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**JMIETI, Radaur**

Lesson Planning of **Mathematics III**

Deptt.Civil Engineering Semester w.e.f July 2019

Name of Teacher : Mrs. Punam Kalra

Designation : Assistant Professor

Subject with code :BS 204-A

Objective of Course 1. Mathematics fundamental necessary to formulate, solve and analyze engineering problems.

2. An understanding of Laplace Transform to solve real world problems.

3. An understanding of Complex integration Using Numerical Methods

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| **Week & Month** | **Topic / Chapter Covered** | **Academic Activity** | **Test/Assignment** |
| **Aug** | Solution of polynomial and Transcendental equations by Bisection Method | **Lecture** |  |
| **Aug** | -----------------Do--------------------- | **Lecture** |  |
| **Aug** | Newton Raphson Method | **Lecture** |  |
| **Aug** | -----------------Do--------------------- | **Lecture** |  |
| **Aug** | Regular Falsi Method | **Lecture** |  |
| **Aug** | -----------------Do--------------------- | **Lecture** |  |
| **Aug** | Finite Differences, Relation between operators | **Lecture** |  |
| **Aug** | -----------------Do--------------------- | **Lecture** |  |
| **Aug** | Interpolation using Newton,s Forward Difference formula | **Lecture** |  |
| **Aug** | Interpolation using Newton,s Backward Difference formula | **Lecture** |  |
| **Aug** | Interpolation with unequal intervals | **Lecture** |  |
| **Aug** | Newton’s Divided difference | **Lecture** |  |
| **Sep** | Lagrange’s Formulae | **Lecture** | **Assignments** |
| **Sep** | Introduction of Laplace transform, LT. of Elementary functions | **Lecture** |  |
| **Sep** | Basic Properties of Laplace Transform. | **Lecture** |  |
| **Sep** | -----------------Do--------------------- | **Lecture** |  |
| **Sep** | Laplace Transform of periodic functions | **Lecture** |  |
| **Sep** | Inverse Laplace Transform | **Lecture** |  |
| **Sep** | Inverse Laplace Transform by different methods | **Lecture** | **Sessional/Test** |
| **Sep** | -----------------Do--------------------- | **Lecture** |  |
| **Sep** | Convolution Theorem | **Lecture** |  |
| **Sep** | Inverse Laplace Transform using Convolution Theorem | **Lecture** |  |
| **Sep** | Solving ODEs by Laplace Transform | **Lecture** |  |
| **Sep** | -----------------Do--------------------- | **Lecture** | **Assignments** |
| **Sep** | Numerical Differentiation using Newton’s Forward difference formulae | **Lecture** |  |
| **Sep** | Numerical Differentiation using Newton’s Backward difference formulae | **Lecture** |  |
| **Oct** | -----------------Do--------------------- | **Lecture** |  |
| **Oct** | Numerical Integration, Trapezoidal Rule | **Lecture** |  |
| **Oct** | Simpson’s 1/3rdrule | **Lecture** |  |
| **Oct** | Simpson’s 3/8 rule | **Lecture** | **Sessional/ Test** |
| **Oct** | Ordinary differential Equations | **Lecture** |  |
| **Oct** | Taylor’s Series Method | **Lecture** |  |
| **Oct** | Euler’s Method | **Lecture** |  |
| **Oct** | Modified Euler’s Method | **Lecture** |  |
| **Oct** | Runga Kutta Method of fourth order for solving first and second order equations | **Lecture** |  |
| **Oct** | -----------------Do--------------------- | **Lecture** | **Assignments** |
| **Oct** | Formation of Partial Differential equations | **Lecture** |  |
| **Oct** | -----------------Do--------------------- | **Lecture** |  |
|  **Nov** | Solutions of first order linear PDEs | **Lecture** |  |
| **Nov** | Solutions of first order non-linear PDEs | **Lecture** |  |
| **Nov** | -----------------Do--------------------- | **Lecture** |  |
| **Nov** | Charpit’s Method | **Lecture** | **Sessional/ Test** |
| **Nov** | -----------------Do--------------------- | **Lecture** |  |
| **Nov** | Solution to homogeneous linear PDEs(with constant coefficients) using C.F. and P.I | **Lecture** |  |
| **Nov** | -----------------Do--------------------- | **Lecture** | **Assignments** |
| **Nov** | -----------------Do--------------------- | **Lecture** |  |

Outcome of Course: The students will be able to

1. Analyze and solve engineering problems using Laplace Series.

2.. Solve engineering problems using Complex Integration.

Lecture Plan of Introduction To Civil Engineering

 Deptt. of Civil Engineering

 Semester :3rd wef July 2019

Name of Teacher: Gaurav Dhiman

Designation: Assistant Professor

Subject code: HM-251A

*Course Objective:* To learn about the Basics of Civil Engineering

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| Month | Class | Topic/ Chapter covered | Academic activity | Test/ assignment |
| Aug | 3rd sem | Basic Understanding:What is Civil Engineering/ Infrastructure?  | Teaching |  |
| Aug | 3rd sem | Basics of Engineering and Civil Engineering;  | Teaching |  |
| Aug | 3rd sem | Broad disciplines of Civil Engineering;  | Teaching | Assignment |
| Aug | 3rd sem | Importance of Civil Engineering,  | Teaching |  |
| Aug | 3rd sem | Possible scopes for a career,  | Teaching |  |
| Aug | 3rd sem | Early constructions and developments over time;  | Teaching |  |
| Aug | 3rd sem | Ancient monuments & Modern marvel | Teaching |  |
| Aug | 3rd sem | Development of various materials of construction and methods of construction;  | Teaching |  |
| Aug | 3rd sem | Works of Eminent civil engineers | Teaching |  |
| Aug | 3rd sem | Works of Eminent civil engineers | Teaching |  |
| Aug | 3rd sem | Structural Engineering: Types of buildings | Teaching |  |
| Aug | 3rd sem | Tall structures | Teaching |  |
| Sep | 3rd sem | Various types of bridge | Teaching | Assignment |
| Sep | 3rd sem | Water retaining structures | Teaching |  |
| Sep | 3rd sem | Other structural systems | Teaching |  |
| Sep | 3rd sem | Experimental Stress Analysis  | Teaching |  |
| Sep | 3rd sem | Wind tunnel studies | Teaching |  |
| Sep | 3rd sem | Overview of National Planning for Construction and Infrastructure Development; | Teaching |  |
| Sep | 3rd sem | Position of construction industry  | Teaching |  |
| Sep | 3rd sem | Industries, five year plan outlays for construction;  | Teaching |  |
| Sep | 3rd sem | Current budgets for infrastructure works; | Teaching |  |
| Sep | 3rd sem | Surveying & Geomatics: Traditional surveying techniques | Teaching | Assignment  |
| Sep | 3rd sem | Introduction to Total Stations | Teaching |  |
| Sep | 3rd sem | Development of Digital Terrain Models | Teaching |  |
| Sep | 3rd sem | GPS, LIDAR | Teaching |  |
| Sep | 3rd sem | Fundamentals of Building Materials: Stones, bricks, | Teaching |  |
| Sep | 3rd sem | mortars, Plain reinforcement | Teaching |  |
| Sep | 3rd sem | Structural Steel, High Tensile Steel, Carbon Composites; Plastics in Construction | Teaching | Assignment |
| Sep | 3rd sem | Reinforced & Prestressed Concrete | Teaching |  |
| Sep | 3rd sem | Construction Chemicals | Teaching |  |
| Sep | 3rd sem | 3D printing; Recycling of Construction & Demolition wastes. | Teaching |  |
| Sep | 3rd sem | Basics of Construction Management & Contracts Management:  | Teaching |  |
| Sep | 3rd sem | Temporary Structures in Construction;  | Teaching |  |
| Oct | 3rd sem | Construction Methods for various types of Structures;  | Teaching |  |
| Oct | 3rd sem | Major Construction equipment; Automation & Robotics in Construction;  | Teaching |  |
| Oct | 3rd sem | Modern Project management Systems;  | Teaching |  |
| Oct | 3rd sem | Advent of Lean Construction | Teaching | Assignment |
| Oct | 3rd sem | Importance of Contracts Management | Teaching |  |
| Oct | 3rd sem | Environmental Engineering & Sustainability: | Teaching |  |

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| Month | Class | Topic/ Chapter covered | Academic activity | Test/ assignment |
| Oct | 3rd Sem. | Water treatment systems | Teaching |  |
| Oct | 3rd Sem. | Effluent treatment systems;  | Teaching |  |
| Oct | 3rd Sem. | Different methods of Effluent treatment systems;  | Teaching |  |
| Oct | 3rd Sem. | Solid waste management; | Teaching |  |
| Oct | 3rd Sem. | Classification on different method Solid waste management  | Teaching |  |
| Oct | 3rd Sem. | Sustainability in Construction | Teaching | Test |
| Oct | 3rd Sem. | Hydraulics, Hydrology  | Teaching |  |
| Oct | 3rd Sem. | basics of water supply systems  | Teaching | Assignment 1 |
| Oct | 3rd Sem. | Fundamentals of fluid flow | Teaching |  |
| Oct | 3rd Sem. | Underground Structures;  | Teaching |  |
| Oct | 3rd Sem. | Multipurpose reservoir projects | Teaching |  |
| Oct | 3rd Sem. | Fundamentals of fluid flow | Teaching |  |
| Oct | 3rd Sem. | Surveying & Geomatics: Traditional surveying techniques | Teaching |  |
| Oct | 3rd Sem. | Water treatment systems | Teaching |  |
| Nov  | 3rd Sem. | Effluent treatment systems;  | Teaching |  |
| Nov | 3rd Sem. | Different methods of Effluent treatment systems;  | Teaching | Assignment 2 |
| Nov | 3rd Sem. | Solid waste management; | Teaching |  |
| Nov | 3rd Sem. | Classification on different method Solid waste management  | Teaching |  |
| Nov | 3rd Sem. | Sustainability in Construction | Teaching |  |
| Nov | 3rd Sem. | Hydraulics, Hydrology &Water Resources Engineering | Teaching |  |
| Nov | 3rd Sem. | Fundamentals of fluid flow | Teaching |  |
| Nov | 3rd Sem. | Basics of water supply systems | Teaching |  |
| Nov | 3rd Sem. | Underground Structures;  | Teaching |  |
| Nov | 3rd Sem. | Multipurpose reservoir projects | Teaching | Assignment 3 |
| Nov | 3rd Sem. | Fundamentals of fluid flow | Teaching |  |
| Nov | 3rd Sem. | Surveying & Geomatics:  | Teaching | Test |
| Nov | 3rd Sem. | Water Resources Engineering | Teaching |  |
| Nov | 3rd Sem. | Traditional surveying techniques | Teaching |  |
| Nov | 3rd Sem. | Fundamentals of fluid flow | Teaching | Assignment 4  |
| Nov | 3rd Sem. | Surveying techniques | Teaching |  |

Lecture Plan Of Introduction To Solid mechanics

 Deptt. of Civil Engineering

 Semester :3rd Wef July 2019

Name of Teacher: Amit Raheja

Designation: Assistant Professor

Subject code: CE-201 A

*Course Objective:* To learn about the Basics of Strutural Analysis

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| Month | Class | Topic/ Chapter covered | Academic activity | Test/ assignment |
| Aug | 3rd sem | Analysis of stresses and strains:Analysis of simple states of stresses and strains,  | Teaching |  |
| Aug | 3rd sem | Numerical Problems | Teaching |  |
| Aug | 3rd sem | Numerical Problem | Teaching | Assignment |
| Aug | 3rd sem | Elastic constraints,  | Teaching |  |
| Aug | 3rd sem | Numerical Problems | Teaching |  |
| Aug | 3rd sem | Bending stresses, theory of simple bending, flexure formula  | Teaching |  |
| Aug | 3rd sem | Numerical Problems | Teaching |  |
| Aug | 3rd sem | Numerical problem | Teaching |  |
| Aug | 3rd sem | Combined stresses in beams, shear stresses | Teaching |  |
| Aug | 3rd sem | Numerical Problems | Teaching |  |
| Aug | 3rd sem | Numerical problem | Teaching |  |
| Aug | 3rd sem | Mohr's circle,  | Teaching |  |
| Sep | 3rd sem | Principle stresses and strains | Teaching | Assignment |
| Sep | 3rd sem | Torsion in shafts  | Teaching |  |
| Sep | 3rd sem | Torsion closed thin walled sections | Teaching |  |
| Sep | 3rd sem | Stresses and strains in cylindrical shells  | Teaching |  |
| Sep | 3rd sem | Spheres under internal pressure. | Teaching |  |
| Sep | 3rd sem | Theory of ColumnsSlenderness ratio | Teaching |  |
| Sep | 3rd sem | End connections, short columns | Teaching |  |
| Sep | 3rd sem | Euler's critical buckling loads | Teaching |  |
| Sep | 3rd sem | Eccentrically loaded short columns | Teaching |  |
| Sep | 3rd sem | Cylinder columns subjected to axial and eccentric loading | Teaching | Assignment  |
| Sep | 3rd sem | Bending moment and shear force in determinate beams | Teaching |  |
| Sep | 3rd sem | Numerical Problem | Teaching |  |
| Sep | 3rd sem | Numerical Problem | Teaching |  |
| Sep | 3rd sem | Numerical Problem | Teaching |  |
| Sep | 3rd sem | Numerical Problem | Teaching |  |
| Sep | 3rd sem | Numerical Problem | Teaching | Assignment |
| Sep | 3rd sem | Definitions and sign conventions,  | Teaching |  |
| Sep | 3rd sem | Axial force, Shear force and Bending moment diagrams. | Teaching |  |
| Sep | 3rd sem | Numerical Problems | Teaching |  |
| Sep | 3rd sem | Analysis of Three hinged arches | Teaching |  |
| Sep | 3rd sem | Numerical Problems | Teaching |  |
| Oct | 3rd sem | Horizontal thrust | Teaching |  |
| Oct | 3rd sem | Numerical Problems | Teaching |  |
| Oct | 3rd sem | Shear force and bending moment diagrams for Overhanging beams | Teaching |  |
| Oct | 3rd sem | Numerical Problems | Teaching | Assignment |
| Oct | 3rd sem | Numerical Problems | Teaching |  |
| Oct | 3rd sem | Numerical Problems | Teaching |  |

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| Month | Class | Topic/ Chapter covered | Academic activity | Test/ assignment |
| Oct | 3rd Sem. | Introduction to Deflections in beams | Teaching |  |
| Oct | 3rd Sem. | Slope and deflections in Beams by Moment area method | Teaching |  |
| Oct | 3rd Sem. | Numerical Problem | Teaching |  |
| Oct | 3rd Sem. | Numerical Problem | Teaching |  |
| Oct | 3rd Sem. | Numerical Problem | Teaching |  |
| Oct | 3rd Sem. | Numerical Problem | Teaching | Test |
| Oct | 3rd Sem. | Numerical Problem | Teaching |  |
| Oct | 3rd Sem. | Slope and deflections by Conjugate Beam method | Teaching | Assignment  |
| Oct | 3rd Sem. | Numerical Problem | Teaching |  |
| Oct | 3rd Sem. | Numerical Problem | Teaching |  |
| Oct | 3rd Sem. | Slope and deflection by Unit load method | Teaching |  |
| Oct | 3rd Sem. | Numerical Problems | Teaching |  |
| Oct | 3rd Sem. | Numerical Problems | Teaching |  |
| Oct | 3rd Sem. | Numerical problems | Teaching |  |
| Nov  | 3rd Sem. | Numerical Problems | Teaching |  |
| Nov | 3rd Sem. | Numerical Problem | Teaching | Assignment  |
| Nov | 3rd Sem. | Numerical Problem | Teaching |  |
| Nov | 3rd Sem. | Numerical Problem | Teaching |  |
| Nov | 3rd Sem. | Numerical Problem | Teaching |  |
| Nov | 3rd Sem. | principle of virtual work | Teaching |  |
| Nov | 3rd Sem. | Maxwell's Law of Reciprocal Deflections,  | Teaching |  |
| Nov | 3rd Sem. | Williot’s Mohr diagram. | Teaching |  |
| Nov | 3rd Sem. | Analysis of statically determinate trussesIntroduction | Teaching |  |
| Nov | 3rd Sem. | Various types of trusses, stability | Teaching | Assignment  |
| Nov | 3rd Sem. | Numerical Problems | Teaching |  |
| Nov | 3rd Sem. | Analysis of plane trusses by method of joints  | Teaching | Test |
| Nov | 3rd Sem. | Numerical Problem | Teaching |  |
| Nov | 3rd Sem. | Analysis of Trusses by method of sections,  | Teaching |  |
| Nov | 3rd Sem. | Numerical Problem | Teaching | Assignment  |
| Nov | 3rd Sem. | Analysis of space trusses using tension coefficient method. | Teaching |  |
| Nov | 3rd Sem. | Numerical Problem | Teaching |  |

Lesson Planning of Fluid Mechanics-I

Deptt.Civil Engineering

Semester-3rd (w.e.f July 2019)

Name of Teacher : Pardeep Dabur

Designation : Assistant Professor

Subject with code : CE-203A

Objective of Course : 1. To familiarize the students with the basic concepts of Fluid Mechanics

 2. To understand the mechanics of Fluid flow.

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| **Week & Month** | **Topic / Chapter Covered** | **Academic Activity** | **Test/Assignment** |
| Aug | Scope and application of Fluid Mechanics to engineering problems. Fluid properties, mass density | Lecture |  |
| Aug | Specific volume and specific volume and specific gravity | Lecture |  |
| Aug | Surface Tension | Lecture |  |
| Aug | Pressure inside a droplet and bubble due to surface tension | Lecture |  |
| Aug | Capillarity action  | Lecture |  |
| Aug | Compressibility | Lecture |  |
| Aug | Viscosity and its types | Lecture |  |
| Aug | Newtonian and Non-Newtonian fluids, real and ideal fluids. | Lecture |  |
| Aug | Introduction to Kinematics of Fluid Flow, Steady & unsteady, uniform and non-uniform. | Lecture |  |
| Aug | Laminar & turbulent flows, one, two & three dimensional. flows | Lecture |  |
| Aug | Continuity equation in three dimensional coordinates | Lecture |  |
| Aug | Continuity equation in polar coordinates | Lecture |  |
| Aug | Stream lines, streak lines and path lines | Lecture | Assignment |
| Aug | Elementary explanation of stream function and velocity potential | Lecture |  |
| Aug | Rotational and Ir-rotational flows, graphical and experimental methods of drawing flow nets, rotation and circulation | Lecture |  |
| Sep | Introduction to Statics of Fluid Flow**,**Pressure-density-height relationship, gauge and absolute pressure. | Lecture |  |
| Sep | Simple differential and sensitive manometers, two liquid manometers | Lecture |  |
| Sep | Pressure on plane and curved surfaces. | Lecture |  |
| Sep | Center of pressure. | Lecture |  |
| Sep | Buoyancy, stability of immersed and floating bodies | Lecture |  |
| Sep | Determination of metacentric height | Lecture |  |
| Sep | Fluid masses subjected to uniform acceleration | Lecture |  |
| Sep | Free and forced vortex. | Lecture | Assignment |
| Sep | Introduction to Dynamics of Fluid Flow, | Lecture |  |
| Sep | Euler's equation of motion along a streamline and its integration | Lecture |  |
| Sep | Limitation of Bernoulli’s equation | Lecture |  |
| Oct | Application ofBernoulli’s equation,Pitot tubes | Lecture |  |
| Oct | Venture meter | Lecture |  |
| Oct | Orifice meter | Lecture |  |
| Oct | Flow through orifices & mouth pieces | Lecture |  |
| Oct | Sharp crested weirs and notches | Lecture |  |
| Oct | Aeration of nappe. | Lecture | Assignment |
| Oct | Introduction to Boundary layer analysis | Lecture |  |
| Oct | Boundary layer thickness | Lecture |  |
| Oct | Boundary layer over a flat plate | Lecture |  |
| Oct | Laminar boundary layer, turbulent boundary layer, | Lecture |  |
| Oct | Laminar sub-layer, smooth and rough boundaries | Lecture |  |
| Nov | Local and average friction coefficient | Lecture |  |
| Nov | Separation and its control. | Lecture | Assignment |
| Nov | Introduction toDimensional Analysis and Hydraulic Similitude | Lecture |  |
| Nov | Buckingham Pi-theorem | Lecture |  |
| Nov | Important dimensionless numbers and their significance | Lecture |  |
| Nov | Geometric, kinematic and dynamic similarity | Lecture |  |
| Nov | Model studies, physical modeling | Lecture | Assignment |
| Nov | Similar and distorted models. | Lecture |  |

Name of Institute : JMIETI, Radaur

Name of teacher with designation : Rajesh Sagwal ( A.P)

Department : Civil Engg.

Subject : Surveying and Geomatics

Subject Code CE-205 A

*Course Objective:* To learn about the Basics of Survey , Instrument used and various methodology in Surveying

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| **Month** | Class | **Topic/ Chapter covered** | **Academic activity** | **Test/ assignment** |
| August | 3rd Sem. | Introduction, Fundamental Principles of surveying  | Teaching |  |
| August | 3rd Sem | Survey station, survey line, Ranging | Teaching |  |
| August | 3rd Sem | Bearing of line, Local Attraction,Examples | Teaching |  |
| August | 3rd Sem | Theodolite Survey, Temporary adjustment of theodolite, Measurements of Angles | Teaching |  |
| August | 3rd Sem | Repitition And Reiteration method, Traverse surveying, checks in traversing, | Teaching | Assignment |
| August | 3rd Sem | Numerical Problems | Teaching |  |
| August | 3rd Sem | Adjustment of traversing, trigonometric leveling,Axis signal correction | Teaching |  Test |
| August | 3rd Sem. | Types of Levels and staff, Temporary adjustment of level, principle of leveling, Reduction of levels, | Teaching |  |
| August | 3rd Sem. | Booking of staff reading, Numerical problems | Teaching | Assignment |
| August | 3rd Sem. | Numerical Problems | Teaching |  |
| September | 3rd Sem. | Contours, Horizontal Equivalent, Contour interval, characteristics of contour,Methods of contouring | Teaching |  |
| September | 3rd Sem. | Contour gradient, Use of contour maps | Teaching |  |
| September | 3rd Sem. | Plane Table, , radiation, intersection, traversing and resection | Teaching |  |
| September | 3rd Sem. | Two point and Three point problems. | Teaching |  |
| September | 3rd Sem. | Classification of curves, elements of simple circular curve | Teaching |  |
| September | 3rd Sem. | Location of tangent points-chain and tape methods, instrumental methods | Teaching |  |
| September | 3rd Sem. | Examples of simple curves | Teaching |  |
| September | 3rd Sem. |  Transition Curves-Length and types of transition curves | Teaching | Test |
| September | 3rd Sem. | Vertical Curves: Necessity | Teaching |  |
| September | 3rd Sem. | Numerical Problems | Teaching |  |
| September | 3rd Sem. | Length of combined curve, Plane Table, , radiation, intersection, traversing and resection | Teaching | Assignment |
| October | 3rd Sem. |  Vertical Curves: Necessity and types of vertical curves | Teaching |  |
| October | 3rd Sem. | Numerical Problems | Teaching |  |
| October | 3rd Sem. | principle of leveling, Reduction of levels, | Teaching |  |
| October | 3rd Sem. | Trigonometric leveling, Axis signal correction | Teaching |  |
| October | 3rd Sem. | Numerical Problems | Teaching |  |
| October | 3rd Sem. | Transition Curves-Length and types of transition curves | Teaching |  |
| October | 3rd Sem. | Modern Field Survey Systems | Teaching |  |
| October | 3rd Sem. | Principal of Electronic Distance Measurement | Teaching |  |
| October | 3rd Sem. | Modulation, Types of EDM Instruments. | Teaching |  |
| November | 3rd Sem. | Working principle and survey with total station | Teaching | Test |
| November | 3rd Sem. | Elements of Photogrammetry, Examples | Teaching |  |
| November | 3rd Sem. | Types of photographs, types of aerial photographs | Teaching | Test |
| November | 3rd Sem. | Numerical Problems | Teaching |  |
| November | 3rd Sem. | Aerial camera and height displacements in vertical photograph | Teaching |  |
| November | 3rd Sem. | Stereoscopic vision and stereoscopies, height determination from parallax measurement | Teaching |  |
| November | 3rd Sem. | Flight planning,Introduction of remote sensing and its systems | Teaching |  |
| November | 3rd Sem. | Concept of G.I.S and G.P.S | Teaching | Assignment |
| November | 3rd Sem. | Numerical Problems , Basic Components, data input, storage & output. | Teaching |  |

**Lesson Plan for the 3rd semester started w.e.f. 1st August, 2019**

Name of Institute : JMIETI Radaur

Name of teacher with designation : MEGHAV GUPTA ( A.P)

Department : Civil Engg.

Subject : Building Construction and Practise

Subject Code : CE- 207 A

Course Objective : The aim of study is to get knowledge about different components of building and material used in building construction.

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| **Month** | **Class** | **Topic/Chapter covered** | **Academic activity** | **Test/Assignment** |
| August | 3rd Sem |  Masonry Construction, various terms used | Lecture |  |
| August | 3rd Sem | Stone masonry-Dressing of stones, Classifications of stone masonry | Lecture |  |
| August | 3rd Sem | Brick masonry-bonds in brick work, Defects in brick masonry | Lecture |  |
| August | 3rd Sem | laying brick work, structural brick work-cavity and hollow walls | Lecture |  |
| August | 3rd Sem |  Composite stone and brick masonry, glass block masonry, Reinforced brick work | Lecture |  |
| August | 3rd Sem | Cavity and Partition Walls Advantages, position of cavity | Lecture |  |
| August | 3rd Sem | Types of non-bearing partitions, constructional detail of cavity wall | Lecture |  |
| August | 3rd Sem | Foundation and its Functions, types of shallow foundations | Lecture |  |
| August | 3rd Sem | General feature of shallow foundation, foundations in water logged areas,  | Lecture |  |
| August | 3rd Sem | Design of masonry wall foundation, introduction to deep foundations | Lecture |  |
| August | 3rd Sem |  Pile and pier foundations | Lecture |  |
|  August | 3rd Sem | Sub-surface investigations, Geophysical methods | Lecture |  |
| September | 3rd Sem | Damp-Proofing and Water-Proofing: | Lecture |  |
| September | 3rd Sem | Defects and causes of dampness, prevention of dampness | Lecture |  |
| September | 3rd Sem | Materials used, damp-proofing treatment in buildings, | Lecture |  |
| September | 3rd Sem | Water proofing treatment of roofs including pitched roofs. | Lecture |  |
| September | 3rd Sem | Roofs and Floors, Types of roofs | Lecture |  |
| September | 3rd Sem | Various terms used, roof trusses-king post truss | Lecture |  |
| September | 3rd Sem | Queen post truss etc., Floor structures | Lecture |  |
| September | 3rd Sem | Ground floor, basement and upper floors, | Lecture |  |
| September | 3rd Sem | Various types of floorings | Lecture |  |
| September | 3rd Sem | Doors and Windows, Locations, ,  | Lecture |  |
| September | 3rd Sem | Sizes, Types of doors and windows | Lecture |  |
| September | 3rd Sem | Fixures and fastners for doors and windows.  | Lecture |  |
| October | 3rd Sem | Brick and Tiles, Classification of bricks  | Lecture |  |
| October | 3rd Sem | Constituents of good brick earth, harmful ingredients, | Lecture |  |
| October | 3rd Sem | Manufacturing of bricks, testing of bricks. | Lecture |  |
| October | 3rd Sem | Tiles: Terra-cotta, manufacturing of tiles | Lecture |  |
| October | 3rd Sem | Types of terra-cotta, uses of terra-cotta. | Lecture |  |
| October | 3rd Sem | Lime, Classification of lime,  | Lecture |  |
| October | 3rd Sem | Types of cement, manufacturing of ordinary Portland cement, | Lecture |  |
| October | 3rd Sem | Cements composition, testing of cement,Storage of cement | Lecture |  |
| October | 3rd Sem | Mortars, cement mortars, mortars for masonry and plastering. | Lecture |  |
| October | 3rd Sem | Pozzolona, testing of lime, storage of lime,. | Lecture |  |
| October | 3rd Sem | Manufacturing, artificial hydraulic lime | Lecture |  |
| October | 3rd Sem | Stones, Classification of stones. | Lecture |  |
| November | 3rd Sem | Requirements of good structural stone, quarrying, | Lecture |  |
| November | 3rd Sem | Blasting and sorting out of stones, dressing | Lecture |  |
| November | 3rd Sem | Sawing and polishing, prevention and seasoning of stone | Lecture |  |
| November | 3rd Sem | Timber, Classification and structure of timber,  | Lecture |  |
| November | 3rd Sem | Seasoning of timber, defects in timber, fire proofing of timber | Lecture |  |
| November | 3rd Sem | Plywood, fiberboard, masonite and its manufacturing | Lecture |  |
| November | 3rd Sem | Important Indian timbers. | Lecture |  |
| November | 3rd Sem | Paints,Basic constituents of paints  | Lecture |  |
| November | 3rd Sem | Types of paints | Lecture |  |
| November | 3rd Sem | Painting of wood | Lecture |  |
| November | 3rd Sem | Varnishes, constituents of varnishes, | Lecture |  |
| November | 3rd Sem | Characteristics and types of varnishes. | Lecture |  |

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