

MSc. in Geoinformatics

Master of Science in Geoinformatics offered by the Indian Institute of Information Technology and Management-Kerala, addresses the scientific use of a rapidly increasing flood of geographical information, the increasing importance of geospatial information to several organizations, and the developing market in spatial and geo-referenced information for the mobile Web. The goal of the Geoinformatics programme is to provide students with both the breadth and depth of knowledge in geoinformatics required for solving real-world problems. The students will gain the unique knowledge and skills necessary to facilitate the design, development, and deployment of complex systems and applications in a rapidly emerging geoinformatics profession. Graduates will be able to deploy and manage geoinformation systems in industry, conduct research in geotechnologies. Students completing this course will be equipped to follow careers in managing, presenting and analysing spatial and geographic information, or developing spatial and geographic systems and applications in a wide variety of organisations and application areas. The technology enhanced e-learning methodologies with web based course management system and on-line learning system enriches the programme, allows broadening their horizons.

The duration of the programme is 2 years and the courses are carefully designed to attain both scientific and technical aspects that enable them to grow into competent, seasoned professionals. There are 13 core courses spread across 3 semesters accumulating 48 credits. The 4th semester is for internship of credit 18. Students are required to undergo an industry or research oriented project in any leading IT or R and D organizations. Students are also required to take up two electives of 6 credits and the total requirement of credit is 72.

Salient Features

- Students are selected through an entrance examination conducted by CUSAT
- Students are provided with high-end network and software services and Lab, e-learning technologies, and multimedia facilities
- Courses at basic and advanced levels with cutting edge technologies
- Highly qualified Faculty actively engaged in teaching and research. Also Visiting Faculty from leading institutes and industries.
- Support of Digital Library with good collection of e-journals, e-books, online reports and other digital materials.
- Multimedia Digital Library with course videos available at any time.
- Teamwork and students community and collaboration group enable healthy exchange of information.
- Students can participate in ongoing research and technology development, live projects and networks.
- The technology enhanced learning methodology and e-learning framework allows students to learn at anytime in their own pace.]
- Internship in highly reputed institutions like IITs, IISc, NIIST, INCOIS, NAARM etc.
- Exposure and experience in Live projects
- All the students of the passing out batch have well placed.

- Situated in Technopark, India's largest IT park that hosts over 150 IT companies allows students to interact with techies and get in touch with current technologies and developments.

Eligibility

Bachelor's Degree in any Science/Engineering/Technology branch with Mathematics / Geology /Geography as one of the subjects of study in that course, with a score of 60 % marks or above or CGPA of 6.5 or above in 10 points scale in the qualifying examination. SC/ST candidates are eligible for admission, if they have minimum pass marks in the qualifying examination. Students who are in final semester / year and appearing for the exams shortly can also apply.

Admissions

Students shall be selected through an entrance examination conducted by Institute under the supervision of CUSAT for both Basic Sciences and general aptitude. Reservation of seats for SC/ST, OBC. is applicable as per government rules. The final selection of the candidates is done through an interview from the short listed candidates of written test. The total intake of the student is 40.

Course Fee

The course fee for Masters programme is Rs.1,20,000/-. The fee is payable in four equal installments of Rs. 30,000/-

Courses (New Pattern)

The student should have earned 48 credits from the following 15 core courses (Theory-11, Lab-4):

Semester I

- GIM210 Principles of Remote Sensing
- GIM2102 Introduction to GIS
- GIM2103 Geodesy and GPS
- GIM2104 Introduction to IT
- GIM2105 Principles of Programming

- GIM2106 Remote Sensing Lab
- GIM2107 GIS Lab

Semester II

- GIM2201 Digital Image Processing
- GIM2202 Photogrammetry
- GIM2203 Spatial Modeling & Analysis
- GIM2204 Database Management System
- GIM2205 Elective
- GIM2206 Spatial Modeling & Analysis Lab
- GIM2207 Digital Image Processing Lab

Semester III

- GIM2301 Geostatistics
- GIM2302 GIS Customization and Application Development
- GIM2303 Web Mapping and Web GIS
- GIE2304 Elective II
- GIM2305 Elective III
- GIM2306 Computing Lab
- GIM2307 Web Application Lab

Semester IV □ □ □ **project**

- GIM2407 Project

Electives for Semester II

1. GIE 22** Web Technology
2. GIE 22** Geoinformatics Applications in e-Governance

Electives for Semester III

1. GIE 23** Geoinformatics Applications in Natural Resources Management
2. GIE 23** Geoinformatics Applications in Agriculture
3. GIE 23** Geoinformatics Applications In Water Resources Management
4. GIE 23** Geoinformatics Applications in Health Care

Geoinformatics Lab

The institute has set up a most advanced Geoinformatics lab equipped with the following infrastructure

- Geoinformatics Hardware: Hand Held GPS, PDA GPS, Vehicle Tracking Unit, Differential Global Positioning System - Leica DGPS, HP Scannerplotter, GPS enabled Tablets, Dedicated Server with two SixCore Intel Xeon Intel X5675 Chipset, 24 GB DDR3 Memory with a hard disk capacity of 5 TB

- Geoinformatics Software: ArcGIS for Desktop 10.1, ArcGIS for Server 10.1, ArcPAD 10, ERDAS 2011 with Leica Photogrammetric Suite, IDRISI selva, Autodesk design ultimate

- FOSS for Geoinformatics: GRASS GIS, Quantum GIS, gvSIG, MapGuide Open Source, Geoserver, MapServer, PostGIS, Geonetwork, ILWIS Open