



# **MAR THOMA COLLEGE FOR WOMEN, PERUMBAVOOR**

*Affiliated to Mahatma Gandhi University, Kottayam, Kerala  
Re-accredited with 'B+' by NAAC*

## **CRITERION - 1**

# **CURRICULAR ASPECTS**

### **1.2.1 Institutional Programme Brochure/ Notice for Certificate/ Value Added Programmes with Course Modules and Outcomes**

**2017 - 2022**



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# 2017 - 2018

## 1. Diploma in Computer Application (DCA)



**Mar Thoma College for Women,  
Perumbavoor**

**Diploma in Computer Application(DCA)  
Certified by IHRD**

**PSC Approved  
6 months  
course**



**Admission started for January 2017 batch**



**Mar Thoma College for  
Women, Perumbavoor**

**DCA (DIPLOMA IN  
COMPUTER APPLICATION)**

**IHRD Certified & PSC Approved  
Course**

**Duration: 6 months**

**ADMISSION STATED FOR JULY 2017  
BATCH**



**Syllabus**

**INSTITUTE OF HUMAN RESOURCES DEVELOPMENT DIPLOMA  
IN COMPUTER APPLICATIONS**

(One Semester) (Scheme-2017)

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

[Scheme 2017]





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)

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#### **Reference:**

1. Computer Fundamentals - B RAM
2. Upgrading and repairing PC's – Que publications
3. <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 – page layout – 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:**

1. Office 2016 All-In-One For Dummies - Peter Weverka
2. Office 2013 Library Excel 2013 Bible, Access 2013 Bible, PowerPoint 2013 Bible, Word 2013 Bible Lisa A. Bucki
3. Adobe PageMaker 7.0 Classroom in a Book
4. 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 Mark-up 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*

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-3-

**References :** [https://www.tutorialspoint.com/internet\\_technologies/index.htm](https://www.tutorialspoint.com/internet_technologies/index.htm)  
[https://www.webopedia.com/quick\\_ref/network-fundamentals-study-guide.html](https://www.webopedia.com/quick_ref/network-fundamentals-study-guide.html)  
<https://www.w3schools.in/sql/database-concepts/>



Duration: 40 Hrs.

(Windows, Linux,  
PC Hardware)

### **DCA104 Lab Practice-1**

#### **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.

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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:**

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

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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](http://www.IRCTC.com), [www.Keralapsc.org](http://www.Keralapsc.org), [www.mvd.org](http://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.ERP9 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.



## 2. Certificate Course in Energy Efficient Devices



**MAR THOMA COLLEGE FOR WOMEN**  
Perumbavoor, Ernakulam, Kerala.  
Affiliated to MG University & Accredited "B+" by NAAC

# Department of Physics

presents

# Certificate course in Energy Efficient Devices

Duration  
30 hrs

*Registration starts on July 2017*

Dr.Lisy Cherian  
Principal

Dr.Anupama P  
HoD, Dept. of Physics



## 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.





### 3. Diploma in International Finance and Accounts (DIIFA)

**UMTS**  
Education is the fundamental key to success. We launch Unique UMTS with a mission to provide quality and value based education to the students. We bring the professional education to the best quality of international standards. Our aim is to provide our students with an excellent career focusing on wide scope of the National / Global Level.

**HIGHLIGHTS**

- Training assistance for professional and add on courses
- Placement assistance
- Classes by industrial experts
- Internship and personality development included
- Factory visit
- Exam & Certificates from providers directly.
- Certificates can verify online directly

**UNIQUE MANAGEMENT TRAINING SOLUTIONS**  
"Join us & be Unique"

**MAR THOMA COLLEGE FOR WOMEN**  
Perumbavoor, Ernakulam, Kerala.  
Affiliated to MG University & Accredited "B+" by NAAC

**AUTHORIZED TRAINING CENTRE**

**inprox**  
Empowering Towards Excellence

**Certificate of Authorization**

This is to certify that

**Mar Thoma College For Women**  
Perumbavoor, Ernakulam, Kerala.

is an Authorized Training Centre of UMTS for add on courses as per the rules and regulations stipulated

**Academic Director**      **UQ233816**      **30 JUNE 2026**  
ATC Code      Validity Upto

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## 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.



#### 4. Certificate Course in Tailoring



**MAR THOMA COLLEGE FOR WOMEN, PERUMBAVOOR**  
 RE-ACCREDITED BY NAAC WITH B+ GRADE  
 (AFFILIATED TO MAHATMA GANDHI UNIVERSITY)

**Add on Course on Tailoring**

**30 hours Course Starts from September 2017**

**Serene Anna Sam**  
Co Ordinator

**Dr. Lisy Cherian**  
Principal



## Syllabus

**Course Name: Certificate Course in Tailoring Course**

**Code: MTCTOR**

**Module I (10 hours):** Introduction to the Course – Use of tools & equipment used in tailoring trade · Sewing terminology · Taking correct body measurements · Basic hand & machine stitches · Designing, drafting & pattern making · Layout & fabric estimation · Cutting, tailoring & finishing of garments for children, ladies & gents. · Alteration, defects & remedies to fitting problems. · Processes of quality control, packaging, labeling, marking, costing & promotion. Machine Operation - Different parts of machine and their functions. - Safety precautions - Proper maintenance and oiling - Operating machine - Removing parts and practice in refixing - Adjusting the parts for proper functioning - Practice in cleaning and oiling. Tools and Equipments used in tailoring Description of various tools used in tailoring - Drafting tools: - Cutting Tools: - Stitching tools: Practice in using - Different Scissors - Shapper, L Scale, Art Curve, Tracing wheel - Thimble etc.

**Module II (10 hours):** Trade Terminology - Specific terms used in drafting, cutting & stitching - Practice in using proper terms. Measurement Taking - Use of tape for measurement - Proper / correct measurement taking, Precautions - Use of L scale for measurement - Sequence of measurement - Practice in using tape - Taking measurement - Sequencing of measurement. - Use of L scale.

**Module III (10 hours):** Drafting / Pattern Making - Need for drafting and pattern making - Method of preparing draft - Preparing pattern cutting - Simple drafting - Pattern making - Paper pattern cutting 6. Basic Stitching - Hand stitches - Machine stitches - Decorative stitches - Preparation of sample pieces of stitches Construction Skills - Knowledge about: - Seams, Drafts, Tucks, Pleats, Buttons Hole, Buttons Hooks and snage, Eye, Titch buttons - Preparation of sample pieces using all construction skills.





**Module IV (10 hours):** Selection of Cloth - Selection of right type of fabric for a particular garment - Identification of different types of fabric. Estimation of Cloth - How to estimate cloth for garments - Estimation by giving various measurements. Simple Cutting and Stitching - How to mark the measurements on cloth before cutting - Leaving margin for inlays and turnings - Skills in Stitching - Marking with different measurement - Cutting the cloth as permarking, leaving margin for inlays and turnings. - Practice in stitching on paper for straight zigzig, round etc.

**Course Objective:** To provide knowledge & training in Tailoring

**Course Outcome:** Enabled students to cut and stitch dresses on their own.



## 5. Certificate Course in Yoga

**MAR THOMA COLLEGE FOR WOMEN, PERUMBAVOOR**

RE-ACCREDITED BY NAAC WITH B+ GRADE  
(AFFILIATED TO MAHATMA GANDHI UNIVERSITY)

**DEPARTMENT OF PHYSICAL EDUCATION**

**Presents**  
**Certificate course on**  
**Yoga**

**30 hours Course**  
**From October 2017**

Dr Vineed Kumar K  
Convenor

Dr. Lisy Cherian  
Principal



## Syllabus

**Course Name: Certificate Course in Yoga Course**

**Code: MTCYA**

### **Module I (10 hours)**

- Concepts of Yogic practices
- Principles of Yoga practice
- Introduction to Suryanamaskar

### **Module II (10 hours)**

- Asanas – Meaning and Classification
- Asanas - Method of practice and Benefits

o ( Sukhasana, Vajrasana, Ardhapadmasana, Padmasana, Savasana, Makrasana, Ardhanakanti chakrasana, Padahasthasana, Dandasana, Paschimotanasana, Pavanamuktasana, Vakrasana, Gomukhasana, Bhujangasana, Naukasana, Sasankasana, Halasana, Dhanurasana)

### **Module III(10 hours)**

- Pranayama – Meaning and Importance
- Pranayama – Kinds of Breathing, Techniques of Breathing exercises
- Meditation – Meaning, Guidelines and Benefits
- Meditation Technique – Yoga Nidra.

**Course Objective:** To manage stress.

**Course Outcome:** Yoga improves strength, balance and flexibility.





# 2018 - 2019

## 1. Diploma in International Finance and Accounts (DIIFA)

**UMTS**  
Education is the fundamental key to success. We ensure Unique UMTS aims at ensuring quality and value based education to the students. We bring the professional education to the best quality of international standards. Our aim is to provide our students with an enriched course, focusing its wide scope of the National / Global Level.

**HIGHLIGHTS**

- Training assistance for professional and add on courses
- Placement assistance
- Classes by industrial experts
- Internship and personality development included
- Factory visit
- Exam & Certificates from providers directly.
- Certificates can verify online directly

**UNIQUE MANAGEMENT TRAINING SOLUTIONS**  
"Join us & be Unique"

**MAR THOMA COLLEGE FOR WOMEN**  
Perumbavoor, Ernakulam, Kerala.  
Affiliated to MG University & Accredited "B+" by NAAC

### AUTHORIZED TRAINING CENTRE

#### Certificate of Authorization

This is to certify that

**Mar Thoma College For Women**  
Perumbavoor, Ernakulam, Kerala.

is an Authorized Training Centre of UMTS for add on courses as per the rules and regulations stipulated

Empowering Towards Excellence

UNIQUE MANAGEMENT TRAINING SOLUTIONS

Academic Director

UQ233816

ATC Code

30 JUNE 2026

Validity Upto

Registered Office : MG ROAD, NEAR KOTTAPURAM OVERBRIDGE, THRISSUR ☎ 790 240 88 88 ✉ info@inprox.in 🌐 www.inprox.in

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.





## 2. Certificate Course in Energy Efficient Devices



**MAR THOMA COLLEGE FOR WOMEN**  
Perumbavoor, Ernakulam, Kerala.  
Affiliated to MG University & Accredited "B+" by NAAC

DEPARTMENT OF  
PHYSICS

Organizes

**Certificate course  
in  
Energy Efficient Devices**

**Registration starts on July 2018**

Dr.Lisy Cherian  
Principal

Dr.Anupama P  
HoD, Dept. of Physics

**Duration  
30 hrs**



## 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.



### 3. Diploma in Computer Application (DCA)

**Mar Thoma College for Women, Perumbavoor**

**Diploma in Computer Application (DCA)**

Duration :- 6 months

Qualification :- +2

**IHRD Certified & PSC Approved Course**

**ADMISSION STARTED FOR JANUARY 2018 BATCH**

**Mar Thoma College for Women, Perumbavoor**

**Diploma in Computer Application (DCA)**

Qualification :- Plus Two

Duration: 6 months

**IHRD Certified & PSC Approved Course**

**Admission started for July 2018 batch**





**Syllabus**

**INSTITUTE OF HUMAN RESOURCES DEVELOPMENT DIPLOMA  
IN COMPUTER APPLICATIONS**

(One Semester) (Scheme-2017)

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

[Scheme 2018]



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)

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#### **Reference:**

1. Computer Fundamentals - B RAM
2. Upgrading and repairing PC's – Que publications
3. <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 – page layout – 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:**

5. Office 2016 All-In-One For Dummies - Peter Weverka
6. Office 2013 Library Excel 2013 Bible, Access 2013 Bible, PowerPoint 2013 Bible, Word 2013 Bible Lisa A. Bucki
7. Adobe PageMaker 7.0 Classroom in a Book
8. Teach Yourself Tally ERP 9 Mr. Niranjana 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 Mark-up 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*

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**References :** [https://www.tutorialspoint.com/internet\\_technologies/index.htm](https://www.tutorialspoint.com/internet_technologies/index.htm)  
[https://www.webopedia.com/quick\\_ref/network-fundamentals-study-guide.html](https://www.webopedia.com/quick_ref/network-fundamentals-study-guide.html)  
<https://www.w3schools.in/sql/database-concepts/>



Duration: 40 Hrs.

(Windows, Linux,  
PC Hardware)

### **DCA104 Lab Practice-1**

#### **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.

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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

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### **References:**

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

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**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](http://www.IRCTC.com), [www.Keralapsc.org](http://www.Keralapsc.org), [www.mvd.org](http://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.ERP9 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.

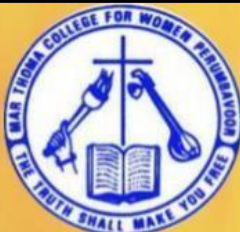
**Course Outcomes:** By completing a DCA Course, candidates will be able to:

- 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.





#### 4. Add-on Course on DTP/Photoshop and Allied Skills



**MAR THOMA COLLEGE FOR WOMEN, PERUMBAVOOR**  
 RE-ACCREDITED BY NAAC WITH B+ GRADE  
 (AFFILIATED TO MAHATMA GANDHI UNIVERSITY)

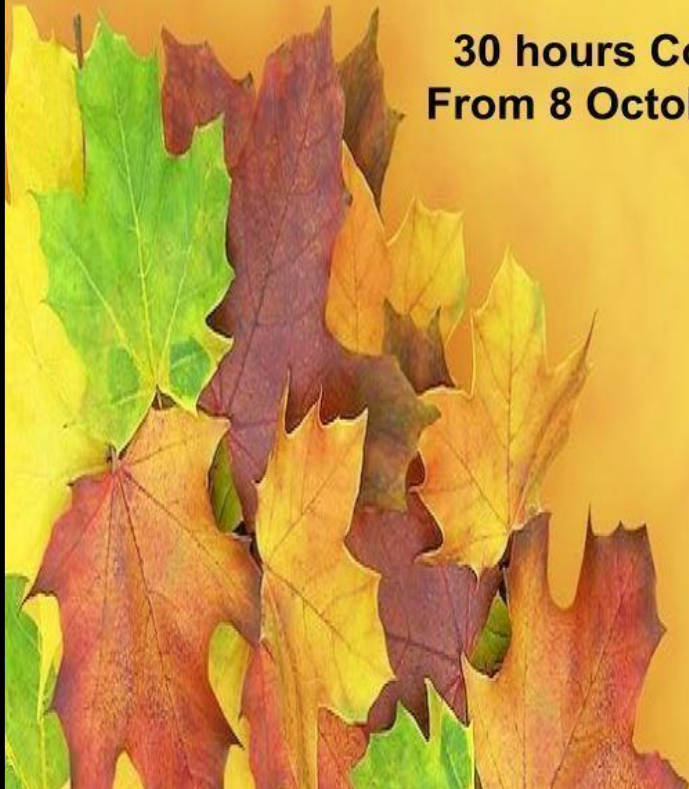
**PG DEPARTMENT OF MATHEMATICS**

**Presents**  
**Add on Course on**  
**DTP/Photoshop and Allied**  
**Skills**

**30 hours Course**  
**From 8 October 2018**

**Dr Annie Kurien K**  
**Head of the Department**

**Dr. Lisy Cherian**  
**Principal**




## Syllabus

Course Name: **Certificate Course-DTP/Photoshop and Allied skills**

Course Code: **MTC DTP**

### **Module I: Introduction to computers (10 hours)**

Definition, History & Development of Computers , Use of Computers, Characteristics of Computers, Computer Components, Number Systems, Input & Output Devices, Introduction to Operating System: Information Technology - Definition, Uses & Applications. Word Pad-Note Pad-Imaging -Paint Brush-Character Map.

### **Module II: MS-Office (Theory & Practical) (10 hours)**

MS-Word : Introduction -creating, saving, opening, and closing documents. Moving & Copying, Find & Replace, Formatting & Shading, Headers & Footers, Tables & Mail Merging., MS- Excel : Introduction to Spread sheet- creation- saving- opening - closing Workbooks-Sorting-Chart, MS-Power Point : Introduction, Creation of Slides, Custom Animation

### **Module III: MS-Publisher (10 hours)**

Creation of News Letter, Brochure etc., Adobe Photoshop: Introduction to Photoshop (Theory & Practical)


**Course Objective:** The objective of the Course is to provide the participants understanding of the techniques essential to build their career in desktop publishing using suitable hardware and software tools. This Course offers a range of topics of immediate relevance to industry and makes the participants exactly suitable for DTP industry.

**Course Outcome:** After the successful completion of the Course, the students shall be able to:

- Know and use MS-word, MS-excel and MS-PowerPoint for professional or personal use.
- Effectively utilize MS-Publisher to create newsletter, brochure etc.
- Use Photoshop as a premier graphic design and image editing tool.



## 5. Certificate Course in Tailoring



**MAR THOMA COLLEGE FOR WOMEN, PERUMBAAVOOR**  
 RE-ACCREDITED BY NAAC WITH B+ GRADE  
 (AFFILIATED TO MAHATMA GANDHI UNIVERSITY)

*Add on Course on  
Tailoring*

*30 hours Course  
Starts from September  
2018*

Serene Anna Sam  
Co Ordinator

Dr. Lisy Cherian  
Principal



**Syllabus Course Name: Certificate Course in Tailoring****Course Code: MTCTOR**

**Module I (10 hours):** Introduction to the Course – Use of tools & equipment used in tailoring trade · Sewing terminology · Taking correct body measurements · Basic hand & machine stitches · Designing, drafting & pattern making · Layout & fabric estimation · Cutting, tailoring & finishing of garments for children, ladies & gents. · Alteration, defects & remedies to fitting problems. · Processes of quality control, packaging, labeling, marking, costing & promotion. Machine Operation - Different parts of machine and their functions. - Safety precautions - Proper maintenance and oiling - Operating machine - Removing parts and practice in refixing - Adjusting the parts for proper functioning - Practice in cleaning and oiling. Tools and Equipments used in tailoring Description of various tools used in tailoring - Drafting tools: - Cutting Tools: - Stitching tools: Practice in using - Different Scissors - Shapper, L Scale, Art Curve, Tracing wheel - Thimble etc.

**Module II (10 hours):** Trade Terminology - Specific terms used in drafting, cutting & stitching - Practice in using proper terms. Measurement Taking - Use of tape for measurement - Proper / correct measurement taking, Precautions - Use of L scale for measurement - Sequence of measurement - Practice in using tape - Taking measurement - Sequencing of measurement. - Use of L scale.

**Module III (10 hours):** Drafting / Pattern Making - Need for drafting and pattern making - Method of preparing draft - Preparing pattern cutting - Simple drafting - Pattern making - Paper pattern cutting 6. Basic Stitching - Hand stitches - Machine stitches - Decorative stitches - Preparation of sample pieces of stitches Construction Skills - Knowledge about: - Seams, Drafts, Tucks, Pleats, Buttons Hole, Buttons Hooks and snage, Eye, Titch buttons - Preparation of sample pieces using all construction skills.

**Module IV (10 hours):** Selection of Cloth - Selection of right type of fabric for a particular garment - Identification of different types of fabric. Estimation of Cloth - How to estimate cloth for garments - Estimation by giving various measurements. Simple Cutting and Stitching - How to mark the measurements on cloth before cutting - Leaving margin for inlays and turnings - Skills in Stitching - Marking



with different measurement - Cutting the cloth as per marking, leaving margin for inlays and turnings. - Practice in stitching on paper for straight zigzag, round etc.


**Course Objective:** To provide knowledge & training in Tailoring

**Course Outcome:** Enabled students to cut and stitch dresses on their own.





## 6. Certificate Course in Yoga



**MAR THOMA COLLEGE FOR WOMEN, PERUMBAVOOR**  
RE-ACCREDITED BY NAAC WITH B+ GRADE  
(AFFILIATED TO MAHATMA GANDHI UNIVERSITY)

**DEPARTMENT OF PHYSICAL EDUCATION**

**Presents**  
**Certificate course on**  
**Yoga**

**30 hours Course**  
**From September 2018**

**Dr Vineed Kumar K**  
**Convenor**

**Dr. Lisy Cherian**  
**Principal**



## Syllabus

**Course Name: Certificate Course in Yoga**

**Course Code: MTCYA**

### **Module I (10 hours)**

- Concepts of Yogic practices
- Principles of Yoga practice
- Introduction to Suryanamaskar

### **Module II (10 hours)**

- Asanas – Meaning and Classification
- Asanas - Method of practice and Benefits

o ( Sukhasana, Vajrasana, Ardhapadmasana, Padmasana, Savasana, Makrasana, Ardhakanthi chakrasana, Padahastasana, Dandasana, Paschimotanasana, Pavanamuktasana, Vakrasana, Gomukhasana, Bhujangasana, Naukasana, Sasankasana, Halasana, Dhanurasana)

### **Module III(10 hours)**

- Pranayama – Meaning and Importance
- Pranayama – Kinds of Breathing, Techniques of Breathing exercises
- Meditation – Meaning, Guidelines and Benefits
- Meditation Technique – Yoga Nidra.

**Course Objective:** To manage stress.

**Course Outcome:** Yoga improves strength, balance and flexibility.



2019-2020

## 1. Certificate Course in Robotics



**MAR THOMA COLLEGE FOR WOMEN**  
Perumbavoor, Ernakulam, Kerala.  
Affiliated to MG University & Accredited "B+" by NAAC

*Department of Physics*

*presents*

**Certificate course  
in  
Robotics**

*Duration 30 hr course*

*Registration starts on July 2019*

Dr.Gigi George  
Principal

Dr.Anupama P  
HoD Dept of Physics



**Syllabus Course Name: Certificate Course in Robotics****Course Code: MTCRBT****(Credit 30 hours)****1. Introduction to Robotics (10 hours)**

Types and components of a robot, Classification of robots, 1.2 Kinematics systems; Definition of mechanisms and manipulators, Degrees of Freedom

**2. Robot Kinematics and Dynamics (10 hours)**

Kinematic Modelling: Translation and Rotation Representation, Coordinate transformation, DH parameters, Forward and inverse kinematics, Jacobian, Singularity, and Statics 2.2 Dynamic Modelling: Forward and inverse dynamics, Equations of motion using Euler-Lagrange formulation, Newton Euler formulation

**3. Sensors (10 hours)**


Sensor: Contact and Proximity, Position, Velocity, Force, Tactile etc. 3.2 Introduction to Cameras, Camera calibration, 3.3 Geometry of Image formation, Euclidean/Similarity/Affine/Projective transformations 3.4 Vision applications in robotics.

**Course Objective:** The Objective of the Course is to impart knowledge about basic mathematics related to industrial robots and to control and design robots. Also to find their application in automation Industries.

**Course Outcome:** After the completion of this Course, the students will be able to:  
Perform kinematic and dynamic analyses with simulation. · Design control laws for a simple robot. · Integrate mechanical and electrical hardware for a real prototype of a robotic device. · Select a robotic system for a given industrial application.



## 2. Certificate Course in Energy Efficient Devices



**MAR THOMA COLLEGE FOR WOMEN**  
Perumbavoor, Ernakulam, Kerala.  
Affiliated to MG University & Accredited "B+" by NAAC

**Department of Physics**  
presents

**Certificate course  
in  
Energy Efficient Devices**

Duration 40 hr Course

*Registration starts on July 2019*

Dr.Gigi George  
Principal

Dr.Anupama P  
HoD Dept.of Physics

### 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.



## 3. Diploma in Computer Application (DCA) Brochures



**Mar Thoma College for Women, Perumbavoor**

**DIPLOMA IN COMPUTER APPLICATION (DCA)**

**QUALIFICATION : +2**

**Admission started for January 2019 batch**

**PSC APPROVED & IHRD CERTIFIED COMPUTER COURSE**

**FOR MORE DETAILS: 9562969839**



**Mar Thoma College for Women, Perumbavoor**

**DIPLOMA IN COMPUTER APPLICATION (DCA)**

**ADMISSION STARTED FOR JULY 2019 BATCH**

**PSC APPROVED**

**IHRD CERTIFIED COURSE**

**FOR MORE DEATILS CONTACT: 9562969839**

REALLYGREATSITE.COM



**Syllabus**

**INSTITUTE OF HUMAN RESOURCES DEVELOPMENT DIPLOMA  
IN COMPUTER APPLICATIONS**

(One Semester) (Scheme-2017)

Subject Code	Subject Name	No. of Hrs/Week		Minimum Marks			Maximum Marks		
		T	P	W/P	CE	T	W/P	CE	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)

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#### **Reference:**

7. Computer Fundamentals - B RAM
8. Upgrading and repairing PC's – Que publications
9. <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 – page layout – 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:**

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

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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 Mark-up 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*

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-3-

**References :** [https://www.tutorialspoint.com/internet\\_technologies/index.htm](https://www.tutorialspoint.com/internet_technologies/index.htm)  
[https://www.webopedia.com/quick\\_ref/network-fundamentals-study-guide.html](https://www.webopedia.com/quick_ref/network-fundamentals-study-guide.html)  
<https://www.w3schools.in/sql/database-concepts/>



Duration: 40 Hrs.

(Windows, Linux,  
PC Hardware)

### **DCA104 Lab Practice-1**

#### **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.

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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:**

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

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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](http://www.IRCTC.com), [www.Keralapsc.org](http://www.Keralapsc.org), [www.mvd.org](http://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.ERP9 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.



## 4. Certificate Course in Yoga



**MAR THOMA COLLEGE FOR WOMEN, PERUMBAVOOR**  
RE-ACCREDITED BY NAAC WITH B+ GRADE  
(AFFILIATED TO MAHATMA GANDHI UNIVERSITY)

**DEPARTMENT OF PHYSICAL EDUCATION**

**Presents**  
**Certificate course on**  
**Yoga**

**30 hours Course**  
**From September 2019**

**Dr Vineed Kumar**  
**Convenor**

**Dr. Gigi George**  
**Principal**





## Syllabus

**Course Name: Certificate Course in Yoga**

**Course Code: MTCYA**

### **Module I (10 hours)**

- Concepts of Yogic practices
- Principles of Yoga practice
- Introduction to Suryanamaskar

### **Module II (10 hours)**

- Asanas – Meaning and Classification
- Asanas - Method of practice and Benefits

o ( Sukhasana, Vajrasana, Ardhapadmasana, Padmasana, Savasana, Makrasana, Ardhakanthi chakrasana, Padahastasana, Dandasana, Paschimotanasana, Pavanamuktasana, Vakrasana, Gomukhasana, Bhujangasana, Naukasana, Sasankasana, Halasana, Dhanurasana)

### **Module III(10 hours)**

- Pranayama – Meaning and Importance
- Pranayama – Kinds of Breathing, Techniques of Breathing exercises
- Meditation – Meaning, Guidelines and Benefits
- Meditation Technique – Yoga Nidra.

**Course Objective:** To manage stress.

**Course Outcome:** Yoga improves strength, balance and flexibility.



2020 - 2021

## 1. Certificate Course in Solar Energy Technology



**MAR THOMA COLLEGE FOR WOMEN**  
Perumbavoor, Ernakulam, Kerala.  
Affiliated to MG University & Accredited "B+" by NAAC

Department of physics  
Presents

**Certificate course in  
SOLAR ENERGY  
TECHNOLOGY**

Duration  
30 hr

Registration starts on August 2020

Dr.Gigi George  
Principal

Dr.Anupama p  
HoD Dept .of Physics




## Syllabus

**Course Name: Certificate Course in Solar Energy technology**

**Course Code: MTCSET**

**(30 hours)**

**Module 1 (5 Hrs)**

Introduction to energy sources

Renewable energy sources-different types-solar energy, advantages of renewable energy, prospects of renewable energy

**Module 2 (5 Hrs)**

Solar energy collectors

Introduction, physical principles of conversion of solar radiation into heat, flat type collectors, concentrating collectors-advantages and disadvantages

**Module 3 (10 Hrs)**

Solar energy storage

Introduction, solar energy storage systems-thermal storage, electrical storage, chemical storage, mechanical energy storage, electromagnetic energy storage, solar pond-principles of operation and applications

**Module 4 (10 Hrs)**

Applications of solar energy

Solar water heater, solar desalination, solar dryer, solar cooker, solar air conditioning, solar heating of buildings, solar green houses, solar furnace, solar thermo mechanical power, solar powered thermal water pump, solar photovoltaic, economic analysis


**Course Objective:** This Course allows the students to have a deep insight into the various available renewable energy sources. A detailed study on solar energy collectors and storage are included in the syllabus.

**Course Outcome:** Students who completed the Course will have thorough knowledge about various renewable energy sources. They are strongly familiarized with how to collect solar energy and how it can be stored effectively.





## 2. Diploma in Computer Application (DCA)



**MAR THOMA COLLEGE FOR  
WOMEN, PERUMBAVOOR**

**DIPLOMA IN COMPUTER  
APPLICATION (DCA)**

**INRD CERTIFIED & PSC  
APPROVED COURSE**

**Qualification : +2**  
**Duration : 6 months**

**FOR MORE DETAILS  
CONTACT : 9562969839**

Syllabus







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)

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#### **Reference:**

10. Computer Fundamentals - B RAM
11. Upgrading and repairing PC's – Que publications
12. <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 – page layout – 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:**

13. Office 2016 All-In-One For Dummies - Peter Weverka
14. Office 2013 Library Excel 2013 Bible, Access 2013 Bible, PowerPoint 2013 Bible, Word 2013 Bible Lisa A. Bucki
15. Adobe PageMaker 7.0 Classroom in a Book
16. Teach Yourself Tally ERP 9 Mr. Niranjana Jha

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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 Mark-up 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*

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-3-

**References :** [https://www.tutorialspoint.com/internet\\_technologies/index.htm](https://www.tutorialspoint.com/internet_technologies/index.htm)  
[https://www.webopedia.com/quick\\_ref/network-fundamentals-study-guide.html](https://www.webopedia.com/quick_ref/network-fundamentals-study-guide.html)  
<https://www.w3schools.in/sql/database-concepts/>



Duration: 40 Hrs.

(Windows, Linux,  
PC Hardware)

## DCA104 Lab Practice-1

### 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.

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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

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### **References:**

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

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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](http://www.IRCTC.com), [www.Keralapsc.org](http://www.Keralapsc.org), [www.mvd.org](http://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.ERP9 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:

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



### 3. Certificate Course in Tally ERP 9.0



**Mar Thoma College for Women, Perumbavoor**

**DEPARTMENT OF COMMERCE  
COMPUTER APPLICATION**

Certificate Course



**40 hours**

For more details contact:  
bcomcamtcw@gmail.com

**Ms. T.J. Vishnu Priya**  
Faculty in charge  
Dept of Commerce (CA)

**Ms.Saritha.N**  
HOD  
Dept of Commerce(CA)

**Dr.Gigi George**  
Principal



## Syllabus

**Course Name: Certificate Course in Tally ERP 9.0**

**Course Code: MTCTERP**

**Duration: 40 Hours**

**Number and titles of modules**

**Module 1 Introduction to Tally ERP9 8 Hours**

**Module 2 Accounts and Vouchers 8 Hours**

**Module 3 Accounts with inventory 8 Hours**

**Module 4 Accounting with GST 8 Hours**

**Module 5 Payroll in Tally ERP9 8 Hours**

**Module 1-Introduction to Tally ERP9 8 Hours**

- \* Features of Tally ERP9
- \* Screen components
- \* Creation/selection/alteration of company
- \* F 11 features and F 12 configuration

**Module 2- Accounts and vouchers 8 Hours**

- \* Account groups - creation, deletion, alteration
- \* Accounting vouchers - creation, alteration, deletion
- \* Bank reconciliation statement
- \* Generation and configuration of reports

**Module 3 - Accounts with inventory 8 Hours**

- \* Enabling F 11 and F 12
- \* Stock category, group and stock item creation
- \* Cost center and cost category
- \* Inventory vouchers
- \* Accounting vouchers in invoice mode
- \* Inventory reports



**Module 4 - Accounting with GST****8 Hours**

- \* F 11 and F12 setting for taxation
- \* TDS and TCS
- \* Types of GST
- \* Computation of GST
- \* Ledgers and vouchers pertaining to GST
- \* GST reports

**Module 5- Payroll in Tally ERP9****8 Hours**

- \* Enabling payroll in Tally
- \* Creating pay heads
- \* Creation of employee group and individual employees
- \* Payroll vouchers
- \* Payroll reports
- \* Generation of pay slip

**Course Objective:** To equip the students to work with well-known accounting software.

**Course Outcome:** To apply the practical knowledge of using Tally.



## 4. Certificate Course in Career Skills



# MAR THOMA COLLEGE FOR WOMEN, PERUMBAVOOR

## DEPARTMENT OF ENGLISH

### Certificate Course in Career Skills

Duration- 30 hrs



**Course Coordinator**  
**Chaithanya Elsa Achankunju,**  
Head of the Department of  
English.

**Chaithanya Elsa Achankunju,**  
Head of the Department of  
English.

**Principal**  
**Dr. Sujo Mary Varghese**





**Syllabus****Course Name: Certificate Course in Career Skills****Course code: MTCCS****Duration: 30 hrs.**

<b>Module No.</b>	<b>Module Title</b>	<b>Hours</b>
Module 1	What is Communication?	4 hrs
Module 2	Resume Writing	4 hrs
Module 3	Interview Skills	6 hrs
Module 4	Group Discussion	6 hrs
Module 5	Functional Vocabulary	5 hrs
Module 6	Presentations	5 hrs

**Module outline:****MODULE 1: WHAT IS COMMUNICATION?**

- Introduction
- Participants in a Communication Process
- Channels and Media of Communication
- Barriers to Communication
- Tips for Effective Communication

**MODULE 2: RESUME WRITING**

- Introduction
- Elements of Resume
- Cover Letters
- Format of Cover Letters

**MODULE 3: INTERVIEW SKILLS**

- Introduction
- All about Interviews
- Telephonic Interviews
- After the Interview



**MODULE 4: GROUP DISCUSSION**

- Introduction
- Use of Persuasive Strategies in A GD
- The Process of A GD
- Topics for GDS
- Structuring a GD
- Leadership Skills
- The Use of Appropriate Body Language

**MODULE 5: FUNCTIONAL VOCABULARY**

- Introduction
- Practice Makes Perfect
- Pronunciation and Enunciation
- Stress
- Intonation

**MODULE 6: PRESENTATIONS**

- Introduction
- Planning
- Preparing
- Practising
- Presentation
- Barriers to Effective Presentation

**Course Objective:**


1. To help students acquire career skills and fully pursue a successful career path.
2. Prepare good resume, prepare for interviews and group discussions

**Course Outcome:**

1. At the end of this Course the students will be able to prepare their resume in an appropriate template without grammatical and other errors and using proper syntax.
2. Participate in a simulated interview
3. Actively participate in group discussion towards gainful employment.
4. Enlist common errors generally made by candidates in an interview.



## 5. Certificate Course in PageMaker



**MARTHOMA COLLEGE FOR  
WOMEN PERUMBAVOOR**

*Department of Commerce  
Finance & Taxation*

**Diploma & Certificate  
course in Page Maker  
2020-21**

*Every Monday  
& Wednesday  
3.30Pm to 4.30Pm*

**Classes  
starts on  
January 5**

**Register soon**

For more details contact :  
Mrs.Avani Department of  
commerce 73564 27898



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 Objective:** To enable the students to become proficient in the usage of PageMaker.

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



## 6. Certificate Course in CorelDRAW



**MARTHOMA COLLEGE FOR  
WOMEN PERUMBAVOOR**

**Department of Commerce  
Finance & Taxation**

**Diploma & Certificate  
course in Corel Draw  
2020-21**

**Every Tuesday &  
Thursday**

**3.30Pm to 4.30Pm**

**Register soon**

**Classes  
starts on  
January 5**

For more details contact :  
Mrs. Avani Department of  
commerce 73564 27898





## 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.

**Conclusion:** The Diploma and Certificate Course in CorelDRAW was successful, and the students gained the necessary skills and knowledge to work with the software. The performance of the students and the feedback from them was positive. The Course was an overall success, and the students were able to gain a good understanding of the software.


**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



2021 - 2022

## 1. Certificate Course in Energy Efficient Devices



**MAR THOMA COLLEGE FOR WOMEN**  
Perumbavoor, Ernakulam, Kerala.  
Affiliated to MG University & Accredited "B+" by NAAC

Department of physics  
presents

**Certificate course in  
Energy Efficient Devices**

Duration  
40 hrs

*Registration starts on July 2021*

Dr.Sujo Mary Varghese  
Principal

Dr.Anupama P  
HoD, Dept.of physics

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.



## 2. Certificate Course in Applied Electronics



**MAR THOMA COLLEGE FOR WOMEN**  
Perumbavoor, Ernakulam, Kerala.  
Affiliated to MG University & Accredited "B+" by NAAC

Department of Physics  
Presents

**Certificate course  
in  
Applied Electronics**

*Duration 30 hr Course*

Registration starts on July 2021

Dr.Sujo Mary Varghese  
Principal

Dr.Anupama p  
HoD Dept.of Physics



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, Multivibratos-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.





### 3. Value Added Course on Fresh Salad Making

*Make your Friday even more Special with a Healthy plate of Fresh Salad*

*Order your plate on Thursday*

contact details :  
Aiswarya K R,  
Dept. of Chemistry,  
Mob - 9495969623

**FRESH SALADS**  
*Made with Passion for Healthy Life...*

*A new Fresh salad for Every Fridays*

*A plate full of Health and Happiness*

**FRUITS SALAD**

**SPROUT SALAD**

**BEET PINEAPPLE SALAD**

**GREEN SALAD**

**SWEET VEG SALAD**

**ORIENTAL SALAD**

**Health benefits :**  
A natural source of Fiber  
Rich in Vitamins and Minerals  
Builds strong bones & muscular strength  
Stimulates hair growth and Skin tone  
Prevents Greying  
Helps lower Cholesterol  
Helps to reduce Weight



## 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.



## 4. Diploma in Computer Application (DCA)



**MAR THOMA COLLEGE FOR WOMEN, PERUMBAAVOOR**


**DIPLOMA IN COMPUTER APPLICATION (DCA)**

**IHRD certified & psc approved course**

Qualification : +2  
Duration : 6 months

Admission started for setember 2021 batch

For more details contact:  
**9562969839**



**MAR THOMA COLLEGE FOR WOMEN, PERUMBAAVOOR**

**DIPLOMA IN COMPUTER APPLICATION (DCA)**

**IHRD CERTIFIED & PSC APPROVED COURSE**

Admission started for January 2021 batch

Qualification : +2  
Duration : 6 months

**FOR MORE DETAILS CONTACT : 9562969839**



**Syllabus**

**INSTITUTE OF HUMAN RESOURCES DEVELOPMENT DIPLOMA  
IN COMPUTER APPLICATIONS**

(One Semester) (Scheme-2020)

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

[Scheme 2020]





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)

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#### **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 – page layout – 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. Niranjana Jha

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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 Mark-up 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*

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-3-

**References :** [https://www.tutorialspoint.com/internet\\_technologies/index.htm](https://www.tutorialspoint.com/internet_technologies/index.htm)  
[https://www.webopedia.com/quick\\_ref/network-fundamentals-study-guide.html](https://www.webopedia.com/quick_ref/network-fundamentals-study-guide.html)  
<https://www.w3schools.in/sql/database-concepts/>





Duration: 40 Hrs.

(Windows, Linux  
, PC Hardware)

### **DCA104 Lab Practice-1**

#### **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.

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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

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### **References:**

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

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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](http://www.IRCTC.com), [www.Keralapsc.org](http://www.Keralapsc.org), [www.mvd.org](http://www.mvd.org),

<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.ERP9 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.

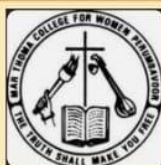
**Course Outcomes:** By completing a DCA Course, candidates will be able to:

- 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.





## 5. Certificate Course on Leadership and Management Skills



**Mar Thoma College for Women, Perumbavoor**

### DEPARTMENT OF COMMERCE COMPUTER APPLICATION



## *Certificate Course in Leadership and Management Skills*

**Admission opens for 2021-22 batch**

**For queries: [bcomcamtcw@gmail.com](mailto:bcomcamtcw@gmail.com)**

Ms. Saritha.N  
HOD  
Dept. of Commerce  
Computer Application



## Syllabus

**Course Name: Leadership and Management skills Duration: 30 Hours**

**Number and titles of Modules:**

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

- 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****6 Hours**

- a. Basic Managerial Skills
- 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.



## 6. Certificate Course in Communication Skills



**MAR THOMA COLLEGE FOR  
WOMEN, PERUMBAVOOR**

DEPARTMENT OF ENGLISH

***Certificate Course in Communication Skills***

**Duration: 30 hrs**



Course Coordinator  
Ms. Sangeetha Rachel Koruth

Ms. Chaithanya Elsa Achankunju  
HoD, Dept of English

Principal  
Dr.Sujo Mary Varghese





## 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.



## 7. Certificate Course in English Essentials



Mar Thoma College For Women, Perumbavoor  
**Department of Zoology**

*Offers*  
*Add-on course on*

**English Essentials**

**30 Sessions**

**STARTING**

NOV  
**2021**

**Course highlights:**

- Basic understanding of the English grammar
- Vocabulary building
- Pronunciation checkers
- Writing and communication skill enhancement activities
- Periodic assessments and feedbacks

Head of the Department and Course Coordinator: Reemmy Sara Mathai, 9746446231



## 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.





## 8. Certificate Course in Green Accounting in Digital Era



**MAR THOMA COLLEGE FOR WOMEN, PERUMBAVOOR**  
RE-ACCREDITED BY NAAC WITH B+ GRADE  
(AFFILIATED TO MAHATMA GANDHI UNIVERSITY)

**DEPARTMENT OF COMMERCE**

*Organizes  
Add on Course on  
Green Accounting in  
Digital Era*

*30 hours Course  
From November  
2021*

**Ms. Sherin T Abraham**  
Head of the Department

**Dr. Sujo Mary Varghese**  
Principal



## 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

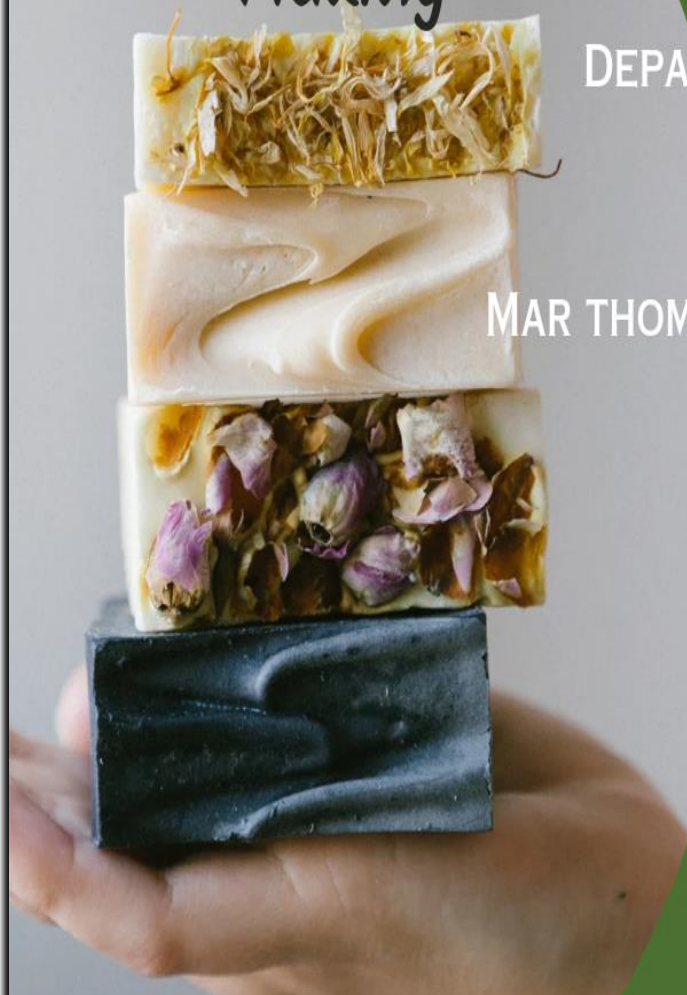
#### **Course Outcome:**

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



## 9. Add-on Course in Herbal Bathing Bar Making

### Add-on course on Herbal Bathing Bar Making



DEPARTMENT OF ZOOLOGY



MAR THOMA COLLEGE FOR WOMEN,  
PERUMBAVOOR

**30 Sessions  
including  
Workshops**

**Starts on  
December  
2021**

**Coordinator-Keerthi Sasidharan, 9544974365**  
**HOD-Reemy Sara Mathai, 9746446231**





## 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.





## 10. Certificate Course on Computational Biology

Mar Thoma College for Women,  
Perumbavoor



**DEPARTMENT OF ZOOLOGY  
(M.SC.ZOOLOGY)**

*Offers*

Certificate Course on  
**COMPUTATIONAL  
BIOLOGY**

30 Sessions including practicals

Classes starts from  
December 2021

Coordinator - Athira M. ( 7994720549)



## 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.



## 11. Certificate Course on Nutrition &amp; Dietetics

**MAR THOMA COLLEGE FOR WOMEN,  
PERUMBAVOOR**



Department of Zoology ( M. Sc. Zoology )

*Offers*

Certificate Course on

**NUTRITION AND  
DIETETICS**

30 Sessions

Classes starts from  
February 2022

Coordinator - Mrs. Sunu N. V  
(Assistant Professor, Department of  
Zoology, 9387319294)



**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.





## 12. Certificate Course in Communicative Hindi

Mar Thoma College For Women  
Perumbavoor

Department of Hindi  
*Offers*  
**Certificate Course on**

Communicative  
Hindi

### Courses Highlights :

- ◆ Basic Hindi Vocabulary
- ◆ Basic understanding of the Hindi Grammar
- ◆ Better Communication Skills

Starting : January 2022





**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.



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



**MAR THOMA COLLEGE FOR WOMEN, PERUMBAVOOR**

*Department of Commerce  
Computer Application*



**CERTIFICATE COURSE IN DATA ANALYSIS  
USING STATISTICAL PACKAGE  
FOR SOCIAL SCIENCES**

*Admission open for 2021, 2022 batch*

More info :

Ms.Amy Maria Paul

Asst.Professor

Department of Commerce Computer Application

bcomcamtcw@gmail.com



**Syllabus****Course Title: Data Analysis using Statistical Package for Social Sciences****Duration: 30 Hours****Number and titles of Modules:**

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

**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.



## 14. Certificate Course on Field Techniques in Archaeology




**MAR THOMA COLLEGE FOR  
WOMEN, PERUMBAVOOR**

2021-2022

**Certificate course in Field  
Techniques in Archaeology**

**Duration : 40 hrs**



**Dr. Vinod V**  
Course Coordinator

**Dr. Bibin Kuriakose**  
HoD, Dept. of History,  
Archaeology & Museology





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
- Major archaeological report in India





**Course objective:**

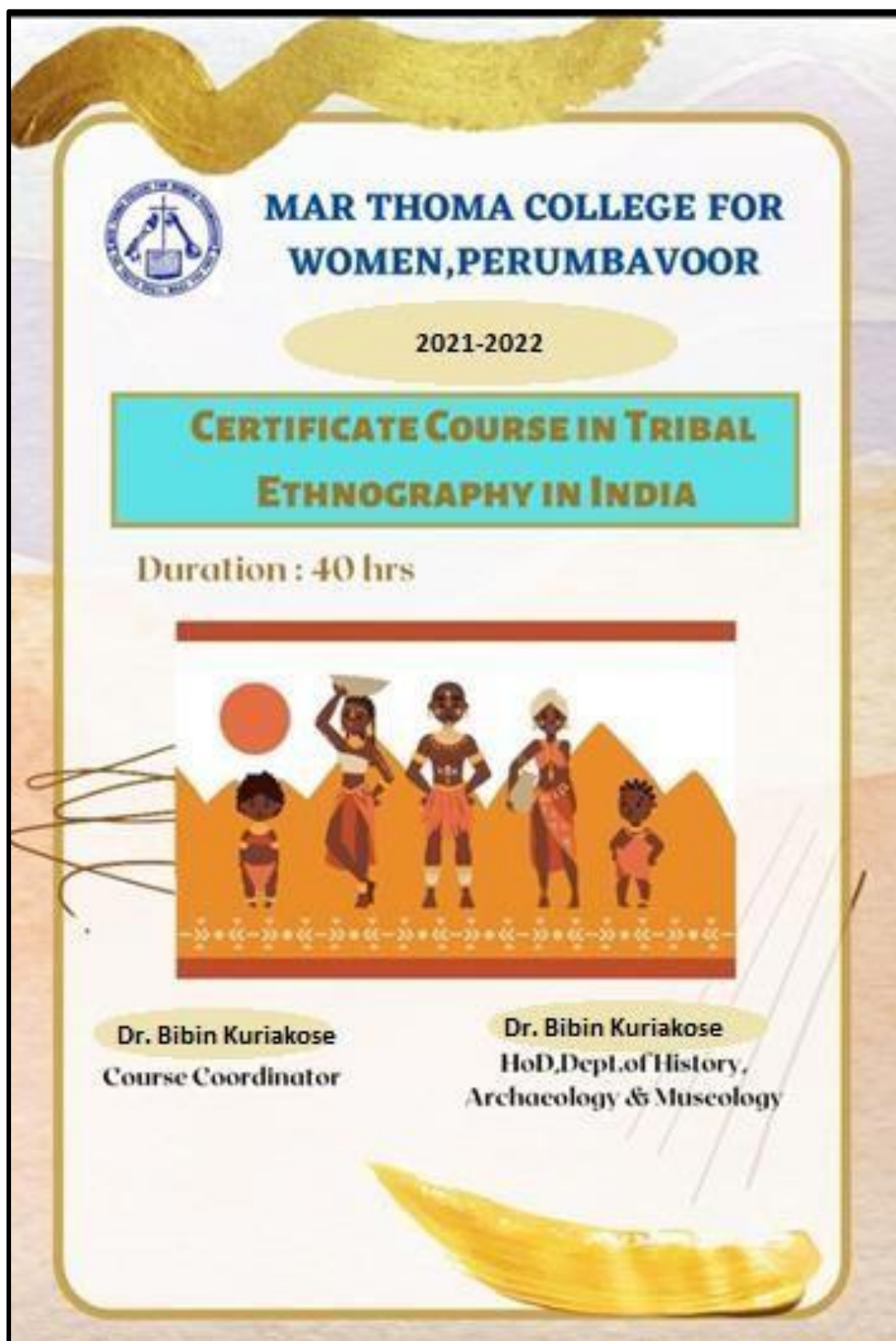
1. Provide necessary field orientation to the students
2. Equip students to undertake field works and report writing
3. Enhance the analytical and comprehension skill of students in archaeology
4. Explore the archaeological potential and enhance awareness among students
5. Provide field orientation and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



## 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.



## 16. Certificate Course in PageMaker



**MARTHOMA COLLEGE FOR  
WOMEN PERUMBAVOOR**

*Department of Commerce  
Finance & Taxation*

**Diploma & Certificate  
course in Page Maker**

**2021-22**

*Every Monday  
& Wednesday  
3.Pm to 4.Pm*

**Join Now**

*Classes  
starts on  
September 7*

For more details contact : Dr. Avani  
Department of commerce 73564 27898

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.



## 17. Certificate Course in CorelDRAW



**MARTHOMA COLLEGE FOR  
WOMEN PERUMBAVOOR**

**Department of Commerce**  
**Finance & Taxation**

**Diploma & Certificate**  
**course in Corel Draw**

**2021-22**

**Every Tuesday &  
Thursday**  
**3.Pm to 4.Pm**

**Classes**  
**starts on**  
**September 11**

**Register soon**

For more details contact : Dr.  
Avani Department of commerce  
73564 27898



## 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.





### 18. Diploma in International Finance and Accounts (DIIFA)

**UMTS**  
UNIQUE MANAGEMENT TRAINING SOLUTIONS

**HIGHLIGHTS**

- Training assistance for professional and add on courses.
- Placement assistance
- Classes by industrial experts
- Internship and personality development included
- Factory visit
- Exam & Certificates from providers directly.
- Certificates can verify online directly

**UNIQUE MANAGEMENT TRAINING SOLUTIONS**

**MAR THOMA COLLEGE FOR WOMEN**  
Perumbavoor, Ernakulam, Kerala.  
Affiliated to MG University & Accredited "B+" by NAAC

**AUTHORIZED TRAINING CENTRE**

**inprox**  
Empowering Towards Excellence

**Certificate of Authorization**

This is to certify that

**Mar Thoma College For Women**  
Perumbavoor, Ernakulam, Kerala.

is an Authorized Training Centre of UMTS for add on courses as per the rules and regulations stipulated

**UMTS**  
UNIQUE MANAGEMENT TRAINING SOLUTIONS

**ima** **Hock International**

	<u>UQ233816</u>	<u>30 JUNE 2026</u>
Academic Director	ATC Code	Validity Upto

Registered Office : MG ROAD, NEAR KOTTAPURAM OVERBRIDGE, THRISSUR ☎ 790 240 88 88 ✉ info@inprox.in 🌐 www.inprox.in



## 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.



## 19. Certificate Course in Virtual Lab



**MAR THOMA COLLEGE FOR WOMEN**  
Perumbavoor, Ernakulam, Kerala.  
Affiliated to MG University & Accredited "B+" by NAAC

*in association with*



**Amritha Vishwa  
Vidhyapeedam, Kollam**

*Presents*

**Certificate course on**

**VIRTUAL LAB**



**30  
HOURS  
COURSE**

**REGISTRATION STARTS ON 1ST JULY 2022**

**Dr. SUJO MARY VARGHES**  
(Principal- in-charge)

**Dr. ANUPAMA P**  
(HoD Department of Physics)



## 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.



## 20. Certificate Course in Energy Audit



**MAR THOMA COLLEGE FOR WOMEN**  
Perumbavoor, Ernakulam, Kerala.  
Affiliated to MG University & Accredited "B+" by NAAC

*in association with*

**ENERGY CONSERVATION SOCIETY (ECS)**



*Presents*

*Certificate course in*

**ENERGY AUDIT**

**36**  **HOURS COURSE**

**REGISTRATION STARTS ON 1ST NOVEMBER 2021**

**Dr. SUJO MARY VARGHES**  
(Principal- in-charge)

**Dr. ANUPAMA P**  
(HoD Department of Physics)



## 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:

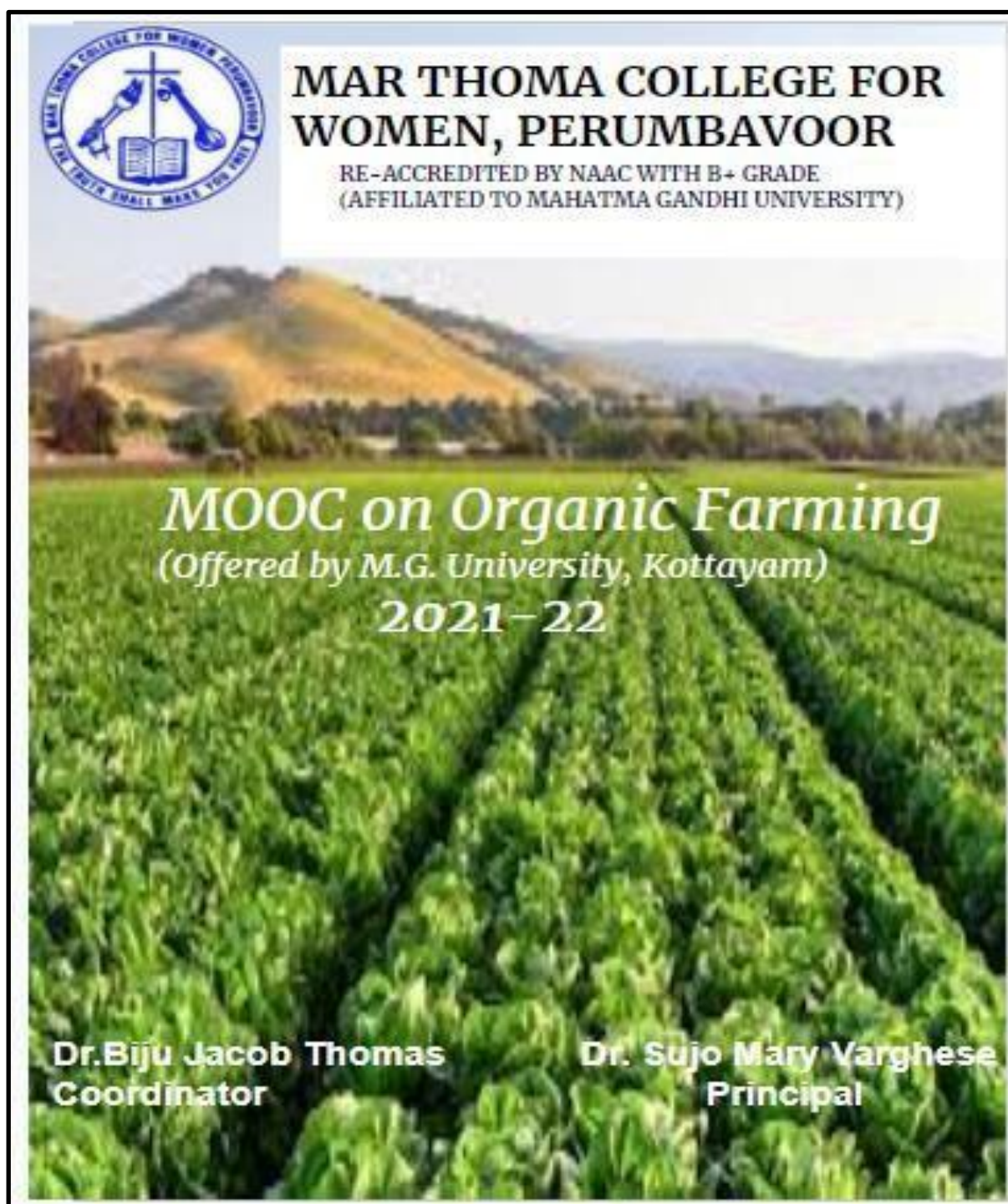
1. understand Energy management, energy audit and BEE regulation.
2. understand different source of energy.
3. understand energy saving methods at home, institution and industries.
4. understand solar PV power plants and main components used.


**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.





## 21. MOOC on Organic Farming



 **MAR THOMA COLLEGE FOR WOMEN, PERUMBAVOOR**  
RE-ACCREDITED BY NAAC WITH B+ GRADE  
(AFFILIATED TO MAHATMA GANDHI UNIVERSITY)

**MOOC on Organic Farming**  
(Offered by M.G. University, Kottayam)  
**2021-22**

**Dr. Biju Jacob Thomas**  
Coordinator

**Dr. Sujo Mary Varghese**  
Principal



**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 lectures, 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.

