



ST. DOMINIC'S COLLEGE, KANJIRAPALLY

AFFILIATED TO MAHATMA GANDHI UNIVERSITY KOTTAYAM

RE-ACCREDITED WITH A GRADE BY NAAC

ABSORB & RADIATE



ADD-ON COURSES 2020-21 BROCHURES AND SYLLABUS



St. Dominic's College Kanjirapally

Postgraduate Department of Mathematics

ADD-ON COURSE

Typesetting in LaTeX

INTRODUCTION

LaTeX is a document preparation system for high-quality typesetting. LaTeX (pronounced LAY-tek or LAH-tek) is a software system used to create professional-looking documents. It is based on the WYSIWYM (what you see is what you mean) idea, meaning you only have to focus on the contents of your document and the computer will take care of the formatting.

At the end of this course, participants will be exposed to enough knowledge to produce well-drafted LaTeX documents.

ASSESSMENT

Practical examination and assignments

COURSE OBJECTIVES

- To introduce LaTeX as an alternative document preparation system.
- To expose participants to the basics of document preparation using LaTeX.
- Learn to prepare LaTeX documents and project report.

COURSE DURATION

- 30 hours (20 hours theory classes and 10 hours practical sessions)

COORDINATOR

PROF. ANU JOY

DEPARTMENT OF MATHEMATICS



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**POST GRADUATE DEPARTMENT OF MATHEMATICS
ST. DOMINIC'S COLLEGE KANJIRAPALLY**

Certificate Course

Typesetting in \LaTeX

For MSc Mathematics and final BSc Mathematics Students



\LaTeX

INSTRUCTOR:PROF.ANU JOY





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1. Typesetting in \LaTeX

1.1 Introduction

1.1.1 What is \LaTeX ?

\LaTeX (pronounced LAY-tek or LAH-tek) is a software system used to create professional-looking documents. It is based on the WYSIWYM (what you see is what you mean) idea, meaning you only have focus on the contents of your document and the computer will take care of the formatting. Instead of spacing out text on a page to control formatting, as with Microsoft Word users can enter plain text and let \LaTeX take care of the rest.

1.1.2 Why we learn \LaTeX ?

\LaTeX is used all over the world for scientific documents, books, as well as many other forms of publishing. Not only can it create beautifully typeset documents, but it allows users to very quickly tackle the more complicated parts of typesetting, such as inputting mathematics, creating tables of contents, referencing and creating bibliographies, and having a consistent layout across all sections.

One of the most important reasons people use \LaTeX is that it

separates the content of the document from the style. This means that once you have written the content of your document, we can change its appearance with ease.

Similarly, you can create one style of document which can be used to standardise the appearance of many different documents. This allows scientific journals to create templates for submissions. These templates have a pre-made layout meaning that only the content needs to be added. In fact there are hundreds of templates available for everything from CVs to slideshows.

\LaTeX started as a writing tool for mathematicians and computer scientists, but even from early in its development, it has also been taken up by scholars who needed to write documents that include complex math expressions or non-Latin scripts, such as Arabic, Devanagari and Chinese.

\LaTeX was originally written in the early 1980s by Leslie Lamport.

1.1.3 How it works?

The example below shows the input to \LaTeX and the corresponding output from the system:

input	Output
<pre> \documentclass{article} % Starts an article \usepackage{amsmath} % Imports amsmath \title{\LaTeX} % title \begin{document} % Begins a document \maketitle \LaTeX{} is a document preparation system for the \TeX{} typesetting program. It offers programmable desktop publishing features and extensive facilities for automating most aspects of typesetting and desktop publishing, including numbering and cross- referencing, tables and figures, page layout, bibliographies, and much more. \LaTeX{} was originally written in 1984 by Leslie Lamport and has become the dominant method for using \TeX; few people write in plain \TeX{} anymore. The current version is \LaTeXe. % This is a comment, not shown in final output. % The following shows typesetting power of \LaTeX: \begin{align} E &= mc^2 \\ E &= \frac{mc^2}{\sqrt{1-\frac{v^2}{c^2}}} \end{align} \end{document} </pre>	<p style="text-align: center;">\LaTeX</p> <p>\LaTeX is a document preparation system for the \TeX typesetting program. It offers programmable desktop publishing features and extensive facilities for automating most aspects of typesetting and desktop publishing, including numbering and cross-referencing, tables and figures, page layout, bibliographies, and much more. \LaTeX was originally written in 1984 by Leslie Lamport and has become the dominant method for using \TeX; few people write in plain \TeX anymore. The current version is \LaTeXe.</p> $E_0 = mc^2 \quad (1)$ $E = \frac{mc^2}{\sqrt{1 - \frac{v^2}{c^2}}} \quad (2)$ <p style="text-align: center;">1</p>

1.2 Syllabus

1.2.1 Course Objective

Students who complete this course will:

- Learn to prepare a \LaTeX document, article and a project report.
- Be able to include figures and tables in a LaTeX document.

1.2.2 Course structure

This course covers document preparation using the \LaTeX typesetting program. Being a computer course, there will be a Theory Part and a Practical Part. The total hours for the course are 30 hrs out of which 20 hrs for theory and 10 hrs for practical session.

1.2.3 Text Book

LATEX Tutorials: A PRIMER by Indian TEX Users Group, Edited by E. Krishnan, 2003. A free PDF document from the URL: <https://www.tug.org/twg/mactex/tutorials/ltxprimer-1.0>

1.2.4 Modules

Module 1: Beginning typesetting with using LaTeX

(10 (5+5) hours)

The Basics: What is LATEX, Simple typesetting, Fonts, Type size.

The Document: Document class, page style, page numbering, formatting lengths, parts of a document, dividing the document.

Bibliography: Introduction. Table of Contents: Table of Contents, Index, Glossary.

Displayed Text: Borrowed words, poetry in typesetting, making lists.

Rows and Columns: Tables.

(Relevant Sections of Text)

Module 2: Typesetting Mathematics

(20 (15+5) hours)

Typesetting Mathematics: The basics, custom commands, more on mathematics, mathematics miscellany, symbols.

Typesetting Theorems: Theorems in LaTeX, designer theorems - the amsthm package.

Floats: creating floating figures.

Cross References in LaTeX: Why cross references? Let LaTeX do it. Cross references in math.

(Relevant Sections of Text)

1.2.5 References

- The free to download book “Formatting inform action: A beginner’s introduction to typesetting with LaTeX” by Pe-

ter Flynn. This can be downloaded free from the URL
<https://www.ctan.org/pkg/beginlatex>

- LATEX, a Document Preparation System by Leslie Lamport (second edition, Addison Wesley, 1994).
- <https://www.overleaf.com/>



¹Course Fee: Rs 100

DEPT. OF COMMERCE (SF)
ST.DOMINIC'S COLLEGE
KANJIRAPPALLY

INAUGURATION
OF

CAREER ENRICHMENT SKILLS

**A TWO YEAR INNOVATIVE
CERTIFICATION PROGRAMME**

FACULTY IN CHARGE

PROF. JC KAPPEN

Tuesday 9th November 2021 @ 10.45 am

by

*Very Rev.Fr. Varghese Parinthricksal
(The Manager)*

Welcome : Dr.Jojo George (Director)

Presidential Address : Dr.Seemon Thomas (Principal)

Vote of Thanks : Ms.Manjusha SG (Hod)

Get the boost you need to achieve academic success

DEPARTMENT OF COMMERCE(SF)
CAREER ENHANCEMENT SKILL – ADD ON COURSE
SYLLABUS

Module 1:

Communication skills 1: The basics

Topics to be covered:

- i. Understanding the communicative environment-I
- ii. Understanding the communicative environment-II
- iii. What to listen for and why
- iv. When to speak and how
- v. Starting and sustaining a conversation

Module 2:

Communication skills 2 : Presentation and interaction

Topics to be covered:

- i. What to present and how – I
- ii. What to present and how – II
- iii. Multimedia presentation: Understanding the basics
- iv. Communication styles
- v. Speaking in groups

Module 3:

Communication skills 3: Visual, nonverbal and aural communication

Topics to be covered:

- i. The world of visual culture
- ii. Visual perception
- ii. The aural: Its relevance and impact
- iv. The body and the way it communicates
- v. The face, its expressions and what it says

Module 4:

Interpersonal communication 1: Individuals, groups and cultures

- i. Building Relationships
- ii. Understanding Group Dynamics- I
- iii. Understanding Group Dynamics- II
- iv. Groups, Conflicts and their Resolution
- v. Social Network, Media and Extending Our Identities

Module 5:

Essential and vocational skills: survival strategies

- i. Managing time
- ii. Managing stress
- iii. Resilience
- iv. Work-life balance
- v. Applying soft-skills to workplace



**RESEARCH & P G DEPARTMENT OF COMMERCE
ST. DOMINIC'S COLLEGE, KANJIRAPALLY**

**ADD ON COURSE
ON
COMPUTERIZED ACCOUNTING
2020-21**

**BENEFICIARIES:
III YEAR DEGREE STUDENTS**

FACULTY



Ms. REEMA ABRAHAM
Assistant Professor
Commerce Department
(Self - Financing)

TOTAL HOURS : 45 (THEORY & PRACTICAL)

FOR ENQUIRIES: 9745913111

COMPUTERISED ACCOUNTING

TALLY ERP.9

Objective:

- To equip the students to meet the demands of the industry by mastering them with industry sought after computerised accounting packages.
- To expose the students to computer applications in the field of accounting.
- To develop practical skills in the application of Tally accounting package.

MODULE – 1 Introduction to computerised accounting: – Tally 9 - Features of Tally – Screen components-Creation of Company- selecting a company – altering/ modifying company creation details – Deleting a company – F 11 Features – F 12 Configuration.

MODULE - 2 Accounts and Vouchers – account groups – pre-defined groups – creating single & multiple groups – creation of primary account groups – creating ledger accounts in single & multiple – displaying, altering and deleting account groups and ledgers – Accounting vouchers- entering transactions in accounting vouchers – bill wise details - altering and deleting a voucher entry – creating new voucher types
– bank reconciliation statement - creating budget - generating reports .

MODULE - 3 Accounts with inventory – enabling F 11 and F 12 - stock category – stock group – single/multiple creation of stock category and stock group – creation of units of measurement – creating single/multiple stock items – creating godowns - displaying, altering and deleting stock groups, units, items and godowns – cost centre, purchase / sales orders - Inventory vouchers - using inventory vouchers – using accounting vouchers with inventory details (invoice mode) - advanced security control – back-up and restore – inventory reports – stock summary - inventory books – statement of inventory.

MODULE - 4 Accounting with Tax – F 11 & F 12 settings for taxation – GST – GST terminologies – computation of GST – ledgers and vouchers pertaining to GST, GST – forms and Reports in GST.

MODULE -5- Payroll Accounting

S D College Add on Course [2021-2022]

MS Office 2013 Syllabus

Total Duration: 30 Hrs.

Common Course Content:

>> MS WINDOWS, COMPUTER BASICS [04 Hrs.]

- Computer Basic, Creating Folder
- Directories, input units, Output unit
- Central Processing Units,
- What is Hardware, what is Software?
- Windows short cut keys

Course on MS Word 2013

Course Duration: 10 Hrs.

Course Curriculum:

BASICS OF A DOCUMENT

- Starting a New Document 2013
- File Tab [Different groups under file tab]
- Home Tab >>Cut, Copy, Paste, Format Painter>> Font Group

>> Alignment of text >> Paragraph >> Find and Replace >> Fill colour.

- Applying Styles
- Using pictures
- Insert Tab [Cover page, table, picture, shapes, links, and symbols]
- Using Smart Art
- Using Chart
- Design Tab [watermark, page borders, page color]

EDITING/FORMATTING THE DOCUMENT

- Using Text Box
- My App and store
- Header and Footer
- Adding Signatures
- Objects >> Grouping Multiple Objects >> Wrapping the Text
- Setting up the Page >> Page Size >> Columns >> Page Breakup >> Indent spacing >> Hyphenation.

VIEWING/FINALIZING THE DOCUMENT

- Reference
- Citation and Bibliography
- Mail Merge
- Reviewing the Document
- Comments

- Viewing the Document [Creating and view Macros]

PRINTING/CLOSING THE DOCUMENT

- Printing the Document
- Saving the Document
- Closing the Document
- Bio data preparation

Course on MS Excel 2013

Course Duration: 08Hrs

Course Curriculum:

BASICS OF CREATING A NEW WORKBOOK

- Introduction to MS Office
- Entering Data in the cell
- Inserting Rows and Column
- Insert and Delete Worksheet
- Number Format

EDITING/FORMATTING A WORKBOOK

- Insert Tab>>Tables >>Pictures >>Slicer>> Hyperlink >> Header and Footer
- Charts >>Column chart – 2D and 3D >> Bar Chart >> Pie Chart>>Scatter Chart>>Combo Chart >>Line Chart

- Data Tab
- Sort and Filter
- Flash Files 2013
- Data Validation
- Remove Duplication
- Page Layout

FUNCTIONS

- Formulas
- Review >>Spelling, Research, Thesaurus >> Comment
- View Options
- Freeze Panes PRINTING/ SAVING A WORKBOOK
- Saving the Workbook
- Recovering an unsaved workbook
- Closing the Workbook

Course on MS PowerPoint 2013

Course Duration: 08 Hrs

Course Curriculum:

CREATE A BASIC PRESENTATION

- Introduction about PowerPoint 2013

- The Quick Access Toolbar
- Opening an Existing Presentation
- Slides
 - Formatting the text EDITING
- Insert >>Tables >>Text
- Adding Rows and Columns
 - Designing the Table
- Using pictures to the slide
- Using Smart Art and Word Art
- Hyperlinks
- Actions
 - Adding Videos and Audios

FORMATTING/DESIGNING

- Formatting
- Designing the presentation
- Adding Transition Effect
 - Removing Transition from the slide
- Slide show
- Animations in the power Point 2013

SETTING UP/SAVING THE PRESENTATIONS

- Show Slides>> Advance Slides>> Multiple Monitor
- Review
- View >>Master View >>Handout Master>>Notes Master
- Saving the Presentations
- Sharing the Presentation
- Printing the Presentation
- Close the Presentation

Learning Outcomes

By successfully completing this course, students will be able to:

- Describe what Microsoft Office 2013 is and how it is useful in both your personal and professional life. Learn the basics of MS Office 2013. Gain expertise in the usage of MS Word, Excel, and PowerPoint. Improve your effectiveness through MS-Office. Extensive Learning hours with 30 hours of classroom training along with real time practice on data sets for better learning and increased retention.

Assessment

- >>An Introduction
- >>Assignment
- >>Exam

Department of Commerce(SF)
St.Dominic's College
Kanjirappally

**ADD-ON
COURSE**

TALLY ERP 9.0

**FOR
3RD YEAR
B.COM COMPUTER APPLICATION
STUDENTS**

FACULTY IN CHARGE

MS.REEMA ABRAHAM

Employability enhancement programme

Department of Commerce (SF)

Add on course- Tally ERP.9

Course: Tally ERP.9

Batch: Model 2&3

Held on: July-October

**Mode of Learning: Classroom, Google Meet,
Computer lab**

Corse duration: 30 Hours

Course objective:

- *To equip the students to meet the demands of the industry by mastering them with industry sought after computerised accounting packages.*
- *To expose the students to computer applications in the field of accounting.*
- *To develop practical skills in the application of Tally accounting package.*

SYLLABUS

Tally ERP.9

MODULE – 1 Introduction to computerised accounting: Computerised accounting Vs. Manual accounting- merits of computerised accounting – Tally 9 - Features of Tally – Screen components- Creation of Company- selecting a company – altering/ modifying company creation details – Deleting a company – F 11 Features – F 12 Configuration.

MODULE - 2 Accounts and Vouchers – account groups – pre-defined groups – creating single & multiple groups – creation of primary account groups – creating ledger accounts in single & multiple – displaying, altering and deleting account groups and ledgers – Accounting vouchers- entering transactions in accounting vouchers – bill wise details - altering and deleting a voucher entry – creating new voucher types – modifying an existing voucher – duplicating a voucher – optional vouchers – post-dated vouchers – reverse journal – bank reconciliation statement - creating budget - generating reports – configuring reports balance sheet – profit and loss account – trial balance – day books – account books – statement of accounts – ratio analysis - cash flow - fund flow – list of accounts – exception reports.

MODULE - 3 Accounts with inventory – enabling F 11 and F 12 - stock category – stock group – single/multiple creation of stock category and stock group – creation of units of measurement – creating single/multiple stock items – creating godowns - displaying, altering and deleting stock groups, units, items and godowns – cost categories- cost centres – creating cost categories and cost centres - displaying, altering and deleting cost categories and cost centres – purchase / sales orders - Inventory vouchers - using inventory vouchers – using accounting vouchers with inventory details (invoice mode) - Tally Security - Tally vault – Tally audit – advanced security control – back-up and restore – inventory reports - stock summary - inventory books – statement of inventory.

Module 4- Manufacturing in Tally, stock clearness, delivery note and receipts notes, purchase & sales Voucher, Inventory Management in Tally, Employees salary creation bill and batch wise details. Rejection In and Rejection Out, Reversing Journal, entering petty cash in tally.

MODULE - 5 Accounting with GST – F 11 & F 12 settings for taxation – TDS - ledgers related to TDS – creating TDS voucher types - TDS reports – TCS – service tax - GST – GST terminologies – purchase and sales bills with GST, computing GSTT – ledgers and vouchers pertaining to GST – GST reports – GST forms.

MAHATMA GANDHI UNIVERSITY, KOTTAYAM

MOOC course on Organic Farming

Project I (Organic Manure Making)

Guidelines

The project is aimed at training the Under Graduate students of Mahatma Gandhi University to familiarize with the different biotechnological means to process the household and kitchen wastes to valuable manure at household level.

The students have to take up the processing of the kitchen and garden wastes generated by them at the family level, for which a processing unit has to be installed at each homestead of the respective student.

The location of the project shall be at the residence of the student concerned. Those students residing in hostels can implement the project at the respective college campus. Approximately one square meter area has to be set aside near the kitchen or in the backyard to install the processing unit.

Conversion of organic wastes generated at household level to useful materials like manure is the theme of the project. Kitchen wastes and garden wastes, generated on a daily basis are to be processed and converted to compost by using appropriate methods. Depending upon convenience and accessibility, the students may opt for processing of either kitchen waste or garden waste. For students who operate from their house, processing of kitchen waste may be more practical. For the others, especially those residing in hostels, processing of garden waste and leaf litter may be preferred.

Methodology

The composting process adopted for kitchen wastes and garden wastes are different. Students have the option to choose the composting of either kitchen waste or the garden waste.

A. Composting Kitchen waste

Materials required

- 1. Kitchen waste** including vegetable waste, fish waste, food waste etc. Waste shall be devoid of plastics, oily materials, bottles and liquefied food wastes.
- 2. Bio Bins** to hold the kitchen waste. Bio bins can be earthen made similar to garden pots, polypropylene pots or PVC pipes of 200 mm diameter. Micro pores on the bin walls ensure aeration that facilitates microbial activity. Large garden pots of one cubic feet can be an alternative, which may be less expensive. The holes of such pots in the base may be closed using cement mortar.
- 3. Composting inoculums:** Composting inoculums are consortia of microflora that can easily decompose vegetable and food wastes. They include bacterial and fungal strains. Talc based and coir pith based inoculums are available. The compost once produced can also be used as

inoculum. The waste decomposer developed by the *National Centre of Organic Farming (NCOF)* is an effective and less expensive source of composting inoculum.

These are available from various sources.

The inoculum developed by the Kerala Agricultural University is available from College of Agriculture, Vellayani, College of Horticulture, Vellanikkara, Research stations and Krishi Vignana Kendrams (KVK) under the Kerala Agricultural University. Private institutions like Agrobiotech also facilitate composting inoculums.

Composting process

A. Kitchen waste composting

1. Garden pot composting: Large garden pots (Cement/Terracotta) are the simplest and cheapest containers for kitchen waste composting. The base holes of the pot are closed. At the bottom of the pot a layer of coir pith is spread at 1" thickness. Above this layer, spread the kitchen waste of the day. Over this layer, add the composting inoculum @ 5 g per kg of bio waste. The bin may be covered with a tile or wooden plank. This process of filling and addition of inoculum may be continued daily. The moisture within the bin has to be regulated by spreading coir pith or dry leaves. It may take 25 to 30 days to fill one pot. Stirring the contents of the pot for a while, accelerates the decomposition process. After 30 to 35 days of the last filling, the compost is taken out. The brown colored compost in powder form is quality manure that can be used for nourishing crops including vegetables.

A second pot may be prepared and filled as above subsequently. Care should be taken to fill the waste on the same day of its generation as the delay may cause egg laying by flies and contamination by its larvae.



2. Bio bin Composting

This three layered bin biocomposter can be used for composting waste in terrace gardens and household in urban areas where space there may be space constraints. Either Terracotta or Poly propylene bins with micro pores and top covered with holed lid can be used. This is Ideal for a family of 3 to 4 generating up to 1kg /day of organic waste and to convert kitchen & organic waste to compost in 4-6 weeks. Coir pith and microbial inoculum can be used for composting.



3. Pipe Composting

This method, using polyvinyl chloride (PVC) pipes placed over ground within households can store degradable kitchen waste for a period of time to break down the waste into manure. In a straight line, drill holes along the pipe at a distance of about 7-8 cm between each to ensure air ventilation. Drill about 4-5 holes on the end cap too. Add brown matter such as crushed dry leaves, wood chippings, coco peat etc., at the bottom and put kitchen waste above this. When we begin the composting process we pore in little bit of jaggery and cow dung along with two litres of water and start filling the pipe with wet waste. Two or more PVC pipes (about 4inch diameter & 5-6 feet height) can be temporarily erected with two feet in the ground or on a plant pot. Once the available volume in a pipe is filled and concealed thoroughly, waste stored in pipe would become manure in about 30-35 days which can be used as nutrients in garden.



B. Composting Garden waste

The National Centre for Organic Farming developed an inoculum that is capable of quick decomposition of organic wastes. It is a consortium of microorganisms extracted from cow dung and is available as 'waste decomposer' in 30 gm. packets. It is available from National Centre for Organic Centre, Ghaziabad. It is also available online from <https://krushikendra.com> and <https://www.amazon.in>

Preparation of composting inoculum

A solution of waste decomposing inoculum can be prepared by mixing 2 kg jaggery in 200 liters of water to which the content of a bottle of the waste decomposer is added. Mix it properly with a stick. Cover the drum with a cardboard and repeat the stirring every day once or twice. After five days, the solution turns creamy and ready for use.

Composting tonic available from the Kerala Agricultural University outlets can also be used as inoculums.

Cow Dung slurry prepared from cow dung can substitute the composting inoculum.

Composting process

Garden wastes collected may be spread at 20 cm thickness on a plastic sheet placed under shade. Wet the waste with a solution of the waste decomposing inoculum. Another 20 cm layer of waste may be spread over it and wet with the inoculum solution again. The process is repeated till the pile goes up by 50 cm. Turn over the pile at one week intervals and add composting inoculum at each stirring. Maintain the moisture content of the pile at around 60 percent. The compost will be ready for use in about two months.

Observations and data collection

The students have to closely monitor the compost making process. They have to **make a record of the process of initial preparation to final compost extraction.**

The materials required are to be procured and their photos are to be taken.

The source of procurement of the inputs, especially the inoculum, should be genuine and to be recorded.

The quantity and kind of waste materials filled are to be recorded on a daily basis.

The quantity of compost produced after the specified period is to be quantified.

The quality of the produce may be assessed by applying it to vegetable or garden plants.

A record of all the events during the project period is to be maintained and submitted to the mentor for evaluation.

College level assessment

There are two components for student assessment. One is project report which carries 80 marks. The Other is a viva voce examination which carries 20 marks. Mentors have to conduct Viva voce of the students, under their control. The total mark for this project is 100.

Guidelines for the 2nd Project given from the University

മഹാത്മാഗാന്ധി സർവ്വകലാശാല ബിരുദ വിദ്യാർത്ഥികൾക്കുവേണ്ടിയുള്ള ജൈവകൃഷി(MOOC) പ്രോജക്ട് നടപ്പാക്കുന്നതിനുള്ള മാർഗ്ഗരേഖ

ലക്ഷ്യം-ജൈവകൃഷികളെക്കുറിച്ച് പ്രായോഗിക വൈദഗ്ദ്ധ്യം നേടിയെടുക്കാൻ വിദ്യാർത്ഥികളെ പ്രാപ്തരാക്കുക എന്നതാണ് ഈ ജൈവകൃഷി പ്രോജക്ട് കൊണ്ടു ഉദ്ദേശിക്കുന്നത്.

● പ്രോജക്ട് നടപ്പാക്കുന്ന സ്ഥലം

വീട്ടിലും വിദ്യാലയത്തിലുമായി ഓരോ വിദ്യാർത്ഥിയും കുറഞ്ഞത് 20 ച.മീ (അരസെന്റ്) സ്ഥലത്തിലോ, അല്ലെങ്കിൽ 25 ഗ്രോ ബാഗുകളിലോ വിവിധ വിളകൾ ജൈവ കൃഷിരീതിയിൽ കൃഷിചെയ്ത് ഒരു പോഷകത്തോട്ടം ഒരുക്കേണ്ടതാണ്. നല്ലത് പോലെ സൂര്യപ്രകാശം ലഭിക്കുന്ന, നീർവാർച്ച സൗകര്യമുള്ള തുറസ്സായ സ്ഥലങ്ങളാണ് ഇതിനഭികാമ്യം.

● വിളകൾ

പച്ചക്കറിവിളകളായ ചീര, വെണ്ട, തടപ്പയർ, വഴുതന, പച്ചമുളക് സുഗന്ധവിളകളായ ഇഞ്ചി, മഞ്ഞൾ, കിഴങ്ങു വർഗ്ഗവിളകളായ ചേന, മരച്ചീനി തുടങ്ങിയവയിൽ നിന്നും അഞ്ചുതരം വിളകൾ വിദ്യാർത്ഥികൾക്ക് തിരഞ്ഞെടുക്കാം. പച്ചക്കറി വിളകളും,

● കൃഷി ഉപകരണങ്ങൾ

മൺവെട്ടി, കൈപ്പല്ലി, വെട്ടുകത്തി, കൂട്ട, പുവാളി, ഹാൻഡ് സ്പ്രേയർ, നാപ്സാക് സ്പ്രേയർ എന്നീ കാർഷിക ഉപകരണങ്ങൾ ആവശ്യമാണ്.

● വളങ്ങൾ

ജൈവ വളങ്ങളായ കമ്പോസ്റ്റ്, ചാണകം, ആട്ടിൻകാഷ്ഠം, കോഴിവളം എന്നിവയും സാമ്പ്രീകൃതവളങ്ങളായ കടലപ്പിണ്ണാക്ക്, വേപ്പിൻപ്പിണ്ണാക്ക്, തേങ്ങാപ്പിണ്ണാക്ക് എന്നിവയും, പച്ചിലവളങ്ങളായ ശീമക്കൊന്നയില, പെട്ടെന്ന് അഴുകുന്ന വിവിധതരം കളകൾ എന്നിവയെല്ലാം ജൈവവളങ്ങളായി ഉപയോഗിക്കാം. ഫിഷ് അമിനോആസിഡ്, എഗ്ഗ് അമിനോ ആസിഡ്, പഞ്ചഗവ്യം, ജീവാമൃതം തുടങ്ങിയ വിവിധതരത്തിലുള്ള പുളിപ്പിച്ച സാമ്പ്രീകൃതവളങ്ങളും ഉപയോഗിക്കാം.

● **നിരീക്ഷണങ്ങളും വിവരശേഖരണവും**

വിദ്യാർത്ഥികൾ അവരുടെ വിളകളെ കൃത്യമായി നിരീക്ഷിക്കേണ്ടതും വിവരശേഖരണം നടത്തേണ്ടതുമാണ്. വിവരശേഖരണ രേഖകൾ കൃത്യമായി മെന്റർമാർ, കോ-ഓർഡിനേറ്റർമാർ എന്നിവർ വിലയിരുത്തേണ്ടതുമാണ്. നിലമൊരുക്കൽ മുതൽ വിളവെടുപ്പുവരെയുള്ള കാലയളവിൽ ചെയ്യുന്ന വിവിധ പ്രവർത്തനങ്ങൾ ഈ രേഖയിൽ ഉൾപ്പെടുത്തേണ്ടതാണ്. പതിനഞ്ചു ദിവസം കൂടുമ്പോൾ, ചെടികളുടെ ഉയരം, ശാഖകളുടെ എണ്ണം, ആദ്യം പുവിടുന്ന തീയതി, കായ് പിടിച്ച തീയതി, കായകളുടെ എണ്ണം, തുടർന്ന് വിളവെടുക്കുന്ന തീയതികളും വിളവിന്റെ അളവും കൃത്യമായി രേഖപ്പെടുത്തേണ്ടതാണ്. ചെടികളുടെ വിവിധ വളർച്ചാദശകളുടെയും, വിളവെടുക്കുന്നതിന്റെയും ഫോട്ടോകൾ വിവരശേഖരണ രേഖയിൽ ഉൾപ്പെടുത്തണം. കീടരോഗാക്രമണങ്ങൾ, അവയ്ക്കെതിരെ സ്വീകരിച്ച പ്രതിവിധി എന്നിവയും ഉൾപ്പെടുത്തേണ്ടതാണ്. വിദ്യാർത്ഥികളുടെ കാർഷിക അനുഭവങ്ങളും അവർക്കു നേരിടേണ്ടിവന്ന പ്രതിസന്ധികളും, അവ തരണം ചെയ്ത രീതികളും റിപ്പോർട്ടിൽ ഉൾപ്പെടുത്തേണ്ടതാണ്.

● **കോളേജുതല വിലയിരുത്തൽ സെമിനാറുകൾ**

ഓരോ വിദ്യാർത്ഥിയും അവരുടെ ജൈവകൃഷി അനുഭവങ്ങൾ കോളേജുതലത്തിൽ നടത്തുന്ന ‘വിലയിരുത്തൽ സെമിനാറിൽ’ അവതരിപ്പിക്കേണ്ടതും കോർഡിനേറ്റർമാർ, മെന്റർമാർ എന്നിവർ വിദ്യാർത്ഥികളെ വിലയിരുത്തേണ്ടതുമാണ്.

MAHATMA GANDHI UNIVERSITY
MOOC on ORGANIC FARMING
Guidelines to Teachers for evaluation of Organic Farming Project in First Semester

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

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

I. Report – 80 Marks

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

Chapter 1. Introduction (5 marks)

Chapter 2. Materials and methods (20 marks)

- 2.1 Location of college and student
- 2.2 Crops selected,
 - 2.2.1 Varieties
 - 2.2.2 Source of seed/seedlings
- 2.3 Area/ no.of grow bags
- 2.4 Crop season
- 2.5 Weather condition prevailed (rainfall, rainy days, average atmospheric temperature etc.)
- 2.6 Agricultural implements and equipments used
- 2.7 Liming material and quantity
- 2.8 Manures
 - 2.8.1 Basal application
 - 2.8.2 Top dressing
 - 2.8.2 Biofertilizers
 - 2.8.3 Bio slurries
- 2.9 Bio pesticides
- 2.10. Bio control agents
- 2.11. Any other inputs used
- 2.12 Crop management
 - 2.12.1 Land preparation/ potting mixture preparation
 - 2.12.2 Liming
 - 2.12.3 Basal manuring

- 2.12.4 Grow bag filling
- 2.12.5 Seeding/ planting
- 2.12.6 Top dressing
- 2.12.7 Pest management
- 2.12.8 Disease management
- 2.12.9 Water management
- 2.12.10 Harvest

Chapter 3. Observations and data collection.

(30 marks)

- Table.1. Germination / plant stand establishment percent
- Table 2. Height of plants in cm. (15 days interval)
- Table 3. No. of branches (15 days interval)
- Table.4.Day of first flowering (Days After Sowing/ planting)
- Table 5. Day of first fruiting (Days After Sowing/ planting)
- Table 6. Harvest days (Days After Sowing/ planting)
- Table 7. No. and weight of fruits from each harvest
- Table 8. Cumulative Yield (kg)

Chapter 4. Photos

(10 marks)

- 4.1. Grow bag preparation and lay out
- 4.2. Flowering stage
- 4.3. Fruiting stage
- 4.4. Harvest stage

Chapter 5. Cost Benefit analysis

(5 marks)

A write up on the expenditure incurred and income obtained

Chapter 6. Conclusion

(5 marks)

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

Abstract

(5 marks)

A summary of the Project covering all the activities done.

II. Oral Presentation – 20 Marks

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