

MSc (Climate Science and Policy)

Sponsored Candidates

Candidates working in the industry/government are encouraged to apply for the full-time MSc programmes. Up to five seats can be reserved in each programme for such candidates. All those who satisfy the minimum qualification requirement may be admitted to the programme after an interview. These candidates are required to submit, at the time of interview, a sponsorship certificate from their employer on a company letterhead, stating the period of his/her study at the University, the candidate will be treated as on-duty with usual salary and allowances and that he/she will be fully relieved for the period of study for pursuing his/her studies.

Placement

The students who complete M.Sc. Climate Science and Policy programme possess the requisite confidence and skills to work as research officers, climate consultant and policy analysts in both public and private organizations. Besides this, opportunities in Research organizations and doctoral research can also be explored.

The School has a Placement Cell that helps students find suitable organizations to do their minor and major projects as well as get final placement.

Some of the organizations where the students have been placed in the past are given below:

- Shakti Sustainable Energy Foundation
- Institute of Rural Management Anand (IRMA)
- International Council for Local Environmental Initiatives (ICLEI)
- Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ)
- Federation of Indian Chambers of Commerce and Industry (FICCI)
- Vasudha Foundation
- KBS Certification Services Pvt. Ltd
- Indian Institute of Science (IISC)
- National Institute of Oceanography (NIO)
- Development Alternatives
- Department of Climate Change, Government of Gujarat
- Think Through Consulting
- CTran Consulting
- Ernst & young

Department of Natural and Applied Sciences

Quality of life depends on the quality and quantity of natural resources available for use to human race. 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 disciplinary academic background 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.

About TERI School of Advanced Studies

Academic programmes at the TERI SAS are focused around the challenges of providing the advanced studies rising global population with a limited and degraded natural resource base. In moving towards sustainability, the implicit understanding is that there is no panacea or straight road, with recognized and established methodologies, tools or specializations leading to such development.

The solutions therefore do not lie in a specific subject discipline, but must be appropriate and relevant to the context or the practical problem being addressed. Developing such an understanding among its students is best achieved through exposure to a variety of subjects, tools, and methodologies offered in interdisciplinary mode. This has been the guiding philosophy behind the programmes offered by the TERI SAS and is practised by building a theoretical understanding in courses covering a variety of traditional disciplines, such as ecology, natural and social sciences, governance, policy, law, and engineering.

Over a period of two years, students converge upon a few areas of focus based upon their interest, having been exposed to a new way of thinking that looks at problems not from the lens of a subject specialist, but from the perspective of one who recognizes the complex linkages between man and his environment.

Apart from doctoral research, the TERI SAS offers M.Sc. degree programmes in Environmental Studies and Resource Management, Environmental and Resource Economics, Geoinformatics, Water Science and Governance, Climate Science and Policy, and Biotechnology; MBA in Sustainability Management; and M.Tech. programmes in Renewable Energy Engineering and Management, Water Resources Engineering and Management and Urban Development Management.

The institute offers two M.A. programmes, one in Public Policy and Sustainable Development, and the other in Sustainable Development Practice. TERI SAS is one of a select group of 22 institutions chosen worldwide by the MacArthur Foundation, USA, to run the Sustainable Development Practice programme. The institute uses modern pedagogical tools, richly supplemented by field visits, live industry projects, and hands-on applications. It provides the very best in equipment and instruments, which includes state-of-the-art computer facilities, well-equipped laboratories, video-conferencing facilities, and access to South Asia's most comprehensive library on energy and environment.

TERI SAS has established excellent partnerships and collaborative arrangements with a number of institutions overseas, including Yale University, USA; The Freie University of Germany; Utrecht University, The Netherlands; North Carolina State University, USA; and University of Technology, Australia.

For further information, please contact

TERI School of Advanced Studies
10, Institutional Area
Vasant Kunj, New Delhi – 110 070, India

Tel. +91 11 71800222
Fax +91 11 2612 2874
E-mail registrar@terisas.ac.in
Web www.terisas.ac.in



www.terisas.ac.in

Feb 2023 (50)

Stay Connected: /terischool @terischool /company/terischool
 c/TERISchoolofAdvancedStudies



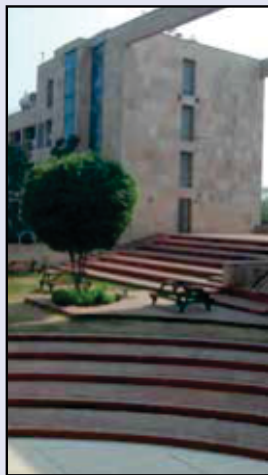
Deemed to be University
Under Section 3 of the UGC Act
Accredited with
'A' grade by NAAC

M.Sc. Climate Science and Policy



www.terisas.ac.in

M.Sc. (Climate Science and Policy)



Of late there has been a growing realization that India should emerge as an economy driven by knowledge. Given the rapid progress that intellectual enterprises are making worldwide, higher education must benefit from a continuous accretion of knowledge through research. This is what TERI SAS is attempting to do through all its programmes, for the benefit of not only Indian citizens but people from other countries as well who would pass through the portals of this institution. This University offers education supported by rigorous research.

Climate Science and Policy

Science has unequivocally established the complexity of the threat posed by climate change, and accordingly, complexity of technological and policy responses to mitigate the threat and adapt to the impacts. In this context, the need is to understand the science, the implications on various regions, resources, societies, and to study ways of mitigating the impacts as well as further emissions of GHGs. Role of policies and measures are equally important. Therefore, TERI School of Advanced Studies offers a programme leading to the award of M.Sc. in Climate Science and Policy. This is an intensive four-semester programme intended to imbue scientific and policy issues relevant to climate change. With this M.Sc. Climate Science and Policy students will be equipped to take up job functions associated with local, national and international efforts to deal with climate change, one of the biggest environmental problems of this era.

The subject is so topical and need of the time – national action plan and Paris agreement on climate change driving action and policy formulation, businesses framing agendas keeping Climate change in focus; energy policies geared towards sustainable Energy use, state action plans being formulated, co-benefits and emissions reductions being internalized in energy planning decisions.



M.Sc. (Climate Science and Policy)

Programme Overview

Climate change is likely to be one of the most challenging issues mankind will face in the 21st century. To involve and educate larger number of people in this area, and to provide professionals with an improved understanding of the subject, the M.Sc. (Climate Science and Policy) programme aims to impart knowledge on mitigation and adaptation strategies.

The programme, offered by the Department of Natural and Applied Sciences, intends to create professional capability in assessing and managing the risks posed by climate change, and provide a sound base in the scientific arena as well as in the economic dimensions of climate change policy, mitigation, and adaptation strategies. Delivered through a diverse range of courses in the two years of study, the Master's degree will also provide a structured route to research and development in the area.

Programme Outline

The two years of the M.Sc. programme are divided into four semesters. The first semester is reserved for compulsory courses, providing a broad overview of both the natural and the policy aspects of climate change. The next two semesters allow specialization on the important topics relevant to climate problem/research by offering elective courses along with 6 credit compulsory minor project. The final semester is fully dedicated to research-based project work which is supervised by external /internal faculty, project can be performed outside the campus or by attaching themselves with internal core faculty member of the university.



Programme Structure

| Year/Semester | Courses | Credits | Duration* |
|--------------------------|--|---------|--------------------------------|
| First Year | | | |
| 1 st Semester | 8 core courses of 2-4 credits each and bridge courses as required* | 22 | 15 weeks |
| 2 nd Semester | 5 core courses of 2-3 credits each and minimum 1 elective of 3 credits | 16 | 15 weeks |
| Summer | Minor Project | 6 | 6-8 weeks |
| Second Year | | | |
| 3 rd Semester | 1 core course and 4 elective courses of 3-4 credits each | 15 | 15 weeks |
| 4 th Semester | Major Project | 16 | At the location of the project |

S*Bridge courses: Students who have not studied the below mentioned bridge courses previously should take these bridge courses. These courses will be offered at the start of/ during the semester 1.

M.Sc. (Climate Science and Policy)

| Semester 1 [22 credits] | Semester 3 [15 credits] |
|--|--|
| Course title | Core Course Seminar Course [3] |
| Environmental Law and Policy Basics of Climate Science Energy Science Technology and Policy Environmental Statistics Concepts and Theories of Development Communication Skills and Technical Writing Earth System Sciences Climate Lab Introduction to Sustainable Development Basic Course in Economics Applied Mathematics | Integrated Impact Assessment Geoinformatics for Resource Management Independent Study Food Security and Agriculture Seminar Course in Global Change Governance of Climate Change Aerosol Science Satellite Meteorology Integrated Watershed Management Climate Change and Disaster Risk Reduction Advance Climate Modelling |
| Semester 2 [16 credits] | Semester 4 [16 credits] |
| Course title | |
| Hydrology Research Methodology and Thesis Writing Environment Health and Risk Assessment Principles of Geoinformatics Mitigation of Climate Change Climate Change Vulnerability and Adaptation Multivariate Data Analysis Impacts of Climate Change Climate Change and Law Introduction to Climate Modelling Transport and Climate Change Economics of Climate Change | Note: students can opt electives from other programs as well with the consultation with program coordinator. Major Project: During the fourth semester students are assigned to major projects in industries and other organizations in areas relevant to the subjects they have learnt in the first three semesters. The student conducts this research under the supervision of a qualified researcher from the host organization. A faculty member from University acts an internal supervisor. Minor Project [2 credits] At the end of the second semester the students will carry out a Minor research project for two months leading to submission of the Minor Project thesis. The students may conduct this research project either at the University under the supervision of one of the faculty members or through an internship at any organization. |

Eligibility Criteria

Bachelor's degree in Science/Engineering/Economics/Mathematics/Statistics/Geology/ Geography with a minimum cumulative grade point average of 6.2 on a 10 point scale or equivalent, as determined by TERI SAS, wherever letter grades are awarded, or 55% marks in aggregate, wherever marks are awarded. For candidates with bachelor's degree in Humanities (e.g. Economics/Geography), a relaxation of 5%/0.75 Cumulative Grade Point Average could be allowed.

Selection Procedure

Admission to the M.Sc. programme is made on the basis of an online test and interview conducted by the University.

Pedagogical Tools

Apart from usual lectures and practical, the program prepares students to connect and apply their classroom learning to society. Field visits, role playing and experiential learning is part of the curriculum. Discussion on the recent development in the arena of climate change between the teacher and a small group of students occurs on a regular and frequent basis.



www.terisas.ac.in



www.terisas.ac.in



www.terisas.ac.in