

TERI SCHOOL OF ADVANCED STUDIES

PLACEMENT BROCHURE

2023

M.Sc. Geoinformatics



Chancellor's Message

Established as an institution of higher learning, TERI School of Advanced Studies aims at creating knowledge and human capacity that enables transition towards a more sustainable world.

The foundation of the institute was laid by the Energy and Resources Institute a not-for-profit, independent research organization globally known for its contribution to scientific and policy research in the realm of energy, environment and sustainable development.

As a leader in sustainability education in India and abroad, TERI School of Advanced Studies (TERI SAS) has been transforming students into sustainability professionals who bring sustainable solutions to the problems that hinder growth in rapidly developing countries like ours.

With the help of an interdisciplinary curriculum taught by a multi-disciplinary faculty, the institute imparts world-class education in domains such as climate change, energy, environment, urban development, policy, water resources, biotechnology, geoinformatics and sustainability management among others.

A series of niche programmes offered by the institute that cater to the demands of the industry and are subjected to constant amendments which enable our students to face and resolve issues with ease.

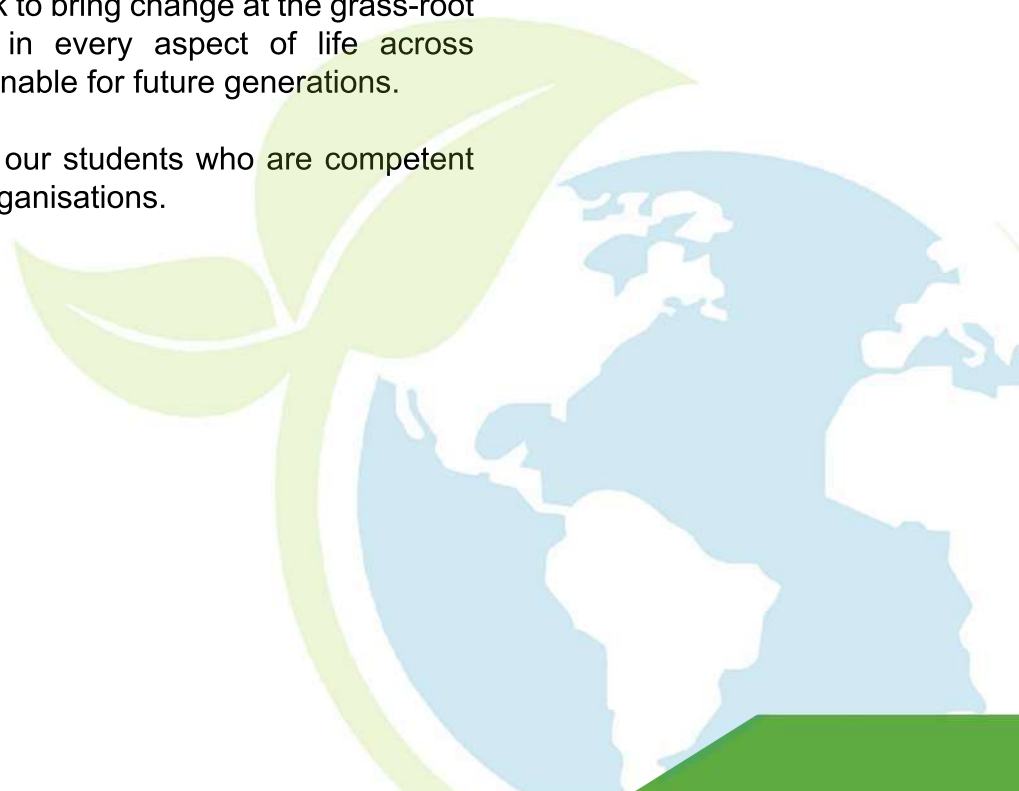
The feedback from the academic peers, employers and other stakeholders always motivate us to work towards improving our teaching methodology and curriculum.

Whether it's the organizations of global relevance such as the United Nations or the organizations that work to bring change at the grass-root level, our alumni are contributing in every aspect of life across continents to make earth more sustainable for future generations.

Therefore, I welcome you all to hire our students who are competent leaders and will be great assets to organisations.



Dr Shailesh Nayak,
Chancellor, TERI SAS



Vice-Chancellor's Message

Dear Development and Industry Partners,

With an aim to create empowered professionals and thought leaders that better aligns the sustainability considerations in pursuit of economic growth and human welfare, TERI School of Advanced Studies (TERI SAS) is a unique institution of higher learning and cutting edge research.

The academic programmes at the TERI SAS have been designed by keeping in mind the challenges of rising population, already depleting and over-exploited natural resources, and opportunities for sustainable development. Over the years, our alumni engaged in diverse domains of various national and international organizations have been the ambassadors of our vision of creating knowledge for sustainable development in both public and private sectors.

The state-of-the-art research by our faculty members helps us to keep our programme curriculum cutting edge, interdisciplinary and solution-oriented. TERI SAS has been a pioneer in sustainability education and it's the unique combination of our multidisciplinary faculty and interdisciplinary curriculum that separates us from the rest of the institutes.

The curriculum ensures that the students inculcate and imbibe the problem-solving attitude through regular engagement with research projects, industry exposure and field visits.

TERI SAS believes in continuously adapting to the change taking place around the world. The feedback from the academic peers at the domestic and international levels, from employers of our alumni and other stakeholders including our students help us to make key amendments in our curriculum and teaching pedagogy.

The multicultural setting comes naturally to TERI SAS as we have students from the diverse regions across India with international students who continuously exchange ideas and experiences, making the institute truly global.

We are certain that you will find our graduates to be competent leaders who adhere to constructive engagements with analytical skills, well versed with contemporary developments in their domains and have solution-oriented approaches. Our graduates will be assets to organizations acclaiming on sustainability.

I welcome you all for the campus recruitment.

Thanking you and best regards,



Prof. Prateek Sharma
Vice-Chancellor(Acting), TERI SAS

About TERI SAS

TERI SAS (earlier TERI University) was established to disseminate knowledge arising from research and development undertaken by The Energy and Resources Institute (TERI), a not-for-profit, independent research institute recognized globally for its contribution to scientific and policy research in the realms of energy, environment, and sustainable development.

In 1999, the University was granted the 'Deemed to be University' status by the University Grants Commission (UGC) and notified vide the Ministry of Human Resources Development, Department of Education, Government of India, notification no. F.9/19/95-U-3, dated October 5, 1999. TERI SAS is also accredited by National Assessment and Accreditation Council (NAAC) with grade "A".

TERI SAS academic programmes are envisioned to provide students with a holistic perspective of the subjects offered and encourage interdisciplinary learning. The University aspires to be an institution of advanced learning which meets the needs of a rapidly growing nation. The University uses modern pedagogical tools, richly supplemented by comprehensive field trips, live industry projects, and hands-on applications.

Administration

The University's Board of Management is responsible for its overall administration and control. All aspects of academic policy are under the purview of the Academic Council, chaired by the Vice Chancellor, which approves curricula, courses and examination results.

ACADEMICS

Since its inception, the wide array of academic programmes offered by TERI SAS have been related to sustainable development and structured around four thematic areas—biotechnology, regulatory and policy aspects, energy and environment, and natural resources.

The University is a first-of-its-kind university in India to dedicate itself to the study of environment, energy, law, water resources, business sustainability and natural sciences for sustainable development.

INFRASTRUCTURE

TERI SAS provides well-equipped laboratories, advanced computer hardware and software, video-conferencing facilities and access to South Asia's most comprehensive library on energy and environment.

Green Campus

Spread over two acres, TERI SAS Green campus comprises of an administrative block, an office block, a convergence and a hostel block. The green campus provides a setting that enhances learning while simultaneously showcasing the concept of modern green buildings including insulation of external walls, terrace insulation, Hunter Douglas louvers, solar water heating system, waste water recycling, rainwater harvesting, solar rooftop system, LED lights and a windmill.

The Academic Council

Chairperson

Prof. Prateek Sharma

Professor & Vice Chancellor (Acting), TERI SAS

Deans

Prof. Ramakrishnan Sitaraman

Professor & Dean(Academic)

Prof. Shaleen Singhal

Professor & Dean(Research & Partnerships)

Prof. Anandita Singh

Professor & Dean(Student's Welfare)

Heads of the Departments

Dr Sudipta Chatterjee

Prof. Vinay Shankar Prasad Sinha

Prof. Naqui Anwer

Dr Sukanya Das

Dr Chaithanya Madhurantakam

Professors

Prof. Arun Kansal

Two Associate Professors from Departments

Dr Chander Kumar Singh

Dr Smriti Das

Two Assistant Professors from the department by rotation of seniority

Dr. Shruti Sharma Rana

Dr Anu Rani Sharma

Nominee by the Vice Chancellor

Prof. Shreekant Gupta

Professor, Delhi School of Economics, University of Delhi

Prof. P.S.N. Rao

Director, School of Planning and Architecture

Prof. Sagnik Dey

Institute Chair Professor, Centre for Atmospheric Sciences, Indian Institute of Technology Delhi

Prof. T C Kandpal

Professor, Centre for Energy Studies, Indian Institute of Technology Delhi

Dr. Vivek Suneja

Faculty of Management Studies, University of Delhi

Prof. Suresh Jain

Professor, IITD

Co-opted Members

Mr. Manoj Chugh

President – Group Public Affairs & Member of the Group Executive Board Mahindra & Mahindra Ltd

Mr. Rahul Mittal

Director, International Tractors Ltd.

Dr Sabhyata Bhatia

Staff Scientist VII, National Institute of Plant Genome Research, New Delhi

Mr. Shubhashis Dey

Director – Climate Policy Program, (Low Carbon Development, Air Quality & Climate Finance), Shakti Foundation

Mr. Niraj Sharma

Chief Scientist, TPE Division, CSIR-Central Road Research Institute

Dr Bidyut Kumar Bhadra

Dy. General Manager, Regional Remote Sensing Centre-North, National Remote Sensing Centre, Indian Space Research Organisation

Dr Madhusudan Sau

Executive Director, R&D Centre, Indian Oil Corporation Limited

Mr. Sudhir Vadehra

Ex-Advisor, Ministry of Power; and Executive Director, REC (Retd)

Controller of Exams

Prof. Shashi Bhushan Tripathi

Secretary

Mr. Kamal Sharma

Registrar (Officiating), TERI SAS

Board of Management

Chairman

Prof. Prateek Sharma
Professor & Vice Chancellor (Acting),
TERI SAS

Deans

Prof. Ramakrishnan Sitaraman
Professor & Dean (Academic), TERI
SAS

Prof. Shaleen Singhal
Professor & Dean (Research &
Partnerships), TERI SAS

Three eminent Academicians nominated by Chancellor

Prof Basabi Bhaumik
Former Professor, IIT Delhi

Dr Sachin Chaturvedi
Director General, Research and
Information System for Developing
Countries (RIS)

Dr Swati Basu
Former Director, National Centre for
Medium Range Weather Forecasting
and Former Scientific Secretary, PSA's
Office, Government of India

Nominee of Sponsoring Society

Dr V.P. Singh
Regional Rep for South Asia,
International Centre for Tropical
Agriculture

Prof. Nitya Nanda
Director, Council for Social
Development

Mr. O P Agarwal
Former IAS and former CEO of WRI

Two teachers (from Prof and Associate Prof)

Prof. Anandita Singh
Professor, TERI SAS

Dr Sukanya Das
Associate Professor, TERI SAS

Secretary

Mr. Kamal Sharma
Registrar (Officiating), TERI SAS

ACADEMICS

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Department of Natural and Applied Sciences

Quality of life depends on the quality and quantity of natural resources available for use in equitable ways. The world today faces an unprecedented challenge of sustainability. Finding a balance between meeting the needs of human population and maintaining integrity of nature around us is the foremost question of our times. It is imperative to understand how natural processes and systems work around us and how to best use them in pursuit of this balance. The Department of Natural and Applied Sciences (DNAS) at TERI SAS is established to impart training for engaging with the questions of natural resource management in a scientifically rigorous manner. It houses faculty members from a diverse academic disciplines with a focus on applied research for informed decision making.

DNAS offers four distinct interdisciplinary masters programs in Biotechnology, Climate Science and Policy, Environmental Science and Resource Management, and Geoinformatics; and two transdisciplinary Ph.D. Programs in Bioresources and Biotechnology, and Natural Resource Management.

Students pursuing their Master's / Doctoral programme at DNAS are exposed to an academically rigorous and interdisciplinary learning environment with a significant emphasis on laboratory work and engagement with contemporary debates, emphasizing exploration and creative thinking and application as essential ingredients of originality in research and learning.

Department of Policy and Management Studies

The primary challenge of the human being is to improve quality of life across generations, an objective now widely recognized as Sustainable Development. This challenge necessitates numerous interventions concerning each of its components: environmental, social and economic. These interventions range from eradication of hunger and poverty to reduction in inequality; from the provision of quality education, good health, decent work environment, water, sanitation, affordable and clean energy to fostering gender equality; from economic growth to effective institutions; from responsible consumption and production to taking urgent actions to combat climate change.

The Department of Policy and Management Studies (DoPMS) at TERI School of Advanced Studies (TERI SAS) aims to contribute to theoretical and empirical enquiry towards informed prescriptions, implementable policies, sustainable practices and management through research, teaching and training. The continued research in sustainability for the business is also one of the key concerns of the Department.

Faculty of the Department have disciplinary backgrounds in Anthropology, Economics, Population Studies, Sociology, Finance & Accounting, Corporate and Commercial Laws, Public Health, Strategy, Business Sustainability, Circular Economy Finance, Climate Finance, Development Studies and Public Policy. Such disciplinary enables the promotion of multi-disciplinary research and learning at the economy-society-ecology interface. The faculties are engaged in active research in their disciplines as well as within the broad theme of sustainable development. This is reflected in their publications, sponsored projects, consultancies and training programmes and supervised research. The faculty regularly engage with the scientific community through seminars and conferences, participate in different forums as experts or resource persons, and engage with the general public through their lectures, print and digital media.

Department of Sustainable Engineering

Over the past half century, the global community has been debating the mode of economic growth, amid challenges of environmental degradation, energy transition and climate change. India among the several emerging economies, though at crossroads, it has chosen a trajectory of sustainable development for ensuring inter-generational equity and inclusiveness in its growth journey. As India is growing economically amid an increased pace of urbanization, the burden on resource utilization and management has increased Substantially. Two prominent sectors such as energy and urban development facing challenges which are bound to increase due to climate change. Addressing these challenges will require trained professionals who can assess the problems, think critically by integrating multiple sectors and create evidence-based solutions. The focus of Department of Sustainable Engineering (DSE) at the TERI SAS is to develop a cadre of professionals having requisite knowledge and skillsets towards addressing the current and envisaged challenges faced by humanity by promoting scientific, technological and policy innovations for strengthening local, regional, and global development agendas.

DSE offers MTech and doctoral programmes in areas of Renewable Energy Engineering & Management (REEM), and Urban Development Management (UDM). The Department is cognizant of the complex environmental, socio-economic, and political challenges that require an integrative approach towards engineering and sustainability. The DSE encourages collaboration with relevant stakeholders including industry, government, academic & research institutions, and multi-lateral organizations to deliver practice-informed research and teaching.

The curriculum of programmes offered by DSE is an eclectic mix of foundational and advanced courses which promotes both critical and creative thinking. The students at DSE are drawn from diverse branches of engineering, science, architecture, and planning which cultivates robust peer learning. The faculty at the DSE has wide experience and expertise across multiple domains, touching upon the two main themes of the Department – renewable energy and urban development.

Coca-Cola Department of Regional Water Studies

The Coca Cola Department of Regional Studies was created in 2014 with a mission to create a cadre of water professionals who can provide systematic solutions to enhance water security. The water science and governance programme aims to prepare regional water champions who can address water problems in a holistic manner that encompasses both the science of water management and the governance and an enabling policy environment with a healthy blend of theory and practice. The teaching programme focuses on cross cutting issues of water resources through science, engineering, legal, socio-economic and institutional dimensions.

The Department offers two Master's level programmes and Ph.D. programme. The M.Sc. programme in Water Science and Governance is an interdisciplinary program with emphasis on development of social, economic, institutional and governance perspectives. The water professionals graduating from TERI SAS are equipped to examine water issues in a trans-boundary and cross-cultural framework transcending environmental science, social, economic and legal discourses. The M. Tech programme in Water Resources Engineering and Management integrates engineering and technological theories with socio-economic principles. The courses address the technical, social, economic, legal and political dimensions of water. Interdisciplinary in its scope and objectives, the programme prepares students for a rewarding and challenging career in water resources management.



COLLABORATIONS

Stressing the importance of the international perspective in its programmes, TERI SAS has entered into Memorandums of Understanding (MoUs) with several international universities aimed at facilitating a mutually beneficial exchange of students, faculty, knowledge, resources, and ideas.

Organisation with which MoU is signed

Freie University, Berlin

The Heller School for Social Policy and Management,
Brandeis University

Himalayan University Consortium Charter University of
Iceland

Sambhram Institute of Technology, Bangalore & TERI,
Bangalore

The University of the West Indies, Kingston, Jamaica

Environment Protection Training and Research Institute,
Telangana, India

Karl-Franzens-University, Graz; Ca'Foscari University,
Venice; Leipzig University, Germany; Utrecht University,
Netherlands; Basel University, Switzerland; Hiroshima
University, Japan; Stellenbosch University, South Africa

Gurugram Metropolitan Development Authority, Haryana

Institute for Future Cities, University of Strathclyde,
Glasgow, United Kingdom

Kwame Nkrumah University of Science and Technology,
Kumasi, Ghana

Future Himalaya Institute (FHI), Kathmandu, Nepal

Faculty of Graduate Studies, University of Sri
Jayewardenapura, Sri Lanka

National Institute of Disaster Management (NIDM), India

Purbanchal University, Nepal

The University of Victoria, B.C., Canada
Deakin University, Australia

SM Sehgal Foundation, Gurugram

CPWD, New Delhi

University of Science, Engineering and Technology,
Gambia

Lomonosov Moscow State University

Linnaeus University, Sweden

Mahindra & Mahindra Ltd.

Humboldt University, Berlin

EKI-Energy Services Limited

Canvest Infracapital Inc., Canada

DHAN Academy, Tamil Nadu

Centre for Public Policy Research, Kerala

Emerson Electric Co (I) Pvt. Ltd, Pune, Maharashtra

National Bureau of Plant Genetic Resources

University of Rhode Island, USA



INFRASTRUCTURE

TERI SAS provides the best equipment and instruments, which includes a state of the art computer hardware and software, well-equipped laboratories, video-conferencing facilities and access to South Asia's most comprehensive library on energy and environment.

Green Campus

Spread over two acres, TERI SAS Green campus comprises of an administrative block, an academic block, a convergence and a hostel block. The green campus provides a landscape that enhances learning while simultaneously showcasing the concept of modern green buildings including insulation of external walls, terrace insulation, Hunter Douglas louvers, solar water heating system, waste water recycling, rainwater harvesting, solar rooftop system, LED lights and Wind turbines.

Laboratories

TERI SAS laboratories are equipped with advanced equipment and facilities to aid and stimulate research.

The different laboratories at TERI SAS are:

Environmental Monitoring Laboratory

The laboratory has been created with the objective of providing a facility with all the basic equipment required for the analysis of environmental samples (soil, waste, water, and air). It caters to the interdisciplinary application of research to all the master's students (science-based) of the Deemed university. This laboratory facility is common for M.Sc./M.Tech. (ESRM, CSP and WSG) programs

Combustion Lab

The combustion lab was established in 2009 with the initial funding received from DST project and MNRE projects. It is a small lab however equipped with instruments used for emission and thermal efficiency testing. Primarily, we conduct experiments based on internationally accepted protocols viz, water boiling test (WBT) and kitchen performance test (KPT) in the above-mentioned lab. The hood methodology is used to capture and quantify the various products of incomplete combustion.

Environment Lab

The laboratory supports master's level experiments pertinent to the laid curriculum. The lab is equipped with instruments required for environmental analysis (soil, water, and air). The laboratory is capable to perform analysis on drinking water, wastewater, surface and groundwater, soil, and sediments, including air quality monitoring, and basic microbial analysis. Laboratory also supports various training programs offered by the university in the associated fields. This laboratory facility is common for M.Sc. (ES, WSG, and CSP) programs.

Centre of Excellence in Thermal Energy Storage

The laboratory is equipped for research on new thermal storage system development for sub-ambient, low, and medium temperature applications and characterizing storage material properties for optimal system design.



Heat transfer laboratory

The laboratory provides hands-on training to students to understand various heat transfer modes, devices and to quantify their characteristics parameters or properties.



Power Systems laboratory

The lab provides fundamental experimental knowledge on different equipments used in electrical power system at various loading conditions and to measure their characteristics.

Hybrid Micro Grid (HMG) laboratory

The lab houses solar PV system, wind turbine, battery energy storage and connected together to develop a hybrid micro grid. The research facility is used for carrying out power flow experiments.

Energy Simulation Laboratory

The lab is equipped with the state of the art software used in Renewable Energy industry. The lab provides in-depth understanding on design, simulation, financial analysis and optimization of various renewable energy technologies for plant/system design and other applications.

Biofuel and Waste Utilization Laboratory

The lab is used to conduct research experiments on the combustion process, fuel properties, biomass conversion, and pyrolysis.

Solar Energy Laboratory

The lab is equipped with outdoor and indoor experimental facilities to conduct experiments on the characterization of solar photovoltaics modules, radiation measurement, and performance analysis of various solar thermal devices/systems.



Geoinformatics Laboratory

The TERI SAS geoinformatics laboratory is well equipped with state-of-the-art equipment such as state-of-the-art computers (workstations), a scanner, printer, plotter, navigation devices, infrared thermometers, etc. It has license for high -end commercial software's like ERDAS Imagine, LPS, ArcGIS, MIKE, GMS, and WEAP along with other advanced support system's mechanism. The laboratory is also equipped with web publishing tools like ArcGIS Advance and ArcIMS Servers. The laboratory is **also fitted with various open-source** geospatial softwares to expose our students to the powerful open-source environment.

The laboratory holds a good repository of geospatial information in both digital and hard formats. The Geoinformatics laboratory of the Department of Natural and Applied Sciences of TERI SAS has a solid network with several research establishments and Universities working in Geoinformatics and other associated fields both within and outside the country. We also support R&D activities of various centres of The Energy Resources Institute (TERI) branches located across the country.



Analytical and Geochemistry Laboratory



The analytical and geochemistry lab caters the needs for research in understanding the earth sciences problems and providing solutions to these problems. The researchers in the laboratory are currently engaged in understanding the natural occurrence of Arsenic, Fluoride and Uranium in groundwater. The lab also has developed prototype nano-materials to remove such geogenic contaminants from groundwater to provide safe drinking water. The lab has established linkages to Lamont Doherty Earth Observatory, Columbia University; Dept. of Engineering,

Massachusetts Institute of Technology, Stanford University. The lab also has developed linkages with institutions in India such as IIT Kharagpur, IIT Guwahati, Jawaharlal Nehru University, SPCB Bihar, Drinking Water Supply and Sanitation, Punjab, Board of Research in Nuclear Sciences etc. The laboratory houses several water field testing kits, flame photometer, double beam spectrophotometer, LED-Fluorimeter, Radiation Survey Meter, Air-dry Oven, Sonicator, pH meter, Muffle furnace, Ion selective Electrodes, Conductivity meter etc.

Biotechnology Laboratory

The Biotechnology Laboratories at TERI SAS are equipped for teaching and research in Biotechnology. The laboratories harbor both basic as well as sophisticated equipment used in modern biotechnology research. In addition to these, the Bioinformatics laboratory is equipped with a high capacity server, workstations and dedicated computers with advanced software such as MATLAB, GCK, PAUP and MacVector. There are two laboratories for M.Sc. teaching and two research laboratories. Furthermore, the students also have access to TERI's research laboratories at Gwal Pahari.



Some of the major equipment installed in the laboratories are listed below:

- | | | |
|--------------------------|-----------------------------|--|
| ●Real time PCR | ●Centrifuges | ●Spectrophotometer |
| ●Zeta Potential Analyzer | ●Incubator Shakers | ●SE 600 Ruby complete, 2D, Vertical Gel unit |
| ●Refrigerators | ●Thermal cyclers | ●2D Gel Electro power supply, EPS 601, GE |
| ●Microscopes | ●EVOX-XL Microscope | ●Gel Doc system XR |
| ●Laminar Flows | ●Nanodrop Spectrophotometer | ●Ice Franking Machine |
| ●Power Pack/Power supply | ●Gene Pulser X Cell | ●Growth Chamber GC - 100 |
| ●BOD Incubator | ●HB-1000 Hybridization Oven | ●Electronic Balances |
| ●Deep freezers -20°C | ●Stereo Zoom Microscope | ●Deep Freezer -80°C |
| | | ●Solar PV Simulator |

Library

One of the key infrastructures of TERI SAS is its well developed and centrally organised library. The library has a number of electronic services and an ever-wider range of resources in order to support teaching, learning and research. The Library also engages in partnership initiatives with academic colleagues and national and international universities. The services are offered electronically through a web-enabled integrated digital information system.



MSc Geoinformatics

M.Sc. Geoinformatics Programme Outline

The M.Sc. (Geoinformatics) Programme comprises a set of core courses taught during the first and second semesters. This is followed by a minor project to be completed during the summer through an internship. A set of advanced courses and elective courses taught in the third semester allows the students to gain in-depth knowledge in this field and specialize in a theme of interest.

In the third semester, students are also required to take up three group research projects demonstrating their knowledge in applying geospatial technology for studying atmosphere, hydrosphere, and biosphere of Earth system.

This encourages the students to take up research and get a feel of real-time research project experience. In the final semester, the students must carry out a semester-long research project preferably in a company or organization outside the Institute to gain exposure to professional experience which also includes tackling real-life situations.

SEMESTER 1

COURSE TITLE	TYPE
Principles of GIS & GNSS	Core
Principles of Remote Sensing	Core
Fundamentals of Computers and Programming	Core
Fundamentals of Physics	Core
Principles of Cartography	Core
Applied Mathematics	Core
Environmental Statistics	Core
Communication Skills and Technical Writing	Core

SEMESTER 2

COURSE TITLE	TYPE
Digital Image Processing and Information Extraction	Core
Programming in Geoinformatics	Core
Research Methodology & Thesis Writing	Core
Spatial Data Modelling and its Applications	Core
Law & Policy for Maps and Remote Sensing	Core
Project Management	Core
Photogrammetry	Core
Multivariate Data Analysis	Core

SEMESTER 3

COURSE TITLE	TYPE
Advances in GIS and Current Trends	Core
Advances in Remote Sensing: Thermal, Hyperspectral, Microwave, LIDAR and UAV	Core
Applications of Geoinformatics for Land Resources	Core
Applications of Geoinformatics for Water Resources	Core
Applications of Geoinformatics for Atmosphere	Core
Geocomputation	Elective
Integrated Watershed Management	Elective
Wildlife Conservation and Management	Elective
Minor Project	Core

SEMESTER 4

COURSE TITLE	TYPE
Major Project	Core

FACULTY PROFILE



Dr. Anand Madhukar

Assistant Professor

Department of Natural and Applied Sciences

Areas of Expertise

- Climate Change Impact
- Adaptation and Mitigation
- Climate- Agriculture Interface



Dr. Anu Rani Sharma

Assistant Professor

Department of Natural and Applied Sciences

Areas of Expertise

- Atmospheric Aerosols and Trace Gases
- Ground Measurements, Solar irradiance
- Climate Change
- Satellite Remote Sensing of Air Pollution
- Radiative Forcing



Dr. Chander Kumar Singh

Assistant Professor

Department of Natural and Applied Sciences

Areas of Expertise

- Geochemistry
- Groundwater
- Hyperspectral Remote Sensing



Dr. Chandrashekhar Azad Vishwakarma

Assistant Professor

Department of Natural and Applied Sciences

Areas of Expertise

- Watershed/ springshed management
- Surface-subsurface hydrology
- Hydrochemistry





Prof. Prateek Sharma

Vice Chancellor & Professor Department of Sustainable Engineering

Areas of Expertise

- Environmental Modelling
- Statistical Applications in Environmental and Water Resources Engineering
- Environmental Risk Assessment



Dr. Sudipta Chatterjee

Associate Professor

Department of Coca-Cola, Department of Regional Water Studies

Areas of Expertise

- Forest Management
- Vegetation
- Wetland
- Wildlife Conservation



Dr. Vinay Shankar Prasad Sinha

HoD, Professor

Department of Natural and Applied Sciences

Areas of Expertise

- Water Resources & Urban
- Spatial Modelling
- Remote Sensing & Geoinformatics

Guest Faculty

Mr. Karan Sharma
Dr. Ashwani Kumar
Mr. Piyush Dubey
Dr. Suneel Deambi
Ms. Pratibha Bhaisora



Field Trip

Field trip to Uttarakhand was organised by Prof. Vinay Shankar Prasad Sinha on 28th March, 2022. The objective of the trip was to observe the geology, geomorphology, environmental conditions, and hydrogeological structure of the study sites in the Garhwal district of Uttarakhand to evaluate the scarcity of water in the region and the steps needed to carry forward spring rejuvenation. Students further postulated amendments to the existing development scheme of the region, bearing in mind the socio-economic conditions of the region. Students also paid a visit to the Tehri dam and understood its functioning through a view of its powerhouse.



Seminar on Space and Sustainability

Every year from October 4 to October 10, the "World Space Week" is observed to remember the launch of Sputnik-1, the planet's first artificial satellite, and to mark the signing of the historic treaty for "Peaceful use of outer space". TERI SAS in collaboration with RRSC-North, NRSC - ISRO organised World space week (Hybrid mode) on 10th October, 2022. Eminent scientists from RRSC-North, namely Dr B.K. Bhadra and Dr Vinod Sharma, engaged students with speeches on the vast range of undertakings by them and held an insightful quiz competition. A space exhibition was arranged to expose the students of TERI SAS to the indigenous space technologies prevalent and its usage.



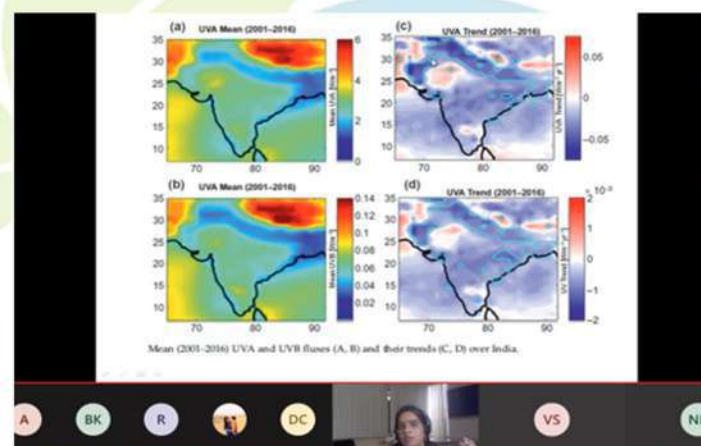
Industry Exposure

Industry experts are invited to interact with students of Geoinformatics to expose them to the work prevalent in the geospatial arena and the upcoming developments. This allows students to learn and stay ahead, keeping in mind the needs of the industry. From ISRO Scientists to geospatial startups, the exposure provided is vast and paves a way for students to work towards the career they envision for themselves.

A strong connection with the alumni is maintained throughout, which is a crucial element to keep students in tune with the industry and equip them with the knowledge and resources that would enable them to carve a successful career and fulfil their goals and ambitions.

Guest Lectures

	Title	Speaker	Designation
1	Geospatial technology transformation	Mr. Dwaipayan Dighal	Industry Head-Education, ESRI
2	Location is the new dimension to your future career	Ms. Senjuti Senayan	Research & Development Manager, Here Technologies
3	Geospatial technology for Air Pollution monitoring	Dr. Anu Rani Sharma	Assistant Professor, TERI SAS
4	Remote Sensing for crop insurance	Dr. Sunil Dubey	Assistant Director, Mahalanobis National Crop Forecasting center
5	Remote Sensing For Geological Applications	Dr. Bidyut Kumar Bhadra	National Remote Sensing Centre
6	Springshed Management and Forest Hydrology in Indian Himalayan Region	Dr. Vinay Sinha	HOD and Professor, TERI SAS



Extra Curricular Activities

• **SPIC MACAY Heritage Club**

Under the banner of SPIC MACAY, various events are organised with an aim to increase students awareness and ability to appreciate various aspects of Indian and World Heritage. Various artists are invited to the TERI SAS campus to showcase their respective art form.

• **Global Climate Change Week (12-18 October)**

The GCCW was organised with an aim to engage with one another on matters of climate change action and solutions. Various talks were held, with people from different walks of life, all involved in work related to climate change. Engaging events surrounding this theme were also organised.

• **Eco-charcha**

This is a platform for students to get together and discuss various emerging environmental issues. Relevant and interesting themes are brought up for each Eco-charcha session and enlightening and engaging discussions take place.

• **Sports events**

Volleyball, table tennis, badminton, basketball, carom and chess among other sports are avidly played at TERI SAS. Apart from the annual sport event, sports weeks are organised frequently; a reflection of the spirit that exists on campus.

• **Cultural events**

• **Blood donation drives/camps**

• **Plantation drives**

• **Nature walks**

• **Plogging**

• **Marathons**



Students' Profile



Aakash Warman
B.Sc. Electronics

Grad. Passing Year: 2021

Grad. College: St.Xavier's College, Ahmedabad

Minor Project Organisation: National Centre for Medium Range Weather Forecasting (NCMRWF)

Minor Project Topic: Visualization of Meteorological variables using Iris in Python Environment



Aayush Verma
B.A. (Hons.) Geography

Grad. Passing Year: 2021

Grad. College: Shaheed Bhagat Singh College, University of Delhi

Minor Project Organisation: Gramener

Minor Project Topic: Analysing Climate Risks and Opportunities on Physical Assets in Investment Portfolios using STAC



Afrin Zaidi
B.A. (Hons.) Geography

Grad. Passing Year: 2020

Grad. College: Dyal Singh College, University of Delhi

Minor Project Organisation: Indian School of Business (ISB), Hyderabad

Minor Project Topic: Bamboo Inventory Mapping In Central Indian Landscape



Anandi Mathur
B.Sc. Life Sciences
(Chemistry, Botany and Zoology)

Grad. Passing Year: 2020

Grad. College: Christ (Deemed to be) University

Minor Project Organisation: CSIR- National Institute of Oceanography

Minor Project Topic: Flood Mapping of Goa



Arkadipta Das
B.Sc. Geography (Hons.)

Grad. Passing Year: 2021

Grad. College: Shri Shikshayatan College, University of Calcutta

Minor Project Organisation: Indian Institute of Engineering Science and Technology (IIST), Shibpur

Minor Project Topic: Urban Sprawl and Resultant Land Use and Land Cover Change Detection In And Around East Kolkata Wetlands For Past 30 Years



Aswin S
B.Sc. Geoinformatics

Grad. Passing Year: 2021

Grad. College: Amity University, Noida

Minor Project Organisation: Indian School of Business (ISB), Hyderabad

Minor Project Topic: Exploring Dimensions of Satellite Derived Nightlight Data



Hemakshi Malik
B.Sc. Physical Sciences
with CS

Grad. Passing Year: 2019

Grad. College: Hansraj College, University of Delhi

Minor Project Organisation: Mahalanobis National Crop Forecast Centre (MNCFC), New Delhi

Minor Project Topic: Comparison of Different Classification Algorithms for Crop Acreage Estimation



Isha Sharma
B.Sc. Physics (Hons.)

Grad. Passing Year: 2020

Grad. College: Hindu College, University of Delhi

Minor Project Organisation: Indian School of Business (ISB), Hyderabad

Minor Project Topic: Exploring Methods Of Spatial Clustering And Allocation: Facilitating Rapid Security Of Tenures Under FRA



Kanchan Tomar
B.Sc. Geology

Grad. Passing Year: 2021

Grad. College: Banasthali Vidyapith

Minor Project Organisation: Indian School of Business (ISB), Hyderabad

Minor Project Topic: Exploring Dimensions of Satellite Derived Nightlight Data



Kanika Bhatia
B.A. (Hons.) Geography

Grad. Passing Year: 2021

Grad. College: Shyama Prasad Mukherjee, University of Delhi

Minor Project Organisation: Indian School of Business (ISB), Hyderabad

Minor Project Topic: Synergistic co-benefit framework analysis using Geospatial Simulation, A case study of fertilizers shift in Narmada District, Gujarat.



Kriti Dadhichi
B.Sc. (Mathematics, CS,
Physics)

Grad. Passing Year: 2020

Grad. College: Miranda House, University of Delhi

Minor Project Organisation: Indian Institute of Remote Sensing (IIRS)

Minor Project Topic: Land use land cover change identification and quantification for Dehradun district



Kritika Singh
B.A. (Hons.) Geography

Grad. Passing Year: 2021

Grad. College: Indraprastha College for Women, University of Delhi

Minor Project Organisation: Agriculture Insurance Company of India

Minor Project Topic: Crop Health Assessment And Area Sown Estimation In Rajnandgaon, Chhattisgarh Using Geospatial Technologies For Rabi 2021-22



Nandhini R

B.Sc. Geography (Hons.)

Grad. Passing Year: 2021

Grad. College: Nirmala College For Women, Coimbatore

Minor Project Organisation: Mindtree Ltd (a Larsen & Toubro Group Company), Chennai

Minor Project Topic: Topographical Mapping Using Mobile LiDAR Survey - Dharwad, Karnataka



Ohviya Raja Prakash

B.Sc. Environmental
Science

Grad. Passing Year: 2020

Grad. College: Fergusson College, Pune

Minor Project Organisation: Indian School of Business (ISB), Hyderabad

Minor Project Topic: Exploring Methods Of Spatial Clustering And Allocation: Facilitating Rapid Security Of Tenures Under FRA



Pratiksha

B.Sc. Geology

Grad. Passing Year: 2021

Grad. College: Hansraj College, University of Delhi

Minor Project Organisation: KPMG, Gurgaon

Minor Project Topic: Retail outlet location site suitability analysis using multi-criteria decision making algorithms



Prisha Pareek

B.A. (Hons.) Geography

Grad. Passing Year: 2021

Grad. College: Dyal Singh College, University of Delhi

Minor Project Organisation: Indian School of Business (ISB), Hyderabad

Minor Project Topic: Forest Encroachment in Kothegudem District



Puspa Sharma
B.Sc. Geography (Hons.)

Grad. Passing Year: 2021

Grad. College: Manohari Devi Kanoi Girls' College, Dibrugarh University

Minor Project Organisation: Assam State Space Application Centre

Minor Project Topic: Geotagging Of Sattras Within Kamrup District Using Mobile Apps And A Pilot Study On 3-D Mapping Of One Of The Sattras Using UAV



Rajarshi Singh
B.Sc. Geography (Hons.)

Grad. Passing Year: 2021

Grad. College: Asutosh College, University of Calcutta

Minor Project Organisation: TERI School of Advanced Studies

Minor Project Topic: Comprehensive Study of Urban Growth in Metropolitan Cities Using SpatioTemporal Data



Ridhima Singh Dhankhar
B.A. (Hons.) Geography

Grad. Passing Year: 2021

Grad. College: Post Graduate Government College for Girls Panjab University

Minor Project Organisation: Wildlife Institute of India, Dehradun

Minor Project Topic: Creating the First spatially Georeferenced map of Heritage canals of Dehradun



Shailesh Kumar Jha
B.Sc. Statistics

Grad. Passing Year: 2021

Grad. College: Central University of Rajasthan

Minor Project Organisation: Indian Institute of Technology Kharagpur

Minor Project Topic: Study of Internal Waves Near Eastern Coast of Andhra Pradesh



Uddipta Das
B.Sc. Geography (Hons.)

Grad. Passing Year: 2015

Grad. College: THK Jain College, University of Calcutta

Minor Project Organisation: Regional Remote Sensing Center North

Minor Project Topic: Crop and Non-Crop area classification using PRISMA image

KEY RECRUITERS

- Asian Consulting Engineers Pvt Ltd
- Assam Remote Sensing and Applications Centre
- Centre for Research on Energy & Clean Air
- Defence Terrain Research Laboratory (DTRL), DRDO
- Delhi Secretariat
- Development Alternatives
- Eicher
- EGIS India
- Emergent Venture
- ESRI India
- GeoEPC Management Advisors Pvt. Ltd
- Geospatial Delhi Limited
- Genesis Ray Energy
- Global Hydrological Solutions
- Grassroots
- HERE : Nokia Business
- Indian Institute of Technology
- Indian National Centre for Ocean Information Services
- Indian Institute of Science, Bangalore
- Intergraph
- Indian Space Research Organisation
- International Water Management Institute
- JSV Spatial Consultants

- Malaria Research Institute
- Maps of India
- National Institute of Urban Affair
- Nielsen India
- Nokia
- Pitney Bowes
- Prakhoj
- Punjab Space Application Centre
- Risk Management Solutions
- Risk Management Solutions India Pvt Ltd
- Snow and Avalanche Study Establishment
- Sociometrik
- Spatial Decisions
- The Energy and Resources Institute
- Tokyo Engineering Consultancy
- United Nations Economic Commission for Africa (UNECA)
- West Bengal State Council of Science & Technology
- WildLife Trust Of India
- Windforce Management Pvt. Ltd.
- World Wide Fund for Nature, India
- World Resources Institute

PLACEMENT PROCEDURE

The campus recruitment activity for M.Sc. Geoinformatics is conducted to serve a dual purpose:

- Master's Thesis Project Placement – fourth semester of the programme
- Formal job recruitment on completion of the programme

Master's Thesis Project | Recruitment Period | November – December 2022

Availability of Students | January – June 2023

Job Placement | Recruitment Period | November 2022 – June 2023

Availability of Students | June 2023 onwards

We welcome organizations/corporates/institutions/others to visit our campus for interviewing and selecting the students for fourth semester masters' thesis project and final placements. You may interact with our students through telephone, video conferencing, or in person.

Interested organizations may contact the Placement Cell, the details of which are mentioned at the back of the brochure.

PLACEMENT CELL

Student Placement Coordinators:

Aswin S
aswin.s@terisas.ac.in

Ohviya Raja Prakash
ohviya.rajaprakash@terisas.ac.in

Ridhima Singh Dhankhar
ridhima.dhankhar@terisas.ac.in

Faculty Placement Coordinator:

Dr. Vinay Shankar Prasad Sinha
HoD, Professor
Department of Natural and Applied Sciences
sinhav@terisas.ac.in

For Further Information, Contact:

Ms Sonika Goyal
Placement Manager,
TERI School of Advanced Studies
10, Institutional Area, Vasant Kunj
New Delhi-110070, India
Email: sonika.goyal@terisas.ac.in
Website: www.terisas.ac.in
Phone: +91 11 718800222



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