

## Industry Institute Interaction (IIIC) and Institution's Innovation Council (IIC)

24-10-2025

### A report on three day workshop “QGIS: Slope Mapping and Thematic Analysis using QGIS”

The session began on 22<sup>nd</sup> Oct at 10AM with an introduction of the Resource Person Dr M Durga, Associate Professor, Vignan Institute of Technology & Science (VITS), Hyderabad. A total of 46 Civil engg III & IV year students and 04 faculty attended the workshops.

**Aim of the Workshop:** Understanding coordinate systems, projections, and spatial data formats, Vector and raster data handling, Map creation, georeferencing, and digitization, Thematic mapping etc.

	<b>NALLA NARASIMHA REDDY EDUCATION SOCIETY'S</b> <b>GROUP OF INSTITUTIONS-INTEGRATED CAMPUS</b> <b>(UGC AUTONOMOUS INSTITUTION)</b>	 
<b>Industry Institute Interaction Cell (IIIC) &amp; Institution's Innovation Council (IIC)</b> <i>in association with</i> <b>DEPARTMENT OF CIVIL Engineering</b> <b>Organize a Three Day Workshop on</b> <b>“GEOSPATIAL : SLOPE MAPPING AND THEMATIC ANALYSIS USING QGIS”</b>		
<b>Resource Person</b>  <b>Dr M Durga</b> Associate Professor VGIT, Deshmukhi, Hyderabad	<b>Date &amp; Time: 22 - 24 October 2025 9:00 AM - 4:00 PM</b> <b>Venue: ECE Seminar Hall, II Floor</b>	
<b>Shri Nalla Narasimha Reddy</b> <i>Chairman</i>	<b>Shri Nalla Prashanth Reddy</b> <i>Vice-Chairman</i>	<b>Dr. C.V. Krishna Reddy</b> <i>Director</i>
<b>Dr. G. Janardhana Raju</b> <i>Dean - School of Engineering</i>		<b>Dr. G. Subba Rao</b> <i>HoD - Civil</i>

The workshop is designed to help the Civil engg students of both III and IV year to understand various tools of Geospatial: Slope Mapping and Thematic Analysis using QGIS and its applications in Civil Engg field. Throughout the sessions, the Resource Person Dr M Durga enlightened about QGIS related applications.

**Session Overview:** This workshop was conducted a comprehensive series of sessions on **QGIS**, an open-source Geographic Information System software. The sessions were designed to build both **conceptual understanding and practical proficiency** among faculty members and students. The following key topics were explained in the three days workshop:

- Introduction to GIS and Remote Sensing concepts
- Overview and installation of QGIS software
- Understanding coordinate systems, projections, and spatial data formats
- Vector and raster data handling
- Map creation, georeferencing, and digitization
- Thematic mapping and data visualization
- Spatial analysis tools (buffering, overlay, and querying)
- Integration of GPS data and field mapping exercises
- Application of QGIS in Civil Engineering fields like water resources, transportation, and land use planning

Hands-on training sessions were included, where participants performed exercises such as creating base maps, analyzing spatial data, and producing professional-quality thematic maps.

**Outcome of the Session:** The workshop provided participants with:

- Fundamental knowledge of GIS and QGIS functionalities.
- Hands-on experience in using QGIS for real-time civil engineering applications.
- Improved capacity to integrate GIS tools in academic and research projects.
- Motivation to apply QGIS for data-driven decision-making in planning and resource management.

Participants expressed appreciation for the clarity, expertise, and interactive teaching style of Resource Person, which greatly enhanced their learning experience.

**Feedback and Remarks:** The sessions by the resource person were highly informative, interactive, and practical. The participants commended the resource person for explaining complex GIS concepts in a simple manner and for providing valuable insights into the real-world applications of QGIS in civil and environmental engineering.

The Department extended heartfelt thanks to Dr. M.Durga for their valuable contribution and invited them for future collaborations in GIS-based research and training programs.





The session concluded with a recap of the key concepts like tools of Primavera P6 followed by a feedback of students and vote of thanks on 23<sup>rd</sup> Aug 2015 at 4 .00 PM.

**Dr G SUBBA RAO**  
HOD-CE

**Dr G JANARDHANA RAJU**  
Dean-SoE & Convener-IIC