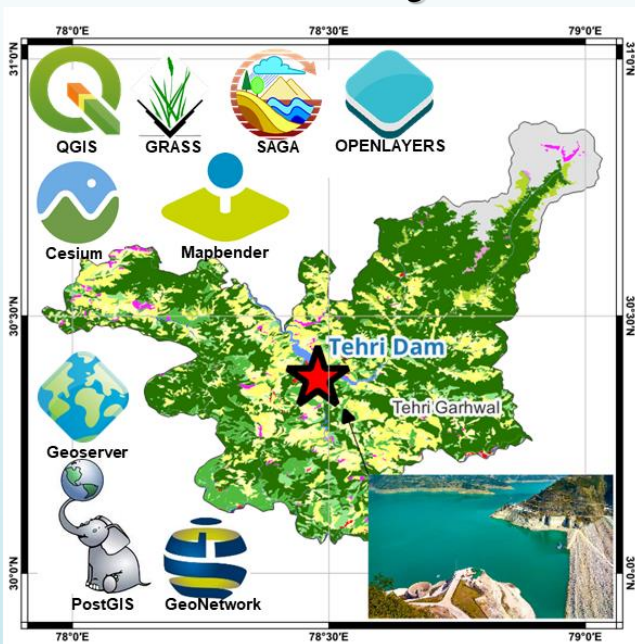


IIRS Outreach Programme



Map prepared using FOSS4G software QGIS. Logos of different popular FOSS4G software.

Overview of Free and Open Source Software for Geospatial Technology

April 24-28, 2023



Organised by

Indian Institute of Remote Sensing
Indian Space Research Organisation
Department of Space, Govt. of India
Dehradun
www.iirs.gov.in

About IIRS

The Indian Institute of Remote Sensing (IIRS) is a constituent unit of Indian Space Research Organisation (ISRO), Department of Space, Govt. of India. Since its establishment in 1966, IIRS is a key player for training and capacity building in geospatial technology and its applications through training, education and research in Southeast Asia. The training, education and capacity building programmes of the Institute are designed to meet the requirements of Professionals at working levels, fresh graduates, researchers, academia, and decision makers. IIRS is also one of the most sought-after Institute for conducting specially designed courses for the officers from Central and State Government Ministries and stakeholder departments for the effective utilization of Earth Observation (EO) data. IIRS is also empaneled under Indian Technical and Economic Cooperation (ITEC) programme of Ministry of External Affairs, Government of India providing short term regular and special courses to international participants from ITEC member countries since 2001.



IIRS Academia Meet 2023

IIRS hosts headquarters of Centre for Space Science and Technology Education in Asia and the Pacific (CSSTEAP), affiliated to the United Nations and provides support in conducting the Remote Sensing and GIS training and education programme. IIRS also plays a key role in the activities of Indian Society of Remote Sensing (ISRS), which is one of the largest non-governmental Scientific Societies in the country. To widen its outreach, IIRS has started live and interactive Distance Learning Programme (DLP) since 2007. IIRS has also launched e-learning course on Remote Sensing and Geo-information Science since August, 2014.

116th IIRS Outreach Programme

IIRS has setup a state-of-the-art studio facility and control room to broadcast live and interactive classroom sessions and practical demonstrations through its Distance Learning Center. The high definition video quality can be broadcast to its users for better quality transmission. The IIRS outreach programme, which started in 2007 with 12 universities/institutions has now grown substantially. Currently, 1000+ Network institutions spread across India are networked with IIRS.

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About the Course

The importance of geospatial technologies is well known. Geographical information system (GIS) can play an important role in data collection, creation of components, integration of information systems, stakeholders' engagement, and dissemination of geoinformation. It's wide adoption is, however, currently restricted by costly Commercial off the shelf (COTS) software. Free and Open Source Software (FOSS) refer to software that allows the users the 'Liberty' i.e. the freedom to use it for any purpose, source code access (enabling code changes or studying the software), redistribute copies of the software without restriction along with the modified version of the software. FOSS software offer many advantages over the proprietary software like:- no software cost or licence fees, avoid vendor lock-in, customization, support for open standard etc. There are multiple "Free and Open Source Software for GIS" (FOSS4G) softwares for every geospatial development needs, ranging from Desktop, Spatial Database Management System (SDBMS), Web-based applications and even libraries for building custom applications. Among the desktop GIS, QGIS (<https://www.qgis.org/en/site/>) is one of the popular examples. It is user friendly and is available on various platforms like Windows, Linux, Android etc. It provides wide capabilities for working with raster and vector datasets along with support for various spatial tools and algorithms. It can also be extended using the "plugins". Currently there are over 350 FOSS4G projects listed in FreeGIS.org and Open Source GIS. Some of these projects have a history that dates back to the early 1980s (e.g. GRASS GIS) while others are more recent and yet have a wide and solid user base, such as Web-GIS platforms (e.g. GeoServer) .

Objective of the Course

The overall objective of this distance learning course is to make the awareness among users / researchers / professionals about the concept of FOSS4G and disseminate knowledge and practical applications on use FOSS4G software.

Curriculum

Following topics will be covered in this course

- Overview of Geospatial Technology
- FOSS for Desktop GIS
- FOSS for Spatial DBMS
- FOSS for Web GIS
- FOSS for 3D GIS

Target Participants

The candidate who wants to participate in the course should be a student of final year undergraduate course or postgraduate course (any year). Technical / Scientific Staff of Central / State Government / Faculty / researchers at university / institutions are also eligible to apply for this course. Applications of participants have to be duly sponsored by university/institute and forwarded through coordinators from respective centres.

Course Study Material

Course study materials, like lecture handouts, video recorded lectures, open source software & handouts of demonstrations etc., will be made available through eclass. Video lectures will also be uploaded on the IIRS eclass platform at <https://eclass.iirs.gov.in/>

Course Funding

The programme is sponsored by Indian Space Research Organisation (ISRO), Department of Space, Government of India.

Award of Certificates

All participants will be awarded a certificate of participation based on 70% attendance during the online classes.

How to apply / Course Registration

- Course updates and other details will be available on URL- <http://www.iirs.gov.in/Edusat-News/>.
- To participate in this course, interested organizations / universities / departments / institutes have to identify a coordinator at their end. The identified coordinator will register online their Institute as nodal center in IIRS website (<https://elearning.iirs.gov.in/edusatregistration/coordinator>).
- All the participants have to register online through registration page (<https://elearning.iirs.gov.in/edusatregistration/student>) by selecting their organization as nodal center.

Programme Reception

The programme can be received through eclass platform of IIRS-ISRO Using internet connectivity. No specific hardware / software is required. however good internet connectivity is recommended at user end. To run the programme in a class room, following computer hardware will be required:

- Desktop computer with web camera microphone & output speaker or laptop with microphone camera and output speaker
- Large display screen /projector/TV

Important Dates

- See the "How to apply / Course Registration" section on details of enrolment process.
- The last date for receiving online applications for the course on **April 21, 2023** Till 1730 hrs
- The course will be conducted online during April 24-28, 2023 via the IIRS eclass platform <https://eclass.iirs.gov.in/>

Course Fee: **NIL**

There is no course fee for live and interactive course.