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**MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)**

Ref. No.: MU/RO/2018/1173-A

17<sup>th</sup> September 2018

**OFFICE ORDER**

**Sub.:** Value Added Course on "Analytical Technique" by Department of Life Science

Students are hereby informed that Department of Life Science offering a value added course on "Analytical Technique" from 01<sup>st</sup> October 2018. So, interested students can enroll on or before 30<sup>th</sup> September 2018. For more information, students are advised Prof. (Dr.) Chetan Kumar Sharma (Head, Department of Life Science).

  
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**MEWAR UNIVERSITY, GANGRAR, CHITTORGARH**  
**VALUE ADDED COURSE: ANALYTICAL TECHNIQUES**

**COURSE OUTCOME:**

**CO1:** To reinforce chemical principles central to analytical chemistry.

**CO2:** To introduce instrumental techniques for chemical measurement.

**CO3:** To develop critical thinking for interpreting analytical data.

**CO4:** To select instrumentation appropriate to the measurement need.

**CO5:** To gain an insight into the key methodologies used

**Unit I**

Microscopy: Principles and applications, simple, compound, phase-contrast and fluorescent microscopes, Electron microscopy: SEM and TEM. Centrifugation: Basic Principle of Centrifugation, Instrumentation of Ultracentrifuge(Preparative, Analytical), Factors affecting Sedimentation velocity, Standard Sedimentation Coefficient, Centrifugation of associating systems, Rate-Zonal centrifugation, sedimentation equilibrium Centrifugation.

**Unit II**

Separation & Identification of Materials: Concept of Chromatography (Partition Chromatography, Paper Chromatography, Adsorption Chromatography, TLC, GLC, Ion Exchange Chromatography, Gel Chromatography, HPLC, Affinity Chromatography); Electrophoresis (Gel Electrophoresis, Paper Electrophoresis); Blotting- Southern, Western and Northern blotting, Immuno-electrophoresis, DNA finger printing and ELISA.

**Unit III**

Spectroscopy: Electromagnetic spectrum, Beer Lambert's Law. Photometry, UV/VIS Spectrophotometry, Infrared spectroscopy, Atomic absorption spectroscopy, Mass spectroscopy (LC-MS, GC-MS), Fluorescent spectroscopy; Applications of different Spectroscopic techniques in Biological science. NMR Spectroscopy: Basic principle of NMR spectroscopy, Experimental technique & instrumentation, Chemical shift, Hyperfine splitting, Relaxation process. Circular dichroism spectroscopy (CD) and applications of Circular dichroism spectroscopy in biotechniques.

**UNIT- IV**

Fixation and Fixatives: Methods of fixation, chemicals used as fixatives and their preparation, chemical basis of fixation (formaldehyde, glutaraldehyde, chromium salts, mercury salts, alcohol and acetone), washing and postfixation methods, decalcification, Cryopreservation. Microtomy and sample preparation for microscopy- Dehydration, clearing and infiltration, embedding methods, trimming, sectioning. Cryostat sectioning and mounting, mounting media, freezing techniques, freeze drying, freeze fracture and staining. Staining techniques (Nuclear and Cytoplasmic Stains).

**Unit V**

Tracer Techniques: Nature and types of radiations, preparation of labelled biological samples, Detection and measurement of radioactivity, GM counter, Scintillation counter, Autoradiography, Flow cytometry, Safety measures in handling radioisotopes

  
(Pankaj Kumar) 

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**MEWAR UNIVERSITY, GANGRAR CHITTORGARH (RAJ.)**

Ref. NO: MU/RO/2018/1025-A

17<sup>th</sup> August 2018

**OFFICE ORDER**

**Sub:** Value Added Course on "Archaeology" by Department of History

Students are hereby informed that Department of History is offering a value added course on "Archaeology" from 4<sup>th</sup> September 2018. So, interested students can enroll on or before 1st September 2018. For more information, students are advised to contact Dr. M. C. Dubey (Head, Department of History).

  
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**DEPARTMENT OF HISTORY**  
**Value Added Course: Archaeology (backbone of History )**

The main goal to develop this curriculum is for students to develop skills in the following learning elements--problem, approach, theory, analysis, and application. These learning outcome based elements will give them the ability to apply archaeology to societal issues and work towards making a better India.

**Course Outcome:**

- On the successful completion of Introduction to Archaeology students will develop a strong foundation on the basic understanding of the nature, development and value of archaeology as a discipline Outcomes.
- Develop a deep sense of past and understanding the rich cultural heritage of India.
- Contributions made in the history of the nation and world and relevance of knowledge system to the contemporary world heritage management and scientific conservation of the rich cultural elements of the country for understanding future and posterity

**Syllabus:**

**UNIT 1**

: a. Definition, Aims, Scope and Relevance of Archaeology b. Archaeological Methods c. Key Archaeological Findings and their significance d. Relation between archaeology and other disciplines e. Relevance of Archaeology to contemporary Society

**UNIT 2:** a. Theoretical Foundations in Archaeology b. Antiquarian period to Traditional Archaeology c. Kinds of Archaeology d. New Archaeology/ Processual Archaeology e. Post Processual Archaeology f. Contemporary approaches g. Cultural Heritage, monuments and archaeological legislations

**UNIT 3:** a. Development of Field Archaeology in India b. Exploration Techniques c. Geo-physical Methods of Survey d. Antiquity and history of the Regions e. Excavation method, Harris Matrix Method

**UNIT 4 :** a. Field work methodology and Excavation Techniques, Stratigraphy, 3D Recording b. Selection of Site c. Lay out of Trench d. Trench Layout

**UNIT 5 :** a. Recording methods b. Section Drawing c. Structure Drawing d. Elevation and Plan e. Pottery Drawing f. Stone Tool Drawing g. Photographic documentation

*Mahesh Dubey*



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**MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)**

Ref. No.: MU/RO/2018/ 1097-A

28<sup>th</sup> August 2018

**OFFICE ORDER**

**Sub.:** Value Added Course on "Basic Statistics" by Department of Mathematics

Students are hereby informed that Department of Mathematics is offering a value added course on "Basic Statistics" from 4<sup>th</sup> September 2018. So, interested students can enroll on or before 2<sup>nd</sup> September 2018. For more information, students are advised Dr. Jyoti Singh Raghav( Head, Department of Mathematics)

  
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**MEWAR UNIVERSITY, GANGRAR, CHITTORGARH**  
**VALUE ADDED COURSES - BASIC STATISTICS**

**COURSE OUTCOME:**

- CO1:** Students should be able to understand the concept of statistics.
- CO2:** Students should be able to understand the concept of correlation and regression.
- CO3:** Students should be able to understand the concept of probability.
- CO4:** Students should be able to analyze the data.

Statistical Methods: Definition and scope of Statistics, concepts of statistical population and sample. Data: quantitative and qualitative, attributes, variables, scales of measurement - nominal, ordinal, interval and ratio. Presentation: tabular and graphical, including histogram and ogives, consistency and independence of data with special reference to attributes.

Measures of Central Tendency and Measures of Dispersion:

Correlations and Regression: Definition, scatter diagram, rank correlation. Karl Pearson coefficient of correlation, Simple linear regression, principle of least squares and fitting of polynomials and exponential curves.

Probability and Probability distribution, Sampling.

**Recommended Books:**

1. Goon A.M.,  
Gupta M.K. and Dasgupta B. (2002): Fundamentals of Statistics, Vol. I & II, 8th Edn. The World Press, Kolkata.
2. Miller, Irwin and Miller, Marylees (2006): John E. Freund's Mathematical Statistics with Applications, (7th Edn.), Pearson Education, Asia.

  
Prasad Mehta



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**MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)**

Ref. No.: MU/RO/2018/908-A

12<sup>th</sup> July 2018

**OFFICE ORDER**

**Sub.:** Value Added Course on "Emerging Innovation, Models and Challenges in SCM" by Department of Management.

Students are hereby informed that Department of Management offering a value added course on "Emerging Innovation, models and challenges in SCM" from 2<sup>th</sup> August 2018. So, interested students can enroll on or before 31<sup>st</sup> July 2018. For more information, students are advised to contact Mr. Rajesh Bhatt Sir (Head, Department of Management)

  
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## VALUE ADDED COURSE

### Emerging Innovation, Models and Challenges in SCM

Course Outcome:

- By completion of this paper students can know chain management plays an important role to know about the system of organizations, people, technology, activities, information and resources involved in moving a product or service from supplier to customer.
- It is beneficial to students to understand the concept of Supply chain activities of transforming natural resources, raw materials and components into a finished product that is delivered to the end customer

#### UNIT1:

Introduction to Supply Chain Management: Supply Chain-Objectives, Importance, Conceptual Model of SCM, SCM Division Phases & process, Elements of SCM, Logistic as a part of SCM, inbound & Outbound Logistic

#### UNIT2:

Designing the Supply Chain Network: Designing Supply Chain Network, Role of Distribution, Factor influencing Distribution, Design Option, Factors Affecting the Network Design Divisions

#### UNIT3:

Designing & Planning Transportation Network: Role of Transportation, modes & their Performance, Transportation Infrastructure & Policies, Design Options & their Trade off, Tailored Transportation, Inventory; Transportation & Information.

#### UNIT4:

Inventory Management in Supply Chain: Traditional Inventory Management, Inventory Models, EOQ Models, FOIS, FOQS, ORS, MRP, Just in Time Elements & benefits.

#### UNIT5:

IT in Supply Chain Management: Role of IT in a SCM, Needs, E-Business & its Impact on Supply Chain, Transaction Management

*(Rajesh Kumar)*



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**MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)**

**Ref. No.: MU/RO/2018/924-A**

**17<sup>th</sup> July 2018**

**OFFICE ORDER**

**Sub.:** Value Added Course on "Financial Accounting: Fundamentals" by Department of Commerce.

Students are hereby informed that Department of Commerce offering a value added course on "Financial Accounting: Fundamentals" from 1<sup>th</sup> August 2018. So, interested students can enroll on or before 31<sup>st</sup> July 2018. For more information, students are advised Mr. Vikram Singh Rao (Head, Department of Commerce)

  
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# Financial Accounting :Fundamentals

Course Outcome:-

- To help students to acquire conceptual knowledge of the financial accounting.
- To impart skills for recording various kinds of Business transactions.

## UNIT1: Introduction:

Accounting Meaning, Nature, Function, Usefulness of Accounting, Scope, Objectives, Accounting Vs Book Keeping

## UNIT2: Conceptual Framework:

Accounting concept, Principle & Conventions, Accounting Standard-Concept, Objectives, Benefits, Brief Review of Accounting Standard in India, Accounting Policies, Accounting as a Measurement Discipline

## UNIT3: Recording Transactions & Final Account:

Account: Meaning and its types; Golden Rules of Accounting; Preparation of Journal Entry; Preparation of Ledger; Various Subsidiary Books; Cash Book; Trial Balance; Rectification of error; Bank reconciliation Statement; Preparation of Final Account: Trading A/C, Profit and Loss A/C and Balance Sheet.

## UNIT4: Depreciation:

Meaning, Need & Importance of Depreciations, Methods for Charging, Depreciation-Straightline method, reducing balance method, Depreciation Fund method, Annuity method

## UNIT5: Analysis of Balance Sheet and Ratios:

Analysis of Financial Statement, Ratio Analysis, Solvency Ratio, Profitability Ratio, Activity Ratio, Liquidity Ratio, Market Capitalization Ratio, Comparative Balance Sheet & Trend Analysis of Manufacturing, Service & Banking organization

## Recommended Text

1. S N Maheswari and Maheswari S K "A Textbook of Accounting for Management, (New Delhi: Vikas, 1<sup>st</sup> edition).
2. T P Gosh, Accounting and Finance for Manager (New Delhi Taxman, 1<sup>st</sup> edition)
3. Anil Choudhary, Fundamentals of Accounting and Financial Analysis (New Delhi Pearson Education, 1<sup>st</sup> edition)

*Vikram*

[VIKRAM SINGH RAO]



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Ref. No.: MU/RO/2018/1657-A

06<sup>th</sup> Dec. 2018

**OFFICE ORDER**

**Sub.:** Value Added Course on "Front End Web Technology" by Department of Computer Applications

Students are hereby informed that the Department of Computer Applications is offering a value added course on "Front End Web Technology" from 9<sup>th</sup> January 2019. So, interested students can enroll on or before 3<sup>rd</sup> January 2019. For more information, students are advised Mr. Ravindra Verma (Head, Department of Computer Applications)

  
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# FRONT END WEB TECHNOLOGY

## COURSE OUTCOMES

1. Understand the basic concepts of web development, including HTML, CSS, and JavaScript.
2. Use HTML to structure web pages, including the use of semantic markup, forms, and multimedia content.
3. Use CSS to apply styles to web pages, including layout, typography, and visual design.
4. Use JavaScript to add interactivity to web pages, including event handling, DOM manipulation, and AJAX.
5. Understand the principles of responsive web design and be able to create websites that are optimized for different screen sizes and devices.

UNIT-I	<b>Hyper Text Mark-up Language (HTML5):-</b> • Introduction HTML •HTML Basics • HTML Elements • HTML5 Semantic • HTML Attributes • HTML Headings • HTML Paragraph • HTML Styles • HTML Formatting • HTML Quotations • HTML Computer Code • HTML Comments & Colours • HTML CSS, Links and Images • HTML Lists • HTML Blocks • HTML Classes • HTML Layout • HTML Responsive • HTML iframes • HTML JavaScript • HTML Head • HTML Entities and URI Code • HTML Symbols and XHTML • HTML Charset and Forms
UNIT-II	<b>Cascading Style Sheets (CSS3):-</b> Introduction CSS3 • CSS3 Syntax • CSS3 How To • CSS3 Colours • CSS3 Backgrounds • CSS3 Borders • CSS Padding • CSS Height/Width • CSS3 Gradients • CSS3 Shadows • CSS3 Text • CSS3 Fonts • CSS3 2D Transforms • CSS3 3D Transforms • CSS Links • CSS Lists • CSS Tables • CSS Box Model • CSS Outline • CSS Display • CSS Max-width • CSS Position • CSS Float • CSS Inline-block • CSS Align • CSS Combinators • CSS Pseudo-class • CSS Pseudo-element • CSS Navigation Bar • CSS Dropdowns • CSS Tooltips • CSS3 Images • CSS Attr Selectors • CSS Forms • CSS Counters • CSS3 Animations • CSS3 Buttons • CSS3 Pagination • CSS3 Multiple Columns • CSS3 User Interface • CSS3 Box Sizing • CSS3 Filters • CSS3 Media Queries • CSS3 Responsive
UNIT-III	<b>JavaScript for Front-end:-</b> Introduction to JavaScript • Java Script Language Basics • JavaScript Objects • JavaScript Scope • JavaScript Events • JavaScript Strings • JavaScript Numbers • JavaScript Math • JavaScript Arrays • JavaScript Boolean • JavaScript Comparisons • JavaScript Conditions • JavaScript Switch • JavaScript Loops • JavaScript Type Conversion • JavaScript RegExp • JavaScript Errors • JavaScript Debugging • JavaScript Hoisting • JavaScript Strict Mode • JavaScript Functions • JavaScript Objects • JavaScript Forms • JavaScript HTML DOM • JavaScript BOM
UNIT-IV	<b>Front-end Frameworks:-</b> <b>Bootstrap:-</b> Introduction to Bootstrap • Bootstrap Basics • Bootstrap Grids • Bootstrap Themes • Bootstrap CSS • Bootstrap JS. <b>Angular</b>

	<p><b>JS:-</b> Introduction to AngularJS • AngularJS Expressions • AngularJS Modules • AngularJS Data Binding • AngularJS Scopes • AngularJS Directives &amp; Events • AngularJS Controllers • AngularJS Filters • AngularJS Services • AngularJS HTTP • AngularJS Tables • AngularJS Select • Fetching Data from MySQL • AngularJS Validation • AngularJS API • AngularJS Animations • AngularJS i18n and i10n</p>
Reference Books	<ul style="list-style-type: none"> <li>• TML and CSS: Design and Build Websites – by Jon Duckett</li> <li>• Head First HTML and CSS: A Learner's Guide to Creating Standards-Based Web Pages – by Elisabeth Robson &amp; Eric Freeman</li> <li>• A Smarter Way to Learn HTML &amp; CSS: Learn it faster. Remember it longer – by Mark Myers</li> <li>• Get Coding!: Learn HTML, CSS &amp; JavaScript &amp; Build a Website, App &amp; Game – by Young Rewired State</li> </ul>

  
Ankit Navalkar



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**MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)**

Ref. No.: MU/RO/2018/918-A

14<sup>th</sup> July 2018

**OFFICE ORDER**

**Sub.:** Value Added Course on "Industrial Relations" by Department of Management.

Students are hereby informed that Department of Management offering a value added course on "Industrial Relations" from 1<sup>st</sup> August 2018. So, interested students can enroll on or before 31<sup>st</sup> July 2018. For more information, students are advised to conduct Mr. Rajesh Bhatt Sir ( Head, Department of Management)

  
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## VALUE ADDED COURSE

### Industrial Relation

Course Outcome:

- To provide exposure of theories, techniques and approaches to manage Industrial Relations.
- To understand the importance of labour administration and Constitutional Provisions.

#### Unit - I

Introduction - Concept and Determinants of Industrial Relations - Industrial Relations in India - Managing IR Changes - IR and Productivity - Technology and IR -Effective Communication Systems and IR Management - Indian Culture & IR.

#### Unit - II

Trade Unions - Purpose, Functions and Structure of Trade Unions - Trade Union Legislation - Multiplicity of Trade Unions - Conflict Resolutions - Industrial Relations - Welfare and Productivity - Social Responsibility of Trade Unions - IR Management and Management of Trade Unions.

#### Unit - III

Employee Counseling - Types - Methods - Problems - Consultative Bodies (Bipartite, Tripartite) - IR Strategies - Workers Development and Participation.

#### Unit - IV

Discipline and Grievance Redressal Machinery - Purposes and Procedures of Disciplinary Action - Grievance Redressal Procedures - Conciliation - Arbitration and Adjudication - Collective Bargaining - The Bargaining Process - Strengths and Skills.

#### Unit - V

Labor Administration - ILO, ILC and Indian Constitutional Provisions in Relation to Labor Administration - Central Machinery of Labor Administration - Labor Administration at the State, District and Local Levels - Contemporary Trends and Future of Industrial Relations in India.

*Wj*  
*(Rajesh Kumar)*



## OFFICE OF THE REGISTRAR

MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)

Ref. No.: MU/RO/2018/1053-A

10<sup>th</sup> August 2018

### OFFICE ORDER

**Sub.:** Value Added Course on “Introduction to Homour Software for Analysis of Electrical Energy” by Department of Electrical Engineering

Students are hereby informed that Department of Electrical Engineering is offering a value added course on “Introduction to Homour Software for Analysis of Electrical Energy” from 20<sup>th</sup> September 2018. So, interested students can enroll on or before 10<sup>st</sup> September 2018. For more information, students are advised Dr. V. Siva Brahmaiah Rama (Head, Department of Electrical Engineering)

  
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Mewar University, Gangrar, Chittorgarh

Department of Electrical Engineering

Value Added Course on Introduction to Homer Software for Analysis of Electrical Energy

Course Code: VAC-EE-1(2018-19)

**Course Outcomes:-**

At the end of this course, Students will be able & understand the Homer software application is used to design and evaluate technically and financially the options for off-grid and on-grid power systems for remote, stand-alone and distributed generation applications.

**UNIT-1 HOMER Software Renewable Energy Base Station Design**

**6Hrs**

Introduction to HOMER Software, Downloading the Software, Defining the Power System, Defining the Site Load, Wind and Solar Resources, Diesel Price, Economics, Equipment, Calculating Results Green Power for Mobile Resources

**Unit-2 HOMER Pro**

**12Hrs**

**Simulation and Optimization (Demonstration and Exercises):-** Model a small community system, Simulate a diesel-only system, Lower costs by adding batteries, Build a hybrid mini-grid with solar photovoltaic, Identify diesel, fuel-saver, hybrid, and 100% renewable designs.

**Sensitivity Analysis (Demonstration and Exercises):-** Sensitivity analysis on fuel price (one-dimensional), Sensitivity analysis on capacity shortage and fuel price (two-dimensional), Determine the payback and internal rate of return (IRR) for a design, Exporting and sharing your preliminary-findings.

**Refining your design (Demonstration and Exercises):-** Develop a customized load based on limited data, develop a customized load based on measured data, Size a diesel generator, Design a system with specific equipment.

**Modeling larger systems (Demonstration and Exercise):-** Model multiple generators, Understanding operating reserve constraints, Using HOMER's Generator Order control strategy, Modeling existing generators

**UNIT-3 HOMER Grid**

**12Hrs**

**Simulation and Optimization (Demonstration and Exercises):-** Simulate a simple grid-connected system, Optimize with solar PV and batteries, Add incentives, Create a customer proposal or a simulation report to share your findings

**Sensitivity Analysis (Demonstration and Exercises):-** Sensitivity analysis to investigate changes in price and reliability on results, Compare two utility tariffs, Determine the payback and internal rate of return (IRR) for a design, Exporting and sharing your preliminary findings

**Refining your design (Demonstration and Exercises):-** Develop a customized load based on limited data, Develop a customized load based on measured data, Import a utility tariff, Add a generator for resilience, Design a system with specific equipment, Exporting and sharing your design

**Interconnected mini-grid design (Demonstration and Exercise):-** More incentives demand response programs and more, Specialized topics – EV charging, unreliable grids

*R. V. S. Patel*  


## OFFICE OF THE REGISTRAR

MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)

Ref. No.: MU/RO/2018/1024-A

16<sup>th</sup> August 2018

### OFFICE ORDER

**Sub.:** Value Added Course on “Introduction to Python Programming” by Department of Computer Science & Engineering

Students are hereby informed that the Department of Computer Science & Engineering is offering a value added course on “Introduction to Python Programming” from 17<sup>th</sup> September 2018. So, interested students can enroll on or before 10<sup>th</sup> September 2018. For more information, students are advised Ms. Jyoti Totla (Head, Department of Computer Science & Engineering)



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## Introduction to Python Programming

### OUTCOMES

1. Understand the basic syntax and structure of the Python programming language.
2. Use Python to solve a variety of programming problems, including basic arithmetic operations, string manipulation, and conditional statements.
3. Understand and use fundamental data structures in Python, including lists, tuples, and dictionaries.
4. Understand the concept of control structures such as loops and functions and use them to solve more complex problems.
5. Apply Python programming skills to other domains such as data science, machine learning, web development, and scientific computing.

Unit –I	Introduction to Python, use IDLE to develop programs, Basic coding skills, working with data types and variables, working with numeric data, working with string data, Python functions, Boolean expressions, selection structure, iteration structure, Illustrative Programs, Exercises
Unit –II	Define and use functions and modules, working with recursion, Basic skills for working with lists, work with a list of lists, work with tuples, work with dates and times, get started with dictionaries, Illustrative programs, Exercises.
Unit –III	An introduction to file I/O, use text files, use CSV files, use binary files, Handle a single exception, handle multiple exceptions, Illustrative programs, Exercises, Object Oriented Programming, An introduction to classes and objects, define a class, work with object composition, work with encapsulation, work with inheritance, override object methods, Illustrative programs, Exercises
Unit –IV	An introduction to relational databases, SQL statements for data manipulation, Using SQLite Manager to work with a database, Using Python to work with a database, Creating a GUI that handles an event, working with components, Illustrative programs, Exercises
Reference Book	<ul style="list-style-type: none"><li>• Learning Python, 5th Edition, Mark Lutz</li><li>• 'Head-First Python' by Paul Barry</li><li>• Elements of Programming Interviews in Python: The Insiders' Guide</li><li>• Learning Python, 5th Edition</li></ul>



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### MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)

Ref. No.: MU/RO/2019/2217-A

06<sup>th</sup> March 2019

### OFFICE ORDER

**Sub.:** Value Added Course on “Introduction to MATLAB(Simulate and Designing the Circuit)” by Department of Electrical Engineering

Students are hereby informed that Department of Electrical Engineering is offering a value added course on “Introduction to MATLAB (Simulate and Designing the Circuit)” from 1<sup>st</sup> April 2019. So, interested students can enroll on or before 25<sup>th</sup> March 2019. For more information, students are advised Mr. V. Siva Brahmaiah Rama (Head, Department of Electrical Engineering)

  
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Mewar University, Gangrar, Chittorgarh

Department of Electrical Engineering

Value Added Course on Introduction to MATLAB (Simulate and Designing the Circuit)

Course Code: VAC-EE-2 (2019-20)

**Course Outcomes:-**

1. Understand the main features and importance of the MATLAB/ SCI LAB mathematical programming environment.
2. Apply working knowledge of MATLAB/ SCI LAB package to simulate and solve Electrical, Electronics circuits and Applications.
3. Solve, Simulate and Analyse various DC& AC circuits, Transformer and DC Generator circuits, Analog and Digital Electronics circuits.

**Unit 1. Introduction to MATLAB**

07 Hrs.

- The MATLAB Environment
- MATLAB Basics – Variables, Numbers, Operators, Expressions, Input and output.
- Vectors, Arrays – Matrices

**Unit 2. MATLAB Functions**

05 Hrs.

- Built-in Functions
- User defined Functions

**Unit 3. Graphics with MATLAB**

06 Hrs.

- Files and File Management – Import/Export
- Basic 2D, 3D plots
- Graphic handling

**Unit 4. Programming & Mathematical Computing with MATLAB**

08 Hrs.

- Conditional Statements, Loops
- MATLAB Programs – Programming and Debugging.
- Applications of MATLAB Programming. 2
- Algebraic equations
- Basic Symbolic Calculus and Differential equations
- Numerical Techniques and Transforms

**Unit-5 Simulation of AC & DC Circuit**

05Hrs

- Simulate the different AC & DC Circuit and Find the Voltage, Current & Power.
- Simulate the Solar Cell in Matlab & Find the Solar Characteristic
- Simulate the Single phase Rectifier with R, RL & RLE Load. & Find the Characteristic.

R. vs. Baul



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**MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)**

Ref. No.: MU/RO/2018/1077 -A

23<sup>rd</sup> Aug 2018

**OFFICE ORDER**

Sub.: Value Added Course on "Mobile Phone Repairing" by Department of Electronics & Communication Engg.

Students are hereby informed that Department of Electronics & Communication Engg is offering a value added course on "Mobile Phone Repairing" from 10<sup>th</sup> Sept, 2018. So, interested students can enroll on or before 10<sup>th</sup> Sept, 2018. For more information, students are advised to contact Mr. Gaurav Sharma (Head, Department of ECE)

  
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- Record file.

## VALUE ADDED COURSE Mobile Phone Repairing

### Course outcomes:-

1. Students will be able to identify the components of a mobile phone and describe their functions, including the various hardware and software components, such as the battery, display, camera, and operating system.
2. Students will be able to diagnose common issues with mobile phones, such as problems with the screen, battery, charging port, and software errors, and use appropriate tools and techniques to repair them.
3. Students will be able to safely disassemble and reassemble mobile phones, following proper safety procedures and handling techniques, including tools such as tweezers, screwdrivers, and soldering equipment.
4. Students will be able to communicate effectively with customers, including explaining technical issues and recommended solutions, providing clear instructions for product use and maintenance, and addressing customer concerns and questions. Additionally, students will be able to understand and apply customer service skills, such as professionalism, empathy, and conflict resolution.

### SYLLABUS:

#### Unit I

Introduction to mobile phones, Generations of mobile phones, FHSS networks, GSM, Spread spectrum, CDMA, TDMA & Basic electronics components. Handset Specific operating systems, Handset features & applications, working principle of mobile handset & components used in mobile handsets.

#### Unit II



Tools & equipment used for repairing & maintenance of mobile handsets, types of power supply & batteries, boosting a battery, Troubleshooting basics. Network problems, Power failure (dead), Mobile phone hardware troubleshooting (water damage, hanging, charging & keypad problems), Handsets assembly & disassembly, Soldering & de-soldering & SMD rework station.

#### Unit III

BGA IC's, Basics of Computer, Installation of software, Flashing, PC based diagnostic tools, mobile sets formatting, used of secret codes. Mobile software, Data cable, Card reader, Mobile display, Remove/replace Component & Mobile phone hardware troubleshooting (Troubleshooting through circuit diagram, transmission, transmitter filter, microphone, reception, Antenna, RF power amplifier, local oscillator, Audio IC, speaker, charger etc. ).

#### Unit IV

Reading & writing skills, Communication skills, Time management skills, Team skills, Safety & Security

  
*RITESH OJHA*  


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Ref. No.: MU/RO/2018/1098-A

13<sup>th</sup> August 2018

**OFFICE ORDER**

**Sub.:** Value Added Course on “Quantity Survey & Valuation” by Department of Civil Engineering.

Students are hereby informed that Department of Civil Engineering is offering a value-added course on “Quantity Survey & Valuation” from 4<sup>th</sup> September 2018. So, interested students can enroll on or before 1<sup>st</sup> September 2018. For more information, students are advised to contact Mr. Esar Ahmad (Head, Department of Civil Engineering)

  
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**VALUE ADDED COURSE  
QUANTITY SURVEY AND VALUATION**

L	T	P	Cr
3	1	-	4

**Internal Evaluation: 50 Marks**  
**External Examination: 50 Marks**  
**Duration of Examination: 03 Hours**

**Course Objective:**

The student should be able to set out any civil engineering work, To prepare detailed exact as well as approximate estimates, To have a thorough idea regarding the quality and quantity of materials, To calculate the exact quantities of items of work and to prepare valuation report of real and landed property.

**Course Outcome:**

Understanding of the principles and practices of quantity surveying and valuation, including knowledge of the construction industry and relevant legislation. Ability to measure and estimate quantities of materials, labor, and other resources required for construction projects, and to prepare bills of quantities. Understanding of the legal and regulatory framework for valuations, including knowledge of relevant legislation and standards.

<b>UNIT-I</b>	Estimate- Basic terms, Types of estimate, Revised estimate- supplementary estimate, Maintenance estimate, Approximate estimate, Plinth area method- cubic rate method, Unit rate method, Bay method, Approximate quantity from bill method, Comparison method, Cost from materials and labour etc., Preparation of detailed estimate for buildings, Centre line method and long wall, Short wall method.
<b>UNIT-II</b>	Methods of measurements of different items of work, Preparation detailed estimate for sanitary and water supply works, Roads, Irrigation works, Steel structures- doors and windows, R C C Structures, Preparation of bar bending schedule.
<b>UNIT-III</b>	Detailed specifications for common building materials and items of work as per I.S specifications, Preparation of conveyance statement, Calculation of quantities of materials for items of work, Analysis of rate for items of works required for civil engineering works, Preparation of abstract of estimate of civil engineering works.
<b>UNIT-IV</b>	Valuation, Explanation of items, Types of values, Sinking fund, Years purchase, Depreciation, Straight line method, Constant percentage method, S.F method, Obsolescence, Valuation of real property, Rental method, Profit based method, Depreciation method, Valuation of land, Belting method, Development method, Hypothecated building scheme method, Rent calculation, Lease and lease hold property.

**Recommended Books:**

- Vazirani V N and Chandola S P, Civil engineering estimating & costing, Khanna Publishers, 2004
- Dutta B N, Estimating and Costing in Civil Engineering: Theory and Practice, Sangam Books, 2002
- Rangawala S C, Valuation of real properties, Charotar Publishing House Pvt. Ltd., 2008

*S.S.P.*

SHASHI KUMAR  
DUJARI



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**MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)**

Ref. No.: MU/RO/2018/852-A

5<sup>th</sup> July 2018

**OFFICE ORDER**

**Sub.:** Value Added Course on "Vermicomposting" by Department of Agriculture

Students are hereby informed that Department of Agriculture is offering a value added course on "Vermicomposting" from 2<sup>nd</sup> August 2018. So, interested students can enroll on or before 2<sup>nd</sup> August 2018. For more information, students are advised Mr. Gautam Singh Dhakad (Head, Department of Agriculture)

  
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# VERMICOMPOSTING

## Course Outcomes:-

1. Acquire, integrate and apply knowledge of agricultural waste management principles and practices
2. Synthesize knowledge and use insight and creativity to better understand and improve practices in composting and Vermicomposting.
3. Appreciate and communicate the diverse impacts of proper waste management especially composting and vermicomposting on people and the environment
4. Demonstrate professionalism and proficiency in skills that relate to agricultural waste management

## UNIT 1

1. Introduction to vermiculture, definition, classification, history, economic important, their value in maintenance of soil structure.
2. Its role in bio transformation of the residues generated by human activity and production of organic fertilizers.
3. Choosing the right worm. Useful species of earthworms. Local species of earthworms. Exotic species of earthworms.
4. Biology of *Eisenia fetida*. a) Taxonomy Anatomy, physiology and reproduction.  
b) Vital cycle of *Eisenia fetida*: alimentation, fecundity, annual reproducer potential.

## UNIT 2

5. Limit factors (gases, diet, humidity, temperature, PH, light, and climatic factors).
6. Physio- chemical parameters of vermicompost
7. Different Methods of Vermicomposting: Small- and large-scale Bed method, Pit method Small Scale Earthworm farming for home gardens - Earthworm compost for home gardens
8. Conventional commercial composting - Earthworm Composting larger scale
9. Pest and diseases of earthworms. Frequent problems. How to prevent and fix them. Complementary activities of auto evaluation.
10. Nutritional Composition of Vermicompost for plants, comparison with other fertilizer.

## UNIT 3

11. Earthworm Farming (Vermiculture), Extraction (harvest), vermicomposting harvest and processing. Earthworm Farming (Vermiculture), Extraction (harvest), vermicomposting harvest and processing.
12. Vermiwash
13. Small Scale Earthworm farming for home gardens
14. Conventional commercial composting
15. Earthworm Farming (Vermiculture), Extraction (harvest), vermicomposting harvest and processing.
16. Harvesting, packaging, transport and storage of Vermicompost and separation

## PRACTICAL

1. Scientific classification of Earthworm
2. Study of external morphology of Earhworm
3. Study of habit and habitat of Earhworm
4. Study of Digestive system of earthworm
5. Study of Reproduction of earthworm
6. Vermicomposting unit Pit method
7. Establishment of vermicomposting unit Bed method
8. Establishment of vermiwash unit
9. Vermicompost production, harvesting and packaging.
10. Study of cocoon and vermicast
11. Study of Pests and diseases of Earthworms

*Brijesh*  
C Brijesh Kumar



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Ref. No.: MU/RO/2019/1196-B

25<sup>th</sup> January 2019

**OFFICE ORDER**

**Sub.:** Value Added Course on "Water Analysis & Soil constituent measurements" by the Department of Chemistry.

Students are hereby informed that the Department of Chemistry offering a value added course on "Water Analysis & Soil constituent measurements" from 21<sup>st</sup> February 2019. So, interested students can enroll on or before 20<sup>th</sup> February 2019. For more information, students are advised to contact Dr. Bhupendra Kumar Sarma (Head, Department of Chemistry).

  
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**Syllabus of Value added course**  
**Water Analysis and Soil Constituents Measurement**  
**(CHEM-VA-105)**

**Course Outcomes**

On successful completion of this course, students should be able to:

1. Enumerate Bonding structures of chemical compounds.
2. Able to define the properties of water sample & pollution.
3. Able to visualize Hardness, Alkalinity, TDS, pH of water and soil sample.
4. Understand the detail chemistry of Water and soil constituents.

**Unit –I Study of Water**

- a. Hydrosphere- Water resources.
- b. Properties of water- color, odor, turbidity, total salt content, total suspended water.
- c. Water pollution- Definition of water pollution, types of water pollutants, sources of water pollutants, trace element in water, water quality parameters and standards
- d. Purification of water- Treatment of domestic and industrial water.

**Unit –II Study of Soil**

- a. The structure of earth, Elemental composition of earth crust, Definition of soil.
- b. Nature and classification of soil, important soil forming minerals, soil as eco system. soil fertility and productivity
- c. Properties of soil – Colour, temperature, pH, electrical conductance (EC), water holding capacity, organic carbon, soil salinity, soil density.
- d. Soil erosion- Definition, Control of erosion, Soil conservation practices, Soil pollution causes and remedies.

**Lab:**

1. Collection of water samples (Field work)
2. Determination of total hardness of water
3. Determination of alkalinity of water
4. Determination of pH of water
5. Determination of conductivity of water
6. Determination of TDS in water
7. Collection of soil samples from fields and study of soil sampling tools. (Field work)
8. Soil sample preparation
9. Determination of maximum water holding capacity of soil
10. Determination of bulk density of soil
11. Determination of pH of soil
12. Determination of conductivity of soil

*B.K. Saran*



*(Bhupendra Kumar Sharma)*