

VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY BURLA

LESSON PLAN

Branch: **Civil Engineering**

Section:

Semester: **2nd M.Tech**

Subject: **GIS Applications in WRE**

Name of the Faculty: **Dr. Anil Kumar Kar**

| Class No. | Module No. | Topics to be Covered | Remarks / Sign of Faculty Member |
|-----------|------------|---|----------------------------------|
| 1 | I | Introduction RS & GIS | |
| 2 | I | Scope of RS & GIS in water resources and environmental system | |
| 3 | I | Scope of RS & GIS in water resources and environmental system | |
| 4 | I | Scope of RS & GIS in water resources and environmental system | |
| 5 | I | Scope of RS & GIS in water resources and environmental system | |
| 6 | I | Geomorphological mapping | |
| 7 | I | Hydrological mapping | |
| 8 | I | Hydrological mapping | |
| 9 | I | Landuse mapping | |
| 10 | I | Landuse mapping | |
| 11 | II | Evaluation of water resources potential | |
| 12 | II | Rainfall-Runoff modelling using RS inputs | |
| 13 | II | Rainfall-Runoff modelling using RS inputs | |
| 14 | II | Flood studies | |
| 15 | II | Drought studies | |
| 16 | II | Drought studies | |
| 17 | II | Drought assessment and monitoring | |
| 18 | II | Command area studies, cropping pattern, crop condition | |
| 19 | II | Irrigation system performance | |
| 20 | II | Crop yield estimation | |
| 21 | III | Introduction of GIS | |
| 22 | III | Hydrology and Resources management | |
| 23 | III | Hydrology and Resources management | |
| 24 | III | Watershed development | |
| 25 | III | Watershed development | |
| 26 | III | Management options, inventory | |
| 27 | III | Management options, inventory, Q & A discussion | |
| 28 | III | Remote sensing in snow cover studies | |
| 29 | III | Remote sensing in snow cover studies | |
| 30 | III | Snowmelt runoff | |
| 31 | IV | Reservoir sedimentation | |
| 32 | IV | Erosion and deposition | |
| 33 | IV | Erosion and deposition | |

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|----|----|-----------------------------|--|
| 34 | IV | Catchment area treatment | |
| 35 | IV | Catchment area treatment | |
| 36 | IV | Estimation of sediment load | |
| 37 | IV | Estimation of sediment load | |
| 38 | IV | Estimation of sediment load | |
| 39 | IV | Use of Sediment Models | |
| 40 | IV | Use of Sediment Models | |
| 41 | | Revision classes | |
| 42 | | Revision classes | |
| 43 | | Revision classes | |
| 44 | | Revision classes | |
| 45 | | Revision classes | |

CLASS DIARY

Branch: **Civil Engineering**

Section: **A1**

Semester: **4th B.Tech**

Subject: **Hydraulics Lab**

Name of the Faculty: **Dr. Anil Kumar Kar**

| Class No. | Date | Topics to be Covered | Remarks / Sign of Faculty Member |
|------------------|-------------|--|---|
| 1 | 09.01.2017 | Study of Hydraulic Instruments | Completed/ |
| 2 | 16.01.2017 | Determination of Metacentric height | Completed/ |
| 3 | 23.01.2017 | Determination of Darcy Weisbach coefficient for pipe friction | Completed/ |
| 4 | 06.02.2017 | Verification of Bernoulli's Theorem | Completed/ |
| 5 | 13.02.2017 | Determination of Coefficient of Discharge for venturimeter | Completed/ |
| 6 | 27.02.2017 | Determination of Coefficient of Discharge (Cd) for Open channel flume | Completed/ |
| 7 | 10.04.2017 | Determination of Chezy and Manning's constant in Open Channel flume, Forced Vortex | |
| 8 | 17.04.2017 | Determination of Cd of orifice meter, Explanation of Laminar and Turbulent flow using Reynold's Test Apparatus | |
| | | Report Submission and Viva | |

CLASS DIARY

Branch: **Civil Engineering**

Section: **A2**

Semester: **4th B.Tech**

Subject: **Hydraulics Lab**

Name of the Faculty: **Dr. Anil Kumar Kar**

| Class No. | Date | Topics to be Covered | Remarks / Sign of Faculty Member |
|------------------|-------------|--|---|
| 1 | 11.01.2017 | Study of Hydraulic Instruments | Completed/ |
| 2 | 18.01.2017 | Determination of Metacentric height | Completed/ |
| 3 | 25.01.2017 | Determination of Darcy Weisbach coefficient for pipe friction | Completed/ |
| 4 | 08.02.2017 | Verification of Bernoulli's Theorem | Completed/ |
| 5 | 15.02.2017 | Determination of Coefficient of Discharge for venturimeter | Completed/ |
| 6 | 22.02.2017 | Determination of Coefficient of Discharge (Cd) for Open channel flume | Completed/ |
| 7 | 15.03.2017 | Determination of Chezy and Manning's constant in Open Channel flume | Not done/ no power |
| 8 | 22.03.2017 | Determination of Chezy and Manning's constant in Open Channel flume | Completed/ |
| 9 | 29.03.2017 | Forced Vortex | Completed/ |
| 10 | 05.04.2017 | Determination of Cd of orifice meter | Completed/ |
| 11 | 12.04.2017 | Explanation of Laminar and Turbulent flow using Reynold's Test Apparatus | |
| | | Report Submission and Viva | |

VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY BURLA

CLASS DIARY

Branch: **Civil Engineering**

Section:

Semester: **2nd M.Tech**

Subject: **Computational Lab**

Name of the Faculty: **Dr. Anil Kumar Kar**

| Class No. | Date | Topics to be Covered | Remarks / Sign of Faculty Member |
|------------------|-------------|--|---|
| 1 | 06.01.2017 | Introduction to computations | Completed/ |
| 2 | 20.01.2017 | Solving Examples using Excel and MATLAB | Completed/ |
| 3 | 10.02.2017 | Parameter estimation through regression | Completed/ |
| 4 | 17.02.2017 | Cropping water requirement using CROPWAT | Completed/ |
| 5 | 03.03.2017 | Determination of design flood | Completed/ |
| 6 | 17.03.2017 | Determination of design flood | Completed/ |
| 7 | 24.03.2017 | Watershed modelling- general practices | Completed/ |
| 8 | 31.03.2017 | Watershed modelling- Unit Hydrograph model | Completed/ |
| 9 | 07.04.2017 | Watershed modelling- Synthetic Unit Hydrograph model | Completed/ |
| 10 | 19.04.2017 | Streamflow analysis and simulation | |
| | | Report Submission and Viva | |