**NATIONAL WATER ACADEMY, PUNE**

Purpose Oriented Training Program through Distance Learning

on

**Drainage & Watershed Delineation using GIS**

**(19th – 30th April 2021)**

**Platform: Google Classroom**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date &Day** | **Session** | **Topic** | **Video link** | **Faculty** |
| Day - 1  19 April 2021  Monday | 11.00-11.10 | Program Introduction | - | PK |
| 11.10-11.30 | Installation of QGIS 3.12 | <https://youtu.be/fgQqhU1dB6M> | PK |
| 11.30-13.00 | Installation of TauDem,  QuickMapServices Plugins in QGIS  Queries regarding Installation | <https://youtu.be/PFy41nYLKp4>  https://youtu.be/pakKCjZI9o0 | PK |
| Day - 2  20 April 2021  Tuesday | 11.00-13.00 | **Introduction to GIS-**  *Components of GIS, Input Data for GIS, Spatial and non-spatial data, Vector and Raster Data Model, Point, line and polygon Vector Data, creation of Vector data, introduction to DEM and TIN Raster data, etc* | https://youtu.be/5YeltFQ3tqc | PK |
| Day - 3  21 April 2021  Wednesday | 11.00-13.00 | **Working with Vector data and Raster Data using QGIS-**  *Introduction to QGIS User Interface, Customization of User Interface, Working with layers, Attributes data, Symbology structure, labeling* | https://youtu.be/PFywyYudx7s | PK |
| Day - 4  22 April 2021  Thursday | 11.00-13.00 | **Working with Vector data and Raster Data using QGIS-**  *Labeling, Scale based Visibility, Classification of vector data, Map Projections, Estimation of area and length of a vector future.* | https://youtu.be/n5JDzXVnxKI | PK |
| Day - 5  23 April 2021  Friday | 11.00-13.00 | **Printing A Basic GIS Map using Map Composer in QGIS-**  *Setting Printing Layout, Introducing border, Scale bar, North Arrow, Legends, Title etc to GIS Map* | https://youtu.be/9P1YcRUBaM8 | PK |

**Holiday: 24 April 2021 (Saturday) and 25 April 2021 (Sunday)**

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| **Date &Day** | **Session** | **Topic** | **Video Link** | **Faculty** |
| Day - 6  26 April 2021  Monday | 11.00-11.30 | *Downloading & Processing of Dem from Net, Merging and Clipping the DEMs*  *(Participants are required to download and process DEM of their jurisdiction)* | https://youtu.be/CMM1wE-XVGA | PK |
| Day - 7  27 April 2021  Tuesday | 11.00-13.00 | **Watershed Modeling using Taudem in QGIS-**  *Creation of Depression less DEM, Flow direction grid, Flow Accumulation grid, Creation of watershed outlets point layer, Delineate watershed* | https://youtu.be/4eXjJGIfUZo | PK |
| Day - 8  28 April 2021  Wednesday | 11.00-13.00 | **Watershed Modeling using Taudem in QGIS-**  *Delineate multiple watersheds using outlets points, stream definition, Extraction of stream network, stream order, Merging watersheds, Calculation of catchment area* | https://youtu.be/3cuPnjXOxNE | PK |
| Day - 9  29 April 2021  Thursday | 11.00-13.00 | **Downloading other relevant Open Data from Net-**  *Installation of Quick OSM plugin, Downloading National, State & District Boundaries, downloading road/rail network, merging the vector layers, modification/correction the vector data* | https://youtu.be/o9ljdbe1zfA | PK |
| Day - 10  30 April 2021  Friday | 11.00-13.30 | **Generation of final GIS Map & Quiz**  *(Participants are required to submit their sample Jurisdiction Map in PDF format)* | - | Open Session |

**Course Coordinator: Pradeep Kumar, Director (IT & GIS), NWA, Pune**

**Faculty:**

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