

## COURSE CONTENT

THEORY SESSIONS	HANDSON SESSIONS
<ul style="list-style-type: none"> <li>✓ Introduction to geospatial science and technology- UNGGI/ Geospatial SDG</li> <li>✓ Advances in geospatial technology:</li> <li>✓ Big data analytics, AI drones, IoT</li> <li>✓ Data types in geospatial sciences</li> <li>✓ Basic geodesy -Spherical, ellipsoidal and geoidal earth, map projections, Geodetic datum-concept and type.</li> <li>✓ Data Quality - elements.</li> <li>✓ Digital Cartography Cartographic evolution Map classification, etc.</li> <li>✓ Introduction to DBMS, databases in GIS</li> <li>✓ Spatial Analysis, Measurements, Queries</li> <li>✓ Buffering and neighbourhood functions,</li> <li>✓ Global Navigation Satellite Sy(GNSS)</li> <li>✓ Remote sensing - introduction</li> <li>✓ Elements of visual interpretation,</li> <li>✓ Image enhancements, and restration</li> <li>✓ Image classification</li> <li>✓ Digital change detection</li> <li>✓ Google earth engine &amp; Google Maps</li> <li>✓ Terrain Data - DEM, DTM, DSM</li> </ul>	<ul style="list-style-type: none"> <li>✓ Acquisition of free satellite data from Bhuvan, USGS, ESA, etc with QGIS tool.</li> <li>✓ Working with projections using QGIS</li> <li>✓ Geo-referencing and data extraction</li> <li>✓ Map preparation &amp; Data exploration</li> <li>✓ Working with tables &amp; queries</li> <li>✓ Field exercise for collecting points using a hand held GPS into QGIS.</li> <li>✓ Intro to SAGA and image interpretation</li> <li>✓ Image(histogram and Image registration</li> <li>✓ Working with images: subsetting and mosaicking.</li> <li>✓ Image enhancements</li> <li>✓ Extracting information for satellite image using unsupervised classification</li> <li>✓ Change detection with SAGAEx: Terrain data</li> <li>✓ Exercise on spatial data analysis</li> <li>✓ Applications of geospatial technologies in GIS/ Remote sensing.</li> <li>✓ Using QGIS to create a web GIS.</li> <li>✓ Project modules using geospatial technologies</li> <li>✓ WebGIS - Applications in ISRO(RE SPOND)</li> </ul>

## FEW OF THE RESOURCE PERSONS

RESOURCE PERSONS	AFFILIATION
<ul style="list-style-type: none"> <li>✓ Prof. T. Vasantha kumaran Former Prof.</li> <li>✓ Prof. A. Bala subramanian Former Prof.</li> <li>✓ Prof. Ramu, Professor</li> <li>✓ Prof. Ganesh Prasad, Professor</li> <li>✓ Prof. Ashok Hanjagi, Professor</li> <li>✓ Prof. Jaganathan R, Professor</li> <li>✓ Shri. Rajashekar P.V, Director</li> <li>✓ Shri. Shashank Patil, Director</li> <li>✓ Dr. S. Vasavi. Professor</li> <li>✓ Prof. R. Mariappan</li> </ul>	<ul style="list-style-type: none"> <li>✓ Dept.of Geography, University of Madras,</li> <li>✓ Dept. of Earth Science, University of Mysore,</li> <li>✓ Centre for Geo informatics Tech, Univ. of Mysore</li> <li>✓ Dept. of Civil Engg, National Inst. of Engg, Mysuru</li> <li>✓ Dept. of Geo &amp; Geoinformatics, Bangalore University</li> <li>✓ Dept. of Geography, University of Madras, Chennai</li> <li>✓ GDC-Tvm, Survey of India, Thiruvananthapuram</li> <li>✓ Vimatraya Drone Technologies, Bangaluru</li> <li>✓ V.R. Siddhartha Engg. College, Vijayawada.</li> <li>✓ V.R. Siddhartha Engg. College, Vijayawada.</li> </ul>

VRSEC-GUEST HOUSE & HOSTELS



Department of Science & Technology  
Govt of India.  
National Geospatial Programme division  
Sponsored

## 21 DAYS SUMMER SCHOOL IN GEOSPATIAL SCIENCE & TECHNOLOGIES (LEVEL 1)

13<sup>th</sup> June to 3<sup>rd</sup> July 2022  
(Offline)

Organized by  
Department of  
**Electronics & Communication Engineering**  
&  
Department of **Civil Engineering**

**VELAGAPUDI RAMAKRISHNA  
SIDDHARTHA ENGINEERING COLLEGE**  
(AUTONOMOUS)  
Vijayawada- 520 007, Andhra Pradesh.




Website: [www.vrsiddhartha.ac.in](http://www.vrsiddhartha.ac.in)

Email: [prof.mariappan.r@gmail.com](mailto:prof.mariappan.r@gmail.com), Phone: 9444812756

## About the Programme:

The National geospatial development programme (NGP) of the Department of Science and Technology, Government of India is to develop tools and techniques for integrated resource management and capacity building at various levels, for planning and implementation in a spatio-temporal context within a multilevel framework. The main goal is to build knowledge and adaptation capacity of geospatial technologies at various levels with following objectives :

1. Capacity building in teaching, research and development and use of geospatial technologies.
2. To promote the use of open source GIS in academic and research.
3. To promote networking of government, academic, research and industrial organizations.
4. To more insights in geospatial Research projects under DST, ISRO ( RESPOND), etc.
5. To get expertise on geospatial technology tools for Research projects.

## Registration Information:

Last date for registration : 15<sup>th</sup> May 2022  
Date for selection intimation : 30<sup>th</sup> May 2022  
Dates of the program : 13<sup>th</sup> June to 3<sup>rd</sup> July 2022  
Mode of conduct : Offline Mode  
Boarding & Lodging : Free  
TA will be provided for outstation participants

## Registration Links:

### User Registration

<https://dst-iget.in/Applicationsform/>

No. of seats: **30**

Registration Fee: **Free**

### Participant Registration

<https://dst-iget.in/Newparticipant/>

## Grading and Certification :

Grading and Certification Participants will be assessed based on assignments completed during the course, a mini project that they are expected to complete, active participation during the training program as well as attendance.

## ABOUT THE INSTITUTE

Velagapudi Ramakrishna Engineering College (VRSEC) was established in the year 1977 as the first self-financing engineering college in the state of A.P. It is located in a vast expanse of 24.05 acres of land on the outskirts of Vijayawada city. The college is offering 7 UG (B.Tech) Courses, 9 PG ( M.Tech) courses , MBA and MCA . The college has been accredited four times by National Board of Accreditation (NBA) of All India Council for Technical Education (AICTE), New Delhi in respect of all Engineering disciplines and also certified for ISO 9001:2015. It is affiliated to Jawaharlal Nehru Technological University, Kakinada, AP. Autonomous status was conferred by UGC in the year 2006 and extended for 10 years up to 2027-28, first time in AP. It is one among the top 16 engineering colleges selected with Rs 6 crores funding under World Bank aid for R & D and PG enhancement programme called TEQIP-II (S.C.1.2) by MHRD, Govt. of India. The Institute received Platinum Award in years 2017, 2018 & 2019 as a Best Industry Linked Technical Institute by AICTE-CII Survey. It is also recognized as “Scientific & Industrial Research Organization (SIRO)” by DSIR. MST, Govt. of India since August 2017. The Institute has several Industry collaborated labs viz Anblicks, Apple, IBM, CISCO, National Instruments, Oracle Technologies, etc.

The Institute has established the following Centres of Excellence (CoE) to promote excellence in education and research.

- i. Siemens Centre of Excellence (CoE)
- ii. CoE on Telematics and
- iii. CoE on Composites

The institution has well equipped lab with high end computers, licensed and open source GIS and Remote sensing software as well as handheld navigation system. A very well equipped guest house is also available for the participants.

