

Mewar University



Mewar University

Knowledge to Wisdom

Additional information for 1.3.2

**Sample Notice for Value Added Courses and Course
Modules and Outcomes**

OFFICE OF THE REGISTRAR

MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)


Ref. No.: MU/RO/2021/1073

07th August 2021

OFFICE ORDER

Sub.: Value Added Course on “Additive Manufacturing and Tooling” by Department of Mechanical Engineering.

Students are hereby informed that Department of Mechanical Engineering is offering a value added course on “Additive Manufacturing and Tooling” from 2nd September 2021. So, interested students can enroll on or before 1st September 2021. For more information, students are advised to contact Mr. Dinesh Kumar (Dy. Head, Department of Mechanical Engineering).


Registrar
Mewar University
Gangrar, (Chittorgarh)

Copy to:

- PS to Hon'ble Chairperson (for kind information)
- PS to Hon'ble President (for kind information)
- PS to Hon'ble Pro-President (for kind information)
- All concerned Deans/Directors/HoD's (for kind inf. & Necessary action)
- Accounts/Examination/Library/Store/Warden/Security/IT Head.
- Coordinator, IQAC Cell.
- Record file.

OFFICE OF THE REGISTRAR

MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)


Ref. No.: MU/RO/2022/ 884

11th March 2022

OFFICE ORDER

Sub.: Value Added Course on "Hands on Training on Molecular Docking" by Department of Chemistry

Students are hereby informed that Department of Chemistry offering a value added course on "Hands on Training on Molecular Docking" from 02nd April 2022. So, interested students can enroll on or before 31st March 2022. For more information, students are advised to contact Dr. Mohammad Ashid (Head, Department of Chemistry).


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**OFFICE OF THE REGISTRAR
MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)**

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

13th 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 4th September 2018. So, interested students can enroll on or before 1st September 2018. For more information, students are advised to contact Mr. Esar Ahmad (Head, Department of Civil Engineering)


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OFFICE OF THE REGISTRAR

MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)

Ref. No.: MU/RO/2017/866-B

15th July 2017

OFFICE ORDER

Sub.: Value Added Course on "Agricultural Waste Management" by Department of Agriculture

Students are hereby informed that Department of Agriculture is offering a value added course on "Agricultural Waste Management" from 04th August 2017. So, interested students can enroll on or before 4th August 2017. For more information, students are advised Dr. R. C. Dhaker (Head, Department of Agriculture)


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OFFICE OF THE REGISTRAR

MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)

Ref. No.: MU/RO/2017/969-A

16th August 2017

OFFICE ORDER

Sub.: Value Added Course on "Work Design and Ergonomics" by Department of Mechanical Engineering.

Students are hereby informed that Department of Mechanical Engineering is offering a value added course on "Work Design and Ergonomics" from 4th September 2017. So, interested students can enroll on or before 1st September 2017. For more information, students are advised to contact Mr. Dinesh Kumar (Dy. Head, Department of Mechanical Engineering).

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OFFICE OF THE REGISTRAR

MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)


Ref. No.: MU/RO/2020/1369

24th December, 2020

OFFICE ORDER

Sub.: Value Added Course on "Introduction and Hands on Training on Chemskech" by Department of Chemistry.

Students are hereby informed that Department of Chemistry offering a value added course on "Introduction and Hands on Training on Chemskech" from 11th January 2021. So, interested students can enroll on or before 11th January 2021. For more information, students are advised to contact Dr. Mohammad Ashid (Head, Department of Chemistry).


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**OFFICE OF THE REGISTRAR
MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)**

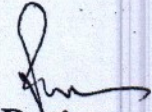
Ref. No.: MU/RO/2020/723

17th August 2020

OFFICE ORDER

Sub.: Value Added Course on "Disaster Management" by Department of Civil Engineering.

Students are hereby informed that Department of Civil Engineering is offering a value-added course on "Disaster Management" from 1st September 2020. So, interested students can enroll on or before 28th august 2020. For more information, students are advised to contact Dr. Esar Ahmad (Head, Department of Civil Engineering)



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Name of Course: Additive Manufacturing & Tooling

Type of Course: Value Added Course

Course Code: ME-12021

Academic Year: 2021-22

Duration of course: 30 Hours

Course Outcomes

Students will be able to:

- (a) Explain additive manufacturing, its advantages and disadvantages
- (b) Explain the effects of surface finish and microstructural properties on behaviour for components produced using additive manufacturing
- (c) Understand an awareness of residual stresses that may occur during additive manufacturing and their effects.
- (d) Describe the processes used in additive manufacturing for a range of materials and applications
- (e) Display the role of additive manufacturing in the design process and the implications for design.

Unit-1

Introduction: Historical developments, Fundamentals of RP Systems and its Classification, Rapid prototyping process chains, 3D modeling and mesh generation, Data conversion and transmission.

Unit-2

RP Systems: Liquid polymer based rapid prototyping systems, Teijin Seikis' solid form and other similar commercial RP systems, Solid input materials based rapid prototyping systems, laminated object manufacturing (LOM) and fused deposition modelling systems etc., Power based rapid prototyping systems, selective Laser sintering, SoligenDiren's shell production casting (DSPC), Fraunhofer's multiphase jet solidification (MJS) and MIT's 3D printing (3DP) etc.

Unit-3

S →/k
(Sunil Kr. Kathuria)



Syllabus of Value added course Hands on Training on Molecular Docking (CHEM-VA104)

Course Outcomes

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

1. Student will be able to understand the basic phenomenon about Molecular docking studies.
2. Student will be able to understand about the drug design pharmacokinetics molecular graphics etc.
3. Student will be able to visualize molecule in 3-D, understand the concept of symmetry elements and symmetry operations.
4. Understand the detail chemistry and use of molecular simulation softwares and visualization softwares.

Unit-1: Introduction to Molecular Modelling:

Introduction to drug design, discovery and development- drug metabolism toxicity and pharmacokinetics. Useful concepts in molecular modelling: Coordinate systems. Potential energy surfaces. Molecular graphics, Surfaces, Computer hardware and software, The molecular modelling literature.

Unit -2: Computer aided Chemistry: Structure Prediction and Drug Design:

Introduction to molecular docking, rigid docking, Flexible docking, manual docking, advantage and disadvantage of flex-X, flex-S, AUTODOCK and other docking software, scoring functions, simple interaction energies, GB/SA scoring (implicit solvation), C Score (consensus scoring algorithms).


(Dr. Mohammed Ashid)



Course title: Agricultural Waste Management

Course Outcomes:-

1. Definition of different waste management methods like MBO, landfilling, composting and incineration.
2. Introduction with best management practices in agriculture.
3. Definition of waste management and basic principles like RRR.
4. Investigate the benefits of waste management in farms.

UNIT-1

Introduction to agricultural waste management, Nature and characteristics of agricultural waste and their impact on the environment, Kinds of wastes, Classification, role of soil and plants in waste management,

UNIT-2

sources of waste, impact of waste on soil and plant quality, Biological processes of waste management, Utilization and Recycling of Agricultural waste, Potential of Recyclable Crop Residues and its management,

UNIT-3

In-situ management of agriculture waste, Composting and Vermicomposting for bio conservation of biodegradable waste, Biogas Technology, Agricultural waste and water, air and animal resources,

UNIT-4

Impacts of waste on human, animal health and environment. Management of bedding & litter, wasted feed, run-off from feed lots and holding areas and waste water from dairy parlors, agro-waste recycling through farming system, waste management machineries, environmental benefit of waste management.

Practical

1. Collection and preparation agricultural waste sample.
2. Determination of pH, EC, CECe, heavy metals, BOD, COD, TSS, TDS, NH₄, Total P, and dissolved reactive P. Nutrient status (N, P, K, secondary and micronutrients) analysis of agricultural waste.
3. Waste management equipment operation, Maintenance and safety hazards, computer software and models.
4. Survey of different agri waste from live stock, dairy, poultry, food processing, fruit & vegetable and agri-chemicals,
5. Preparation of compost, Vermicomposting, biogas and analysis of compost.

Handwritten signature: 
Harkaran Singh


Name of Course: Work Design and Ergonomics

Type of Course: Value Added Course

Course Code: ME-12017

Academic Year: 2017-18

Duration of course: 45 Hours

Course Outcomes

Students will be able to:

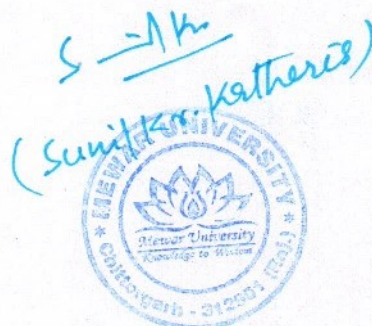
- (a) Provide appropriate allowances for the jobs under analysis.
- (b) Rate a worker engaged on a live job and calculate basic, allowed and standard time for the same.
- (c) Calculate the basic work content of a specific job for employees of an organization. Thereby they will be able to calculate the production capacity of man power of an organization.
- (d) Devise appropriate wage and incentive plan for the employees of an organization.
- (e) Assess the occupational environmental factors like heat stress, noise, and vibration and RSPM level in the industry.
- (f) Analyze the level of risk in a job causing stress, fatigue and musculoskeletal disorders and design appropriate work systems.

Unit-1

Productivity: Definition, reasons for low productivity, methods to improve productivity, work-study and productivity

Human factor in work-study: Relationship of work-study man with management, supervisor & workers, qualities of a work-study man.

Method-study: Definition, objectives, step-by-step procedure, questioning techniques, charts and diagrams for recording data. Like outline process charts, flow process charts, multiple activity charts, two handed process chart, string diagram, travel chart, cycle graph, Chrono-cycle graph, therbligs, micro motion study and film analysis, Simo chart, principles of motion economy. Development and installation of new method.



Value Added Course

Introduction and hands on training on Chems sketch software (CHEM-VA-103)

Course Outcomes

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

1. Student will be able to understand the basic tools about drawing the structures of chemical compounds.
2. Student will be able to understand and able to find out the name generation from structures, conversion of name of molecule into its structure, calculation of physical properties such as density, molecular weight, molecular formula, refractive index from structural formula, bond angles, bond lengths, dihedral angles.
3. Student will be able to visualize molecule in 3-D, understand the concept of symmetry elements and symmetry operations.
4. Understand the detail chemistry and use of Chems sketch software for drawing of variety of chemistry molecules, spectral simulations etc.

Unit – 1

Introduction, download and installation process, Drawing various chemical structures (acyclic, cyclic, polycyclic, heterocyclic), name generation from structures, conversion of name of molecule into its structure, calculation of physical properties such as density, molecular weight, molecular formula, refractive index from structural formula, bond angles, bond lengths, dihedral angles.

Unit – 2

Introduction to basic features of Chems sketch, Chemical structure to name conversion, Chemical name to structure conversion ,NMR spectrum simulation(both H NMR &C13 NMR),Mass spectrum simulation, structure clean up, export to SVG,PDF. Molecular modelling, create and modifying images of chemical structures, write and perform chemical equations and diagrams

Introduction and hands on training on Chems sketch software Lab

1. Hands on training on software.

(Dr. Mohammad Ashid)



Vocal Music

Course Outcome

- 1-Students will be able to demonstrate the understanding and use of knowledge as a means for creating cultural awareness.
- 2-Students will be able to create, analyze and synthesize music as a means of supporting developing careers in music, teaching and performance.
- 3-Student will be able to compose music that displays creativity or ideas.
- 4-Students will able to discover the relationship between music and the other allied arts.
- 5-Students will be able to understand the social and artistic movements.

Syllabus Details

SN.	Duration of Hours	Topics
1	5 Hrs	<ul style="list-style-type: none">• Swaras• Sapthak
2	5 Hrs	<ul style="list-style-type: none">• ShudhSwaras• KomalSwara• TivraSwara• Swara Patterns
3	5 Hrs	<ul style="list-style-type: none">• Patterning and skill development• SwarPehechan• Alankar
4	5 Hrs	<ul style="list-style-type: none">• SwaraSadhana• Playing Swara Patterns in different Rhythm patterns
5	5 Hrs	<ul style="list-style-type: none">• LayakePrakar• Taal• LayabaddhAlankar
6	10 Hrs	Film songs Medium Paced, Limited Range, energetic songs to enable project and open out the tone and basic mechanics of the voice.

R.K. Koushan
Dr. Rajeshi Kumar Koushan



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. Sharma



(Bhupendra Kumar Sharma)