10
Seminar/Viva Voce	10
Total	30



3. Value Added Course on Fresh Salad Making

Syllabus

Course Name: Fresh Salad Making

(Credit 30 hours)

Module 1 (5 hrs)

Introduction- Definition of salad ingredients, importance and nutritional value of salad ingredients in the human body, Health benefits.

Module 2 (5 hrs)

Different parts of salads- base ,body, dressing and garnishing

Module 3 (5 hrs)

Classification of salads- simple salad, compound salad and tossed salad

Module 4 (10 hrs)

Process of salad making – peeling, slicing, chopping, mixing, squeezing, sprinkling, tossing

Module 5 (5 hrs)

Basic types of salad dressing- flavoring, moistening

Course Objectives

The syllabi are framed in such a way that it

- improve their culinary skill
- provides an awareness about nutritional quality of salads
- know about the preparation of various salads.

Course Outcome: The students were able to prepare various fruits and vegetables salads, also understood the nutritional demands in physiological stages of the life cycle.



Assessment Procedure

Assessment of Course is done as per the following Scheme of distribution of marks. For each paper 30 marks are set apart for the evaluation. Total 50% marks should be secured for a pass in the course. Components of evaluation are

Paper	Marks
Test	10
Practical	10
Seminar/Viva Voce	10
Total	30



4. Diploma in Computer Application (DCA)

Syllabus



INSTITUTE OF HUMAN RESOURCES DEVELOPMENT DIPLOMA IN COMPUTER APPLICATIONS

Subject Code	Subject Name	No. of Hrs/ Week		Minimum Marks			Maximum Marks		
		T	P	W / P	C E	T	W / P	C E	T
DCA101	PC Hardware & Operating Systems	2	-	30	10	50	75	25	100
DCA102	Office Automation Packages	2	-	30	10	50	75	25	100
DCA103	Networking & Web Technology	2	-	30	10	50	75	25	100
DCA104	Lab Practice - 1 (Windows, Linux, PC Hardware)	-	3	30	10	50	75	25	100
DCA105	Lab Practice - 2 (Office Automation Packages, Data Entry)	-	3	30	10	50	75	25	100
DCA106	Lab Practice - 3 (Network, PC Skills, Internet)	-	3	30	10	50	75	25	100
Total Duration : 240 Hrs		6	9	Total Marks			450	150	600

* T- Theory P - Practical

W - Written CE-Continuous Evaluation T – Total



Duration: 40 Hrs.

DCA101 PC Hardware & Operating Systems

Module 1 – Computer Fundamentals (10 Hrs)

Introduction to Computer - Familiarity with the basic components of computers and computer terminology - Characteristics of computer, e- governance, multimedia etc.

Concept of Hardware and Software - Block diagram - functional units - Input, Output, Memory, CPU. (2 hrs)

IO-Devices - Familiarization of IO-Devices - Keyboard, mouse (optical, wireless), scanners – Monitor - Type of monitors(LED,TFT)-Pixel, Resolution - LCD projector – Printers -Type of printers - Dot matrix, Inkjet, Laser, Thermal. (4 hrs)

Memory - Primary memory - RAM, ROM, Flash memory - Secondary Storage - Hard disk - concept of track, sector, cylinder, Storage capacity, SMART(concept only), Hard disk types - SATA,SCSI, SAS - Optical storage devices - CD, DVD - Flash disk. (2 hrs)

CPU – Microprocessor - concept of ALU and control unit - familiarization of latest processors (Intel, AMD etc.), Multi core processors – Wordlength , Clock Speed,Concept of Cache memory.(2 hrs)

Module 2 - Windows (8 Hrs)

Introduction to GUI Based Operating System - GUI based operating system - File Management

Operating system Overview – Definition - Functions-as a resource manager, as an Interface - CUI,GUI - Structure of OS - Kernel, Shell - POST and Bootstrapping. (2hrs)

Windows - Shell commands - (DATE, TIME, DIR, COPY, REN, DEL,MD, CD, RD, TYPE),

Files and Folder manipulation - create, copy, move, rename, delete - Sharing of folder and printer - Managing user accounts. (6 hrs)

Module 3 –GNU/Linux (7 Hrs)

Concept of open source software –GNU/Linux – Different distribution of Linux - Features of Linux - login, Shell commands in linux (ls, date, cp, mv, rm, mkdir, rmdir, cd, cat, man, who) - Files and folder manipulation in Linux GUI - User management - Concept of Linux directory structure. (5hrs)



Comparison of Windows and Linux operating systems. (2hrs)

Module 4 - PC Hardware (10Hrs)

Identification of Hardware components - motherboard, processor, memory (DDR3,DDR4), HDD, DVD writer, Graphic system(AGP,PCI Express) - SMPS - NIC (2hrs)

Ports - parallel, USB, PS/2, audio ports, Ethernet. (1hrs) Device Driver installation (Printers, scanners) (3 hrs)

Device connectivity - Ethernet, Bluetooth, wireless, mobile connectivity, modem. Sample system specification for home, office and special purpose computers. (4hrs)

Module 5 - OS Installation (5 Hrs)

Configuring system - Hard disk Partitioning – formatting - CMOS setup – Display and audio configuration. (2hrs) Case study of OS installation (windows, Ubuntu Linux) - Service pack - OS updation - concept of boot loader - software installation (3hrs)

Reference:

13. Computer Fundamentals - B RAM
14. Upgrading and repairing PC's – Que publications
15. <http://en.wikipedia.org/wiki/linux>



Duration: 40 Hrs.

DCA102 Office Automation Packages

Module 1 - Word Processing (10 Hrs)

Elements of Word Processing - Document creation saving, editing, insertion of tables etc. in document

Introduction – Menu – Tool bar – Document – creation, editing, saving, opening- Text – editing , deleting, inserting, selection, moving, copying, converting case, find & replace, redo/undo - Formatting document – paragraph formatting – applying styles , header and footer, bullets and numbering, format painter ,line spacing – pagelayout – numbering pages - inserting section break – spell check - news paper column - Printing Document - page setup, inserting picture Tables - creation, editing, formatting, insertion, merging, splitting rows and columns, document with tables. Mailmerge and template creation.

Malayalam computing -Familiarization of Malayalam fonts, Malayalam Transliteration, Enabling Malayalam in Windows and Linux.

Module 2 - Spreadsheets (13 Hrs)

Office Packages - Create, save, and effectively work with Spreadsheets including formulae and chart - Cell manipulation, Insertion and deletion of rows, columns, chart, graphs, function etc.

Electronic spreadsheet features, work book, work sheet, menu, cells - entering data, text, functions – selecting cell – ranges- saving work sheet- editing work sheet data – copying , cut & paste - inserting , deleting rows, columns, cell ranges- find and replace data – Formatting work sheet – Changing column width, row height , aligning data – controlling text within a cell - changing font size, style - applying border, pattern styles.

Charts - different types - titles and legend, saving , moving and copying between sheets.

Formulas, functions - entering formulas- cell references –functions (sum, average, if, count, max, min, sin, sumif, hyperlink) - working with range names

Printing – print preview - setting print area - headers and footers- inserting, removing page break - cell protection, freezing columns - data - auto filter, sorting - hiding and displaying data



Module 3 - Presentation Software (5Hrs)

Create, save and work on presentation software -Demonstrate Presentation Software like Power Point

Create presentation with back ground – inserting pictures and images - change position or lay out of pictures – Apply 3D effect, shadows, back ground fill colors, textures and pattern. – multimedia – insert sounds and movies - slide transition - introduce animated objects.

Slide show set up - insert navigation to slides- presentations and URL's – apply and edit timings – create a customized slide show.

Module 4 - DTP (6 Hrs)

Desktop publishing software and its functionality - working with publication, new publication, opening a publication, drawing tools- grouping and ungrouping, control palette, power pasting, paste multiple, Importing graphics, place commands, cropping tools, text tools – adding, changing and manipulating text – importing text– placing text, threaded text, master pages, character specification and paragraph specification.

Module 5 –Tally.ERP9 based Accounting (6Hrs)

Accounting basics-Familiarisation of tally menus- configuring tally – Ledger creation/editing – Voucher Entry – corrections –Voucher types – report generation - Printing - Bank reconciliation.

Introduction to Digital Financial Services - Introduction to Internet based financial services and awareness of various schemes of Govt. of India. Awareness of various Digital Financial services modes (like net banking, mobile banking etc.)

References:

17. Office 2016 All-In-One For Dummies - Peter Weverka
18. Office 2013 Library Excel 2013 Bible, Access 2013 Bible, PowerPoint 2013 Bible, Word 2013 Bible Lisa A. Bucki
19. Adobe PageMaker 7.0 Classroom in a Book
20. Teach Yourself Tally ERP 9 Mr. Niranjan Jha

* * * * *



Duration: 40 Hrs.

DCA103 Networking & Web Technology Module 1.

Networking Concepts (10 Hrs)

Concepts of computer network - need and advantages -concept of LANs & WANs - serial & parallel data transmission – networking components- wired & wireless - Transmission media- bounded and unbounded media - UTP cables, fiber optic, microwave & satellite link -NIC cards, Ethernet port, switches, Modems – Concept of IP addresses , subnet mask.

Infrastructure - Awareness on LAN, WAN Infrastructure and its components

- Installation and configuration of peripherals such as printers, scanners, projectors etc. - Awareness on Installation of software, virus scan - Awareness on Data Centre, BCP, DR and its major components

Module 2. Internet (5 Hrs)

Introduction to Internet, WWW and Web browsers, searching content etc - Cookies, caches, history etc.

Internet Basics - URL, Domain - concept of DHCP, DNS, router & gateway. Internet Access methods (DSL, Cable, wireless[WiFi], FTTH) - WWW - Web protocols (HTTP, HTTPS, FTP) – Internet configuration – Linux & Windows - Concept of firewall, Proxy server, Web server. Introduction to Hyper Text Markup Language - Concepts of HTML, The structure of a HTML page.

Module 3. Email & Search Engines (8 Hrs)

Browsers - different browsers, managing web browser , Options and settings, plugins - Search engines - search techniques (site, type, date, range, domain, country etc) - downloading and saving web documents - download managers- Instant messengers - ftp client software(Cute FTP, FileZilla etc), Email - email id creation, compose, attach, send, inbox, spam, trash, CC, BCC, addressbook, reply & forward, searching - Blog creation, Introduction to Web Forms (Familiarisation of Online Forms like PSC application, E-grantz, Keralapsc.org, mvd.org)

Module 4.WEB Utilities& PC Skills (12 Hrs)

Communication and collaboration tools like Skype, Google docs/sheets etc. - Emails, messaging,

Use of Calendars and meeting management using Calendars - Awareness on Cyber Security Act and IT Act



Font Installation in windows and Linux (including Malayalam) - Concept of Unicode, File formats (html, Jpeg, GIF, tiff, bmp, avi, mp3, mp4, 3gp, doc, zip, tar, swf, flv etc.) - File conversion utilities (eg:-DOC to PDF, HTML to DOC, RTF to PDF etc) - Web Documents – PDF document creation ,Google Docs, Video conferencing - WEB Cam & Microphone, Concept of Web Casting - Anti virus software - DVD Burning using software like Nero , CD/DVD creator in Linux etc. Concept of Cyber security (phishing, id theft, spoofing, Denial of Service etc) and Cyber laws. Image Editing - image resize, crop, rotate etc using paint/GIMP/Photoshop or any other software, Mobile Technology- Mobile Operating Systems-Android,ios,windows-Different versions, Mobile Apps Online Store- Google Play store, Apple play store, Microsoft store etc., Online Products- calendar, Docs, Drawings, Drive, Forms, Groups, Sheets, Slides

Module 5. Database Concepts (5Hrs)

Introduction to database, tables, data types, fields, rows, columns ,tuples, attributes– Introduction to mysql - creation of a database and tables - adding , editing, deleting and saving data , displaying data.

Project Management tools

References : https://www.tutorialspoint.com/internet_technologies/index.htm
https://www.webopedia.com/quick_ref/network-fundamentals-study-guide.html
<https://www.w3schools.in/sql/database-concepts/>



Duration: 40 Hrs.

DCA104 Lab Practice-1

(Windows, Linux
, PC Hardware)

Module 1 – Windows (10 Hrs)

Familiarization of windows Desktop, taskbar, icons, mouse operations, utilities - paint, notepad etc. Shell commands - DATE, TIME, DIR, COPY, REN, DEL, MD, CD, RD, TYPE etc. Files and Folder manipulation - create, copy, move, rename, delete, Windows explorer - control panel - recycle bin - Sharing of folder and printer – Managing user accounts - Desktop management - Searching files.

Module 2 – Linux (15 Hrs)

Shell commands in Ubuntu linux (ls, date, cp, mv, rm, mkdir, rmdir, cd, cat, man, who etc.), Files and folder manipulation in linux GUI - User management - Familiarisation of Linux file system - Mounting Windows partitions. Familiarisation of Linux utilities - Calculator, Text editor etc.

Module 3 – PC Hardware (10 Hrs)

Installation and configuration of peripherals such as printers, scanners, projectors etc.

Identification of Hardware components - motherboard, processor, memory(DDR3,DDR4), HDD, DVD writer, SMPS - NIC– UPS – online & offline. Identification of connectors and slots in motherboard. Ports - serial, parallel, USB, PS2, audio ports. Identifying configuration of a system (Through CMOS, Windows or any other software). Installing and connecting various Devices - Printers, scanners, Ethernet, Blue tooth, wireless, mobile, modem, projector

- Install printer cartridges.

Module 4 – OS Installation (5 Hrs)

Familiarizing Hard disk Partitioning – formatting - CMOS setup – Display and audio configuration. OS installation (windows & Linux).

Configuring Windows - Service pack installation - OS updation - software installation – network configuration. Configuring Linux system – creating user accounts – configuring networking.

* * * * *



Duration: 40 Hrs.

Office Automation Packages, Data Entry

Module 1: Word Processing (Word/ Writer) (10Hrs)

Word processing packages – features – Menu – Tool bar – window parts , creating a document, saving, editing – formatting text – selection, copying, Moving, Deleting, Inserting , Undo, Redo, News paper column – Formatting paragraph – Margins and gutters, applying styles, Find & Replace, headers, footers, line spacing, page layout, page numbering, inserting section break – spell check, Tables – creation,merging,splitting rows and columns, formatting – Converting doc file to pdf format – Manipulating downloaded web documents using word processor-mailmerge– printing a document.

Practical/hands on sessions - Drafting/Noting using computer - Format documents

Module 2 : Spreadsheet (Excel / Calc) (8Hrs)

Electronic spread sheet, features, Menus, Cells, Rows, Columns, Saving worksheet, Workbook – selecting cells, entering, copying formula, Autosum, functions, Rearranging worksheet – moving, copying, deleting, filtering data , sorting – Formatting Cells & cell content, find & replace, spell check, insert

/ delete row, column, freezing , splitting, Hide / Unhide, cell protection – drawing graph, Title, legends, saving, if command, moving and copying between sheets-formula, functions (sum, average, if, count, max,min, sin, sumif, hyperlink) and macros – entering formula – cell reference — working with range names . Transferring spreadsheet information to a word document.Printing worksheet-setting Print area.

Create a spreadsheet with data summarization and chart.

Module 3 : Presentation (Power Point/ Impress) (4Hrs)

Create presentations - Application of presentation -Demonstration of Presentation Software like Power Point

Starting presentation software, menu bar, title bar, status bar, tool bar – creating new presentation by using blank presentation , by using template- viewing presentation – slide- insertion, deletion – enter, edit and create new text object – change and correct text, spell check- enhance a presentation – color, style, color schemes, add header and footer, add clipart picture , graphic objects, other objects, align objects – set transition , animate objects on a slide , add sound and movies, adding links to a slide. Printing slides.



Module 4 : Open source DTP software (10 Hrs)

Working with documents – new document – drawing tools – grouping and ungrouping, control palette, paste multiple – importing graphics , place commands , cropping tools, text tools- adding , changing and manipulating text – importing text- placing text, master pages-character specifications – paragraph specification – Column and page break – Spelling check – styles – paragraph styles. Printing - Create pdf

Module 5 : Introduction to Database (Access/ Base) (2 Hrs)

Creation of a database- adding , editing, deleting and saving data , displaying records.

Module 6 : Malayalam computing & Data Entry (6Hrs)

Practical/Hands on sessions - Transcription and typing of dictated passage in English and Malayalam Drafting/Noting using computer

Installation of Malayalam fonts like rachana, meera, kartika etc.- enabling Malayalam in windows and linux. – get phonetic keyboard using varamozhi in Windows and using swanalekhain linux
English & Malayalam data entry practice

References:

9. <http://www.free-training-tutorial.com/>
10. <http://tools.malayalam.kerala.gov.in/>

* * * * *



Duration :40 Hrs.

Network, PC Skills, Internet

Module 1. Networking Concepts (6Hrs)

Familiarisation of Network Components- cable, connector, switches, hub, access point, NIC Installation of network driver demo, Connecting a system to a network -Assignment of IP address and subnet mask, Gateway in Windows & Linux. Usage of trouble shooting commands (ping, ipconfig, ifconfig, traceroute, mii-tool) - File & Printer sharing

Module 2. Internet (6 Hrs)

Demonstration of Internet connection methods(DSL, Cable, Wireless) – Ubuntu Linux& Windows. Demonstration of Proxy server and firewall configuration, Demonstration of Webserver (Apache/IIS) installation & configuration.

Module 3. E-mail & Search Engines (10Hrs)

Browser settings - Plug-in installation -Searching - Google (Filetype, image, site, date, country, domain, range etc.), E-mail- email id creation, compose, attach, send, inbox, spam, trash, CC, BCC, address book, reply, forward & searching.- Blog creation, Familiarization of sites like www.IRCTC.com, www.Keralapsc.org, www.mvd.org, <http://civilsupplieskerala.gov.in>, <http://www.ceo.kerala.gov.in/eregistration.html>, <http://www.cyberkeralam.in> :8888/berker/ etc., Downloading and saving web documents - download managers - Instant messengers – ftp client software(Cute FTP, FileZilla etc)

Module 4. Tally.ERP 9 based Accounting (10Hrs)

Accounting basics - Familiarisation of tally menus- configuring tally – Ledger creation/editing – Voucher Entry – corrections –Voucher types – report generation - Printing - Bank reconciliation.

Module 5. WEB Utilities & PC Skills (8Hrs)

Font Installation in windows and Linux (including Malayalam) - Enabling Unicode in Linux & Windows, File formats (html,Jpeg,GIF,tiff,bmp,avi,mp3,mp4,3gp,doc,zip,tar,swf,flv etc.) File conversion utilities (eg:- DOC to PDF, HTML to DOC, RTF to PDF etc), Web Documents – PDF document creation ,Google Docs. Video conferencing-WEB Cam & Microphone. Anti virus installation, DVD Burning using software like Nero , CD/DVD creator in Linux etc, Image Editing-image resize, crop, rotate etc using paint/GIMP/Photoshop or any other software.Image Scanning. Network Printing - Familiarization of online products



Course Objective: DCA, Diploma in Computer Applications, is a 6 month diploma Course in the field of Computer Applications which involves the study of numerous computer applications such as MS Office, Internet Applications, Operating System, Database Management System (DBMS), Tally, HTML among other subjects.

Course Outcomes: By completing a DCA Course, candidates will be able to:

- Acquire confidence in using computer techniques available to users.
- Understanding the basic components of computers and terminology.
- Understand data, information, and file management.
- Create documents using Word processor, Spreadsheet, and Presentation Software.
- Understanding computer networks, the Internet, and they will also learn about browsing the internet, content search, and email.
- Use a computer to improve existing skills and learn new skills.

Question paper pattern

Duration of Exam.: 3Hrs . Maximum Marks: 75.

Section A: Multiple Choice/Fill in the Blanks/One Word Type Questions

Section B: Short answer type questions with answer size up to $\frac{1}{4}$

pages per question Section C :Descriptive type questions with

answer size up to $\frac{1}{2}$ page per question Section D :Descriptive type

questions with answer size up to 1 page per question.



Marks Distribution

Section	No of questions	Need to be answered	Marks/Question	Total
A	10	10	1	10
B	12	10	3	30
C	7	5	5	25
D	2	1	10	10
Total				75

Remarks:

1. Each part should cover questions from each module in the syllabus.

2. The level of difficulty shall be as follows
1. Easy Questions : 30% -40%
 2. Intermediate level to difficult : 30% -40%
 3. Difficult questions : 20% -30%

3. The question paper setters must prepare and submit the question papers as per the following guidelines.

a. Question paper must be designed and prepared to fit in an A4 size paper with one inch margin on all four sides.

b. Prepare the Question in MS-Word/Open office-Write document format. Use only “Times New Roman” font with size 10. Align text to both left and right margins.

c. Please leave 5 cm. free area at the top of the front page of each question paper to place examination details/Question paper header by the examination department.

d. Avoid placing 1 or 2 questions in the last part in a fresh page, unless it is absolutely necessary. In such case, try to accommodate above questions in the previous page(s) by adjusting top/bottom margins and line spacing, if possible. This will reduce printing expenses.



- e. Specify marks for each question/part clearly.
- f. Clearly specify the number of questions to be answered for each Part.
- g. Confirm that no questions in part B is repeated in Part C also.
- h. Avoid repeating questions in Part C from the immediate previous examination.
- i. Key for evaluation must be prepared and enclosed in a separate cover and should be submitted along with the question paper set. Key for evaluation must specify evaluation guidelines for each part in the question paper, otherwise the key prepared will be treated as incomplete.
- j. Submit Question paper in Laser print out form only. Hand written and printed in poor quality printers is not acceptable.

2. Scheme for Continuous Evaluation.

1. For Theory Papers : Weightage

a). Average of minimum Two test papers	: 30%
b). Average of minimum Two Assignments	: 30%
c). Score for Class Attendance.	: 20%
d). Overall performance in the class.	: 20%

2. For Practical Papers : Weightage

a). Average of minimum Two Lab tests	: 30%
b). Average of minimum Two Lab Assignments	: 30%
c). Score for Lab Attendance.	: 20%
d). Overall performance in the Lab.	: 20%

3. Teachers shall submit Mark list for Continuous Evaluation to the Head of Institution in the following format.



Subject:

Sl no	Regno.	Name	a. Test	b. Assignment	c. Attendance	d. Performance	Total

4. Head of Institution/Co-ordinator shall forward Continuous evaluation marks to the Examination Department in the following format only.

Centre:

Sl no	Regno.	Name	DCA10 1 25	DCA10 2 25	DCA10 3 25	DCA10 4 25	DCA10 5 25	DCA10 6 25

5. Continuous evaluation(CE) marks must be published in the notice board at least one week before the commencement of theory examinations after getting approval from the Head of Institution/Co-ordinator.



5. Certificate Course on Leadership and Management Skills

Syllabus

Course Name: Leadership and Management skills Duration: 30 Hours

Number and titles of Modules:

Module 1	Leadership Skills	6 Hours
Module 2	Managerial Skills	6 Hours
Module 3	Entrepreneurial Skills	6 Hours
Module 4	Innovative Leadership and Design Thinking	6 Hours
Module 5	Ethics and Integrity	6 Hours
Module 1- Leadership Skills		6 Hours

a. Understanding Leadership and its importance

- What is Leadership?
- Why Leadership required?
- Whom do you consider as an ideal leader?

b. Traits and Models of Leadership

- Are leaders born or made?
- Key Characteristics of an effective leader
- Leadership styles
- Perspectives of different leaders

c. Basic Leadership Skills

- Motivation
- Team work
- Negotiation
- Networking

Module 2- Managerial Skills

a. Basic Managerial Skills



6 Hours

- Planning for effective management
- How to organise teams?
- Recruiting and retaining talent
- Delegation of tasks
- Learn to coordinate
- Conflict Management

b. Self-Management Skills

- Understanding self-concept
- Developing self- awareness
- Self-examination
- Self-regulation

Module 3- Entrepreneurial Skills

6 Hours

a. Basics of Entrepreneurship

- Meaning of entrepreneurship
- Classification and types of entrepreneurship
- Traits and competencies of entrepreneur

b. Creating Business Plan

- Problem identification and idea generation
- Idea validation
- Pitch making

Module 4- Innovative Leadership and Design Thinking

6 Hours

a. Innovative Leadership

- Concept of emotional and social intelligence
- Synthesis of human and artificial intelligence
- Why does culture matter for today's global leaders

b. Design Thinking



- What is design thinking?
- Key elements of design thinking:
 - Discovery
 - Interpretation
 - Ideation
 - Experimentation
 - Evolution
- How to transform challenges into opportunities?
- How to develop human- centric solutions for creating social good?

Module 5- Ethics and Integrity

6 Hours

a. Learning through Biographies

- What makes an individual great?
- Understanding the persons of a leader for deriving holistic inspiration
- Drawing insights for leadership
- How leaders sail through difficult situations?

b. Ethics and conduct

- Importance of ethics
- Ethical decision making
- Personal and professional moral codes of conduct
- Creating a harmonious life

Course Objective: To Equip the students with skills of leadership and management

Course Outcome: The students are able to critically evaluate the situations that they encounter and come up with the solution.



Assessment Procedure:

Assessment of course is done as per the following scheme of distribution of marks for each paper 20 marks are set apart for continual internal evaluation and 30 marks are set apart for final written examination. Total 50% marks should be secured for a pass in the course. Components of continuous internal evaluation are:-

Paper	Marks
Attendance	5
Assignment	5
Seminar	5
Test Paper	5



6. Certificate Course in Communication Skills

Syllabus

Course Name: Communication Skills

Module No.	Module Title	Hours
Module 1	Listening	4 hrs
Module 2	Speaking	6 hrs
Module 3	Reading	3 hrs
Module 4	Writing and Different Modes of Writing	4 hrs
Module 5	Digital Literacy	4 hrs
Module 6	Effective Use of social media	4 hrs
Module 7	Non-Verbal Communication	5 hrs

Module outline:

Module 1: Listening (4 hours)

Techniques of Effective Listening

Listening and Comprehension

Probing Questions

Barriers to Listening

Module 2: Speaking (6 hours)

Pronunciation

Enunciation

Vocabulary



Fluency

Common Errors

Module 3: Reading (3 hours)

Techniques of Effective Reading

Gathering Ideas and Information from a Given Text

Evaluating these Ideas and Information

Interpreting the Text

Module 4: Writing and Different Modes of Writing (4 hours)

The Writing Process

Effective Writing Strategies

Different Modes of Writing

Module 5: Digital Literacy (4 hours)

Role of Digital Literacy in Professional Life

Trends and Opportunities in Using Digital Technology in Workplace

Internet Basics

Introduction to MS Office Tools

- i. Paint
- ii. Office
- iii. Excel
- iv. Power point

Module 6: Effective Use of Social Media (4 hours)

Introduction to Social Media Websites

Advantages of Social Media

Ethics and Etiquettes of Social Media

How to Use Google Search Better

Effective Ways of Using Social Media

Introduction to Digital Marketing

Module 7: Non-Verbal Communication (5 hours)

Meaning of Non-Verbal Communication (NVC)



Advantages of Using Non-Verbal Communication

Introduction to Modes of Non-Verbal Communication

Open and Closed Body Language

Eye Contact and Facial Expression

Hand Gestures

Do's and Don'ts in NVC

Learning from Experts

Activities-Based Learning

Course objective:

1. Identify common communication problems that may be holding learners back.
2. Identify what their non-verbal messages are communicating to others.
3. Understand role of communication in teaching-learning process.
4. Learning to communicate through the digital media.
5. Understand the importance of empathetic listening.
6. Explore communication beyond language.

Course Outcome:

By the end of the programme participants should have a clear understanding of what good communication skills are and they can do to improve their abilities.

Pedagogy: Instructor-led

Assessment: Paper based and speech based & Online assessment



7. Certificate Course in English Essentials

Syllabus

Course Title: English Essentials

Course code: ZYAD01

Duration: 30 hrs

Module No.	Module Title	Hours
Module 1	Listening and Reading	10 hrs
Module 2	Basics of English grammar	5 hrs
Module 3	Writing	9 hrs
Module 4	Speaking	6 hrs

Module outline:

Module 1- Listening and Reading **10 hrs**

Techniques of effective listening, Barriers to listening, Listening and comprehension practise, Effective reading techniques, text interpretation, gathering information from text, reading exercise.

Module 2- Basics of English grammar **5 hrs**

Basics of English grammar, tense, verb, adjective and its usages.

Module 3- Writing **9 hrs**

Writing skills, avoid vagueness and oversimplification, captioning, feedback writing, reporting an incident, letter writing, report writing, proper sequencing of text and narrative sequence

Module 4-Speaking **6 hrs**

Speaking skills, common errors, usages in English language, pronunciation, vocabulary, individual activities to test communication skills.

Course objective:

1. Identify common communication problems.
2. Understanding the importance of listening and pronunciation in communication.
3. Realizing the basics of English grammar.



Course Outcome:

1. Enhance communication in English.
2. Better literary skills among students.

Pedagogy: Instructor-led

Assessment: Paper based and speech based & Online assessment



8. Certificate Course in Green Accounting in Digital Era

Syllabus

Course Title: Green Marketing in Digital Era

Course Code : MTCGDE

Duration: 30 hrs

Module No.	Module Title	Hours
Module 1	Fundamentals of Green Marketing	5 hrs
Module 2	Green Marketing Strategies	7 hrs
Module 3	Green Marketing Initiatives and Practices	7 hrs
Module 4	Environmental Consciousness	5 hrs
Module 5	Legal and Technological Aspects	6 hrs

Module outline:

Module 1- Fundamentals of Green Marketing (5 hrs)

Green Marketing – Meaning – Importance – Evolution of Green Marketing – Difference between Traditional Marketing and Green Marketing – Benefits – Challenges – Green Marketing Mix – Green Products

Module 2 – Green Marketing Strategies (7 hrs)

Green Spinning- Green Selling – Green Washing- Consequences of Green Washing- Enviropreneur Marketing – Compliance Marketing – Ecotourism- Triple Bottom Line

Module 3 – Green Marketing Practices and Initiatives (7 hrs)

Green Marketing Policy- Green Firms- General Principles- Business Implications – Case Studies of firms adopting Green Marketing Practices- Role of business, innovation and advertising in Green Marketing

Module 4 – Environmental Consciousness (5 hrs)

Environment- Types- Benefits of Green Environment to society- Solid Waste Management- Urban, domestic and industrial waste- Causes, effects and control measures – E-waste- Collection, Storage, Transportation and Disposal – Role of individual in prevention and generation of waste



Module 5– Technological and Legal Aspects**(6 hrs)**

Green Technology- Energy consumption and GHG emissions- Energy Efficient Devices- Green Architecture- Carbon Capture- Sustainable value creation – Ladder of Sustainability- Trademarks- International Organisation for Standardisation (ISO) Standards, Environment Protection Act - Air (Prevention and Control of Pollution) Act, Water (Prevention and control of Pollution) Act.

Course Objective:

1. To understand the concept of Green Marketing from the perspective of consumers and marketers and its relevance in the present scenario.
2. To understand the opportunities, challenges, and issues in designing and implementing green marketing strategies.
3. To increase consciousness about Green Products and familiarize students with the legal and technological aspects regarding Green Marketing

Course Outcome:

1. Comprehensive understanding of Green Marketing and its relevance
2. Increased environmental consciousness

Assessment Procedure

Assessment of course is done as per the following scheme of distribution of marks for each paper 20 marks are set apart for continual internal evaluation and 30 marks are set apart for final written examination. Total 50% marks should be secured for a pass in the course. Components of continuous internal evaluation are:-

Paper	Marks
Attendance	5
Assignment	5
Seminar	5
Test Paper	5



9. Add-on Course in Herbal Bathing Bar Making

Syllabus

Course Name: Herbal Bathing Bar Making

Course Code: MTAHBM

Total Hours:30

Module 1- 10hrs

Soap,action,contents,biochemistry,PH value,TFM,(General account on soaps)

Module 2- 10hrs

Types of soaps(chemical soaps,Glycerin soaps,Transparent soaps,liquid soaps,laundry soaps)

Handmade soap making

Cold processed(cp)

Hot processed(hp) Melt

and pour(mnp)

(Brief account on making,storage expiry)

Module 3- 10hrs

Preference of mnp soaps Additives, curing period, safety of skin (Antiacne, hydration, antibacterial properties) Bathing bars, Demerits and comparing of different soaps– Sweating of soaps,expiry,expense,handling of lye

Course Objectives:

1. To understand the hazards of chemical soaps on skin
2. Enable the students to make soaps on their home
3. A self-earning program

Course Outcome: Developed handmade soap making skills and self-earning.

Pedagogy- Instructor - led

Assessment - Paper based and practical based



10. Certificate Course on Computational Biology

Syllabus

Course Title: Computational Biology

Course Code: MTCCB

Total Hours: 30

Module 1- 10hrs

Introduction, Basics of Computer (characteristics, History and generation), Types of Computer, Basics of computer

Module 2- 15hrs

System software, Statistical software(Ms Excel, PH Stat).Application software (Programs and packages, calculator, Ms-Word,Ms-Excel, Ms-PPT).Database search & Data retrieval- using NCBI,SWISS PROT, EXPASY,PDB. Sequence analysis- Types, methods & construction of phylogenetic tree

Module 3-5hrs

Application of system biology- introduction, gene network, synthetic biology. Internet and internet services.

Course Objectives:

1. To understand data analysis, mathematical modelling and computational simulations on biological systems and relationships.
2. To learn how to analyse DNA,RNA and Protein Sequence using computer.
3. To address scientific research topic with their theoretical and experimental questions without a laboratory.

Course Outcome: Students learned to analyse DNA,RNA and Protein Sequence using computer.



Assessment Procedure

Assessment of Course is done as per the following Scheme of distribution of marks .For each paper 50 marks are set apart for continual evaluation. Components of Continuous evaluation are

Paper	Marks
Attendance	10
Test Papers I	15
Test Papers II	15
Practical	10
Total	50

Grading System

Percentage of marks	Grade
90% and above	A
80-89%	B
70-79%	C
60-69%	D



11. Certificate Course on Nutrition & Dietetics

Syllabus Course Title: Nutrition & Dietetics

Course Code: MTCND

Total Hours: 30

Module 1 (10hrs)

Introduction to food source, optimum nutrition, balanced diet, structure, physical and chemical properties of food constituents (cereals & grains, pulses & legumes, vegetables & fruits, nuts & oilseeds, Milk & Milk products, meat & poultry, sugar & fat)

Module 2 (10hrs)

Concept & scopes of public health and community nutrition, ecology of health, major public health problems in India, Nutritional deficiency and lifestyle diseases (Cardiovascular, gastrointestinal, diabetics, cancer, hypertension, cancer, PCOD), Renal problems

Module 3 (10hrs)

Nutrition, Immunity & Infection, food quality control technique, food regulation-loss, standard & Agencies-National & International. Different food processing & preservation methods, (Roasting, boiling, frying, baking, grilling, freezing, canning, fermentation)

Course Objectives:

1. To understand the causes and consequences of undernutrition.
2. To discuss the energy value of various nutrients
3. To develop the skills and attitudes required for working in the broad field of applied nutrition.

Course Outcome: Students developed the skills and attitudes required for working in the broad field of applied nutrition.



Assessment Procedure

Assessment of Course is done as per the following Scheme of distribution of marks .For each paper 50 marks are set apart for continual evaluation. Components of Continuous evaluation are

Paper	Marks
Attendance	10
Test Papers I	15
Test Papers II	15
Practical	10
Total	50

Grading System

Percentage of marks	Grade
90% and above	A
80-89%	B
70-79%	C
60-69%	D



12. Certificate Course in Communicative Hindi

Syllabus

Course Title: Communicative Hindi

Course Code: MTCCH

Duration: 30 hrs

Module No.	Module Title	Hours
Module 1	Basics of Hindi vocabulary	10 hrs
Module 2	Essential Hindi grammar	5 hrs
Module 3	Speaking	9 hrs
Module 4	Conversation	6 hrs

Module outline:

Module 1 - Basics of Hindi vocabulary 10 hrs

Words, simple sentences, everyday vocabulary

Module 2 - Essential Hindi grammar 5 hrs

Basics of Hindi grammar, nouns, pronouns, verb, question words and how to ask questions

Module 3 - Speaking 9 hrs

Practice basic greetings, study the days of week, numbers, simple phrases, practice basic travel phrases

Module 4 - Conversation 6 hrs

Basic conversation scenarios, conversations in different situations



Course objective:

1. Understand the basic Hindi vocabulary for daily conversations.
2. Understanding the importance of listening and pronunciation in communication.
3. Realizing the basics of Hindi grammar.

Course Outcome:

1. Enhance basic vocabulary in Hindi.
2. Better communication skills.

Pedagogy: Instructor-led

Assessment: Paper based and speech based



13. Certificate Course in Data Analysis using Statistical Package for Social Sciences

Syllabus

Course Title: Data Analysis using Statistical Package for Social Sciences

Duration: 30 Hours

Number and titles of Modules:

Module I:	Introduction to SPSS	(4 Hours)
Module II:	Working with Data	(6 Hours)
Module III:	Exploring Data	(10 Hours)
Module IV:	Analysing Data	(10 Hours)

Module I: Introduction to SPSS (4 Hours)

SPSS Environment: data editor, output viewer, syntax editor – Data view window – SPSS Syntax – Data creation – Importing data – Variable types in SPSS and Defining variables – Creating a Codebook in SPSS.

Module II: Working with Data (6 Hours)

Computing Variables - Recoding (Transforming) Variables: Recoding Categorical String Variables using Automatic Recode - Rank Cases - Sorting Data - Grouping or Splitting Data.

Module III: Exploring Data (10 Hours)

Descriptive Statistics for Continuous Variables - The Explore procedure - Frequencies Procedure – Descriptives - Compare Means - Frequencies for Categorical Data.

Module IV: Analysing Data (10 Hours)

Inferential Statistics for Association: Pearson Correlation, Chi-square Test of Independence – Inferential Statistics for Comparing Means: One Sample t Test, Paired Samples T Test, Independent Samples T Test, One-Way ANOVA.



Course Objectives: Capacitating the students in analyzing complex information with the help of statistical software

Course Outcome: A strong theoretical and empirical foundation in statistical analysis, Familiarised with SPSS software.

Assessment Procedure:

Assessment of course is done as per the following scheme of distribution of marks for each paper 20 marks are set apart for continual internal evaluation and 30 marks are set apart for final written examination. Total 50% marks should be secured for a pass in the course. Components of continuous internal evaluation are:-

Paper	Marks
Attendance	5
Assignment	5
Seminar	5
Test Paper	5



14. Certificate Course on Field Techniques in Archaeology

Syllabus

Course Title: Field Techniques in Archaeology

Course code: MTCTTA

Duration: 40 hrs

Module No.	Module Title	Hours
Module 1	Introduction to archaeology	10 hrs
Module 2	Archaeological reconnaissance	10 hrs
Module 3	Archaeological Documentation	10 hrs
Module 4	Archaeological Analysis and Report writing	10 hrs

Module 1: Introduction to archaeology

- Archaeology and its features
- Its relations with other subjects
- interdisciplinary approaches in archaeology
- Archaeological sites and its formation

Module 2: Archaeological reconnaissance

- Methods of Exploration---Physical methods
- Methods of Exploration -- Scientific Methods
- Methods of excavation—Arbitrary and scientific
- Methods of Excavation ---Vertical, horizontal, Quadrant

Module 3: Archaeological Documentation

- Methods of documentation—onsite and offsite
- Archaeological Drawing
- Archaeological photography
- Digital recording in archaeology

Module 4: Archaeological Analysis and Report writing

- Introduction to archaeological analysis; Typology, seriation, stratigraphy
- Artifact analysis – archaeometry
- Format and Stages of an Archaeological report



d. Major archaeological report in India

Course objective:

1. Provide necessary field orientation to the students
2. Equip students to undertake field works and report writing
3. Enhance the analytical and comprehension skill of students in archaeology
4. Explore the archaeological potential and enhance awareness among students
5. Provide field orientation and hands on training to the students

Course Outcome:

1. By the end of the programme participants should have a clear understanding of how archaeology works
2. The Course will enhance the practical sense of the student in archaeological field techniques
3. More systematic field works will take place
4. The programme will bring out trained archaeologist oriented towards field archaeologists

Assessment Method:

The completion of the course will be through an evaluation process which includes Attendance, submission of an Assignment, Seminar presentation, and a Test paper

Criteria	Maximum Marks (20)
Attendance	5 Marks
Assignment	5 Marks
Seminar Presentation	5 Marks
Test Paper	5 Marks
Total	20 Marks



15. Certificate Course on Tribal Ethnography in India

Syllabus

Course Title: Tribal Ethnography in India

Course code: MTCTEI

Duration: 40 hrs

Module No.	Module Title	Hours
Module 1	Tribal Studies an Introduction	8 hrs
Module 2	Tribal Ethnicity and Heritage	10 hrs
Module 3	Colonial Impact on the Tribal Population	6 hrs
Module 4	Alienation and Loss of Culture	10 hrs
Module 5	Tribal Right as Human Right	6 hrs

Module outline:

Module I Tribal Studies an Introduction

Introduction to Tribal Studies: Nature, Scope, Relevance- Emergence and Growth
Tribal Studies in India-Approaches to study the tribes-Colonialism and tribes in India

Module II Tribal Ethnicity and Heritage

Colonial discourses on tribes-shifting cultivation-agrarian practices-traditional herbal practices -hunting and dietary practices-creation of the forest department and legislations-impacts-taming of the hill population

Module III Colonial Impact on the Tribal Population

Forest acts and representation of the tribes in India - decay of tribal ethnicity - tribal resistance – leaders - association with peasant and national movement - result-sanskritisation - social change and the tribe.



Module IV Alienation and Loss of Culture

Contemporary Tribal Issues- Poverty, indebtedness, land alienation- Unemployment and migration- Industrialization and urbanization- Social Structure and organization of the tribes-displacement and rehabilitation.

Module V Tribal Right as Human Right

Tribal rights social implications – upliftment - women rights - forest rights - need for a global approach

Course Objective:

Through the completion of the Course the student will fulfill the following objectives,

1. To inculcate in students the awareness regarding the need and importance of tribal ethnographic study.
2. To equip student to understand the socio-cultural aspects and traditions of tribal groups in India.
3. To assess the economic, educational and health status of tribal communities in India.
4. To enable the student to identify the problems faced by the tribal communities and suggest suitable measures for their upliftment.
5. To study the traditional knowledge and lifestyle of tribal communities, and to explore ways to preserve and protect them.
6. To explore the possibilities for sustainable development of tribal communities in India.

Course Outcome:

Through the Add on Course the students will learn the different socio cultural settings and heritage of the adivasi population living in and around.



Assessment Method:

The completion of the course will be through an evaluation process which includes Attendance, submission of an Assignment, Seminar presentation, and a Test paper

Criteria	Maximum Marks (20)
Attendance	5 Marks
Assignment	5 Marks
Seminar Presentation	5 Marks
Test Paper	5 Marks
Total	20 Marks



16. Certificate Course in PageMaker

Syllabus

Course Name: Certificate Course in PageMaker

Course Code: MTCPM

Duration - 30 hours

The Course content included the following topics:

Module I- Introduction to PageMaker (10 hours)

- Working with text and formatting
- Working with images and graphics

Module II – Tables and Templates (10 hours)

- Working with table
- Working with templates

Module III – Documents and other features (10 hours)

- Creating documents
- Advanced features

Course Evaluation: The Course was evaluated at the end of the program by the students and the coordinator. The students reported that they found the Course informative and helpful in learning the basics of PageMaker. They also said they could understand and apply the concepts learned in the Course. The students had gained a good understanding of PageMaker by the end of the Course.

Course Objectives:

The Course aimed to introduce the students to the fundamentals of PageMaker, enabling them to use the software effectively. The Course was designed to give the students the skills and knowledge necessary to create and edit webpages, documents, and other design elements on the PageMaker platform. The Course also introduced the students to PageMaker's various features and functions, such as creating text boxes, links, tables, and images.



Course Outcome: To gain the necessary skills and knowledge to work with the PageMaker software.

Assessment Procedure:

Assessment of course is done as per the following scheme of distribution of marks for each paper 20 marks are set apart for continual internal evaluation and 30 marks are set apart for final written examination. Total 50% marks should be secured for a pass in the course. Components of continuous internal evaluation are: -

Paper	Marks
Attendance	5
Assignment	5
Test Paper	10
Total	20



17. Certificate Course in CorelDRAW

Syllabus

Course Name: Certificate Course in CorelDRAW

Course Code: MTCCD

Module I (5 hours)

Getting to know the workspace and fonts/ Creating a simple report cover.

Module II (5 hours)

Using the toolbox/Using color

Module III (5 hours)

Drawing and editing objects/ creating a greeting card

Module IV (5 hours)

Using photographs in a motivational poster

Module V (10 hours)

Using a template to create a two page newsletter

Course Evaluation: The Course was evaluated at the end of the program by the students and the coordinator. The students reported that they found the Course informative and helpful in learning the basics of CorelDRAW. They also said they could understand and apply the concepts learned in the Course. The students had gained a good understanding of CorelDRAW by the end of the Course.

Course Objective: Develop skills in working with vector graphics

Course Outcome: To provide the knowledge and skills required to use the program effectively and enable them to develop their own projects.



Assessment Procedure:

Assessment of course is done as per the following scheme of distribution of marks for each paper 20 marks are set apart for continual internal evaluation and 30 marks are set apart for final written examination. Total 50% marks should be secured for a pass in the course. Components of continuous internal evaluation are: -

Paper	Marks
Attendance	5
Assignment	5
Test Paper	10
Total	20



18. Diploma in International Finance and Accounts (DIIFA)

Syllabus

Course Name: Diploma in International Finance and Accounts (DIIFA)

Course Code: MTCDIIFA

The Course is divided into three modules, each of which is designed to provide students with an in-depth understanding of the topics mentioned.

Module 1: International Accounting: An overview of the international accounting standards, including the International Accounting Standards Board (IASB), International Financial Reporting Standards (IFRS), International Auditing Standards (ISA), and other related topics.

Module 2: International Financial Reporting: An in-depth look into the financial reporting process, including the preparation of financial statements, the analysis of financial data, and the reporting of financial information.

Module 3: International Financial Markets: An in-depth overview of the international financial markets and the various instruments used in the markets. This module focuses on the analysis and forecasting of financial markets and the roles of financial institutions.

Module 4: International Financial Management: An overview of the financial management process, including the analysis of financial statements, the development of financial strategies, and the management of financial resources.

Module 5: International Finance and Accounting. Introduction to the global financial system, international accounting standards, and the principles of financial analysis. Topics include macroeconomics, financial markets, financial instruments, and global financial management.

Module 6: International Taxation. The taxation of foreign investments and cross-border transactions. Topics include international tax treaties, international tax avoidance, and the taxation of income earned abroad.

Module 7: International Financial Reporting. The preparation and analysis of financial statements, including international financial reporting standards, accounting principles, and the analysis of financial statements.



Course Outcomes: Upon successful completion of the DIIFA program, students will have gained an in-depth understanding of international finance and accounting principles, and will be able to:

- Analyse and interpret financial statements
- Develop and implement financial strategies
- Apply international accounting standards
- Understand international financial markets
- Manage financial resources effectively
- Utilize financial management software
- Analyse and forecast financial markets
- Interpret and apply international financial regulations.

Assessment Procedure

Assessment of Course is done as per the following Scheme of distribution of marks For each paper 50 marks are set apart for continual internal evaluation and 50 marks are set apart for final written examination and for project 100 marks. Total 50% marks should be secured for a pass in the course. Components of Continuous internal evaluation

Paper	Marks
Attendance	10
Assignment	10
Test Papers I	10
Test Papers II	10
Seminar/Viva	10



Grading System

Percentage of marks	Grade
95 and above	A+
90-94%	A
80-89%	B
70-79%	C
60-69%	D



19. Certificate Course in Virtual Lab

Syllabus

Course Name: Certificate Course in Virtual Lab

Course Code: MTCVL

(Credit 30 hours)

Module I (4 hours)

Familiarising virtual lab platform

Lab activities

Module II (13 hours)

1. Compound Pendulum
2. Rigidity modulus of the suspension of the wire of a torsion pendulum
3. Tangent Galvanometer
4. Deflection Magnetometer
5. Newton's Rings – Wavelength

Module III (13 hours)

1. Zener Diode as Voltage Regulator
2. Newton Law of Cooling
3. Numerical Aperture of Optical Fibre
4. Moment of Inertia of Fly Wheel
5. Parallel LCR circuit

References: <https://vlab.amrita.edu>, <https://www.olabs.edu.in>

Course Objective:

1. To provide remote-access to simulation-based Labs in Physics.
2. To enthuse students to conduct experiments by arousing their curiosity. This would help them in learning basic and advanced concepts through remote experimentation.

Course Outcome: After the completion of this Course, the students will be able to:

1. Do the experiments online.
2. Helped to reduce the gap between institutions that retain the advanced physical laboratory.



Assessment Procedure:

Assessment of course is done as per the following scheme of distribution of marks for each paper 20 marks are set apart for continual internal evaluation and 30 marks are set apart for final written examination. Total 50% marks should be secured for a pass in the course. Components of continuous internal evaluation are: -

Paper	Marks
Attendance	5
Assignment	5
Test Paper	10



20.Certificate Course in Energy Audit

Syllabus

Course Name: Certificate Course in Energy Audit

Course Code: MTCEA

(Credit 36 hours)

Unit 1 (10 hours)

Introduction to energy management and energy audit, Sources of Energy, Need of energy conservation. Power generation, transmission and distribution. Energy and utilities, Input and output power, Losses, Star rating in equipment, energy saving methods in industries, high efficiency drives, VFD, energy saving in compressed air system, waste heat recovery systems, green mobility

Unit 2 (5 hours)

Types of equipment in a utility, Refrigerator, Washing machine, Mixer grinder, Specification, star rating, lightings, Consumption of energy, Energy calculation from different loads, Tariff structure in Kerala, Solar PV systems, inverter, Battery, maintenance of battery, maintenance of solar PV system.

Unit 3 (5 hours)

Energy Management, Key elements for successful energy management. Effective energy management, Positive and negative forces to reduce energy consumption. Energy audit, Types of energy audit, Report on energy audit, Production factor, Instruments and meters for energy audit, BEE Regulations 2008 related with energy audit. Familiarisation of data collection form and report preparation methods

Practical (16 hours)

- 1) Energy audit in participant house and prepare reports (Individual activity)
- 2) Energy audit in the institution and prepare audit reports (Group activity))
- 3) Energy audit in one of the industries and prepare audit reports (Group activity)

Course Objective: By the completion of the Course the student will be able to:

1. understand Energy management, energy audit and BEE regulation.
2. understand different source of energy.
3. understand energy saving methods at home, institution and industries.
4. understand solar PV power plants and main components used.



Course Outcome: After the completion of this Course, the students will be able to: calculate the energy consumed in domestic and industrial sectors and know how to reduce the use of energy.

Assessment Procedure:

Assessment of course is done as per the following scheme of distribution of marks for each paper 20 marks are set apart for continual internal evaluation and 30 marks are set apart for final written examination. Total 50% marks should be secured for a pass in the course. Components of continuous internal evaluation are: -

Paper	Marks
Attendance	5
Assignment	5
Test Paper	10



21. Certificate Course in Business and Sustainable Development (NPTEL)

Course layout

Week 1 : Introduction to Sustainability, Key issues, Business Implication and Firm's response

Week 2 : Sustainability Tools: Assessment, Management and Reporting Tools

Week 3 : Sustainability Standards and Strategies

Week 4 : Beyond firms, Regulation, Market, New perspective towards Sustainability

Books and references

1. Green to Gold: How Smart Companies Use Environmental Strategy to Innovate, Create Value, and Build Competitive Advantage, Daniel C. Esty, Andrew S. Winston
2. Business and Sustainability, Michael Blowfield
3. The Triple Bottom Line: How Today's Best-Run Companies Are Achieving Economic, Social and Environmental Success - and How You Can Too, by Andrew Savitz
4. The New Sustainability Advantage: Seven Business Case Benefits of a Triple Bottom Line, Bob Willard
5. Various articles, cases, research literature, websites in the related area

CRITERIA TO GET A CERTIFICATE

Average assignment score = 25% of average of best 3 assignments out of the total 4 assignments given in the course.

Exam score = 75% of the proctored certification exam score out of 100

Final score = Average assignment score + Exam score



22.MOOC on Organic Farming

Mahatma Gandhi University, Kottayam

Re-Accredited by NAAC with A grade

MOOC Organic Farming (Jaiva Krishi: Arivum Padanavum)

Overview

This online Course is to encourage the youngsters to understand and conceive an organic way of life with a strong message “back to nature”. This will ensure to achieve a global perception of sustainable agriculture and will be in consonance with the objectives of state government’s noble mission “Haritha Keralam”.

Course Objectives:

- To achieve the mission of sustainable organic farming.
- To promote organic farming among the public especially to students.
- To promote the value of “Haritha Keralam” mission of Kerala government.

Teaching methods

The Course will follow the quadrant approach, which includes video lecturers, notes, scanned copy of relevant textbooks, uploaded doc files, web resources, and objective question and answer sessions.

Course outcomes

As a result of attending the Course, students will:

- The student will be familiar with organic farming and equipped with the the procedures for organic farming and related transition.;

Assessment methods

The Course will be adapting two approaches for evaluation a) for students – Objective types questions only for evaluation. b) for general public- Objective and descriptive .

How to Apply

Students and General Public can enroll into the Course by registering into the site and paying the prescribed fee through online payment.

Level and demands

It is proposed to offer the Course to third semester B.Sc, BA and B.Com as mandatory to incorporate the state government objective of making the values of organic way of living. The students will be given four credits on successful completion of 14 weeks Course.



Guidelines to Teachers for evaluation of Organic Farming Project

The Project work on Organic Farming of MOOC Course is to be evaluated based on the guidelines given below.

Total marks for the project in the first semester is 100. Out of this, 80 marks are allocated for the Report. Remaining 20 marks are for the Oral presentation by students.

I. Report – 80 Marks

The break up of 80 marks for the Report is shown below. Mentor has to evaluate the report and assign marks as per the following scheme. While evaluating various aspects of the Project, the guidelines given for doing the Project should be considered.

Chapter 1. Introduction (5 marks)

Chapter 2. Materials and methods (20 marks)

2.1 Location of college and student

2.2 Crops selected,

2.2.1 Varieties

2.2.2 Source of seed/seedlings

2.3 Area/ no. of grow bags

2.4 Crop season

2.5 Weather condition prevailed (rainfall, rainy days, average atmospheric temperature etc.)

2.6 Agricultural implements and equipments used

2.7 Liming material and quantity

2.8 Manures

2.8.1 Basal application

2.8.2 Top dressing

2.8.2 Biofertilizers

2.8.3 Bio slurries

2.9 Bio pesticides

2.10. Bio control agents

2.11. Any other inputs used

2.12 Crop management

2.12.1 Land preparation/ potting mixture preparation

2.12.2 Liming

2.12.3 Basal manuring



2.12.4 Grow bag filling

2.12.5 Seeding/ planting

2.12.6 Top dressing

2.12.7 Pest management

2.12.8 Disease management

2.12.9 Water management

2.12.10 Harvest

Chapter 3. Observations and data collection. (30 marks)

Table.1. Germination / plant stand establishment percent

Table 2. Height of plants in cm. (15 days interval)

Table 3. No. of branches (15 days interval)

Table.4.Day of first flowering (Days After Sowing/ planting)

Table 5. Day of first fruiting (Days After Sowing/ planting)

Table 6. Harvest days (Days After Sowing/ planting)

Table 7. No. and weight of fruits from each harvest

Table 8. Cumulative Yield (kg)

Chapter 4. Photos (10 marks)

4.1. Grow bag preparation and lay out

4.2. Flowering stage

4.3. Fruiting stage

4.4. Harvest stage

Chapter 5. Cost Benefit analysis (5 marks)

A write up on the expenditure incurred and income obtained

Chapter 6. Conclusion (5 marks)

Inference on the most suitable and profitable crop for -
the locality with reasons

Abstract (5 marks)

A summary of the Project covering all the activities done.

II. Oral Presentation – 20 Marks

20 marks are allocated for the oral presentation by students. Power Point Presentation based on the content of Project report is to be done. Maximum number of slides is 12.



Assessment Procedure:

Assessment of course is done as per the following scheme of distribution of marks for each paper. 20 marks are set apart for continual internal evaluation and 30 marks are set apart for final written examination. Total 50% marks should be secured for a pass in the course. Components of continuous internal evaluation are: -

Paper	Marks
Attendance	5
Assignment	5
Test Paper	10
Total	20

