



School of Earth, Ocean and Climate Sciences



Indian Institute of Technology Bhuvaneshwar

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About the School

The School of Earth, Ocean and Climate Sciences is one of its first kind in the nation was established in 2012 with a vision of generating skilled manpower in the highly multidisciplinary area of Earth system sciences. Experienced and motivated faculty members with international exposure in different specializations is one of the major strengths of the School. Currently, our research specializations include aerosols & climate, data assimilation, ocean circulation modeling, prediction of extreme weather events, tropical cyclones, storm surges & air-sea interactions, tropical waves, remote sensing & GIS applications, intra-seasonal variability, monsoon dynamics and climate change, land surface processes, regional climate modeling, extended range monthly to seasonal scale prediction systems, satellite and physical oceanography, paleoclimatology, geochemistry, geophysics, hydro-geology etc. to name a few.

Academics

- ❑ **M.Sc. in Atmosphere and Ocean Sciences, Eligibility:** Bachelors degree in science with Mathematics and Physics; Admission: Through Joint Admission test for M.Sc. (JAM in Physics, Mathematics, Statistics, Chemistry & Geology)
- ❑ **M.Sc. in Geology (Through IIT-JAM), Eligibility:** Bachelors degree in Geology, Admission: JAM in Geology
- ❑ **M.Tech. in Climate Science and Technology, Eligibility:** Bachelors in Engineering/Technology/Masters degree in Science
- ❑ **Ph.D. (Through GATE/CSIR-NET/DST-Inspire/Institute Fellowship/Sponsored)**
For latest information, visit us at : <http://www.iitbbs.ac.in/admission.php>

Laboratory Facilities

The following laboratories have been established with state-of-the-art facilities for Geophysical analyses, Modeling and Visualization, Remote Sensing & GIS, Weather Analysis and Forecasting and Simulation of Atmospheric and Oceanic processes. In addition, the School is in the process of establishing Bay of Bengal Coastal Observatory(BoBCO) in collaboration with the Ministry of Earth Sciences (Govt. of India) and MoES-ESSO organization near Laudigaon (Ganjam District) Odisha. This will be a unique kind of facility, jointly run by an academic institution in collaboration with leading research and development laboratories within India and abroad. The laboratory and instrumentation facilities currently available are:

- ❑ Workstations for modeling and satellite data analysis, Flux Tower, AWS, Remote Sensing and GIS Laboratory, Weather Analysis and Forecasting Laboratory, Castaway CTD, Multi Parameter Profiler Instrument (for measuring dissolved O₂, temperature, pressure, chlorophyll and pH), Photometer, Multi-Wavelength Radiometer, Lightning Sensors, Rain Radar, IR Thermometers etc. A full fledged Geophysical Lab, Geochemistry Lab, Petrology, Sedimentology, Ore-Geology Laboratory are functional.



Student Skills and Training

Students undergo regular summer internship/training programmes in different renowned organizations like INCOIS Hyderabad, NIOT Chennai, NIO Goa, IMD, IITM Pune, NCMRWF, ORSAC, PRL, WIHG, NGRI etc. Moreover renowned guest faculty from institutions like WHOI(USA), JPL(NASA), IITM(Pune), RSC, SAC, NCMRWF(Noida), University of Southampton(UK), Purdue University(USA), Texas A&M University(USA), IIT Kharagpur, Mumbai, GSI, ONGC, Delhi University, University of Hyderabad, University of Massachusetts, NRSC and several industries etc. deliver lectures and conduct interactive sessions on various topics on Earth System Sciences. Our students also regularly participate in geological, oceanographic and geophysical field trips and ship cruises along with national and international researchers and are exposed to all the modern field techniques.

Programming and Visualization Tools:

MATLAB, GrADS, Fortran, Ferret, NCL

Remote Sensing & GIS Softwares

ArcGIS, ERDAS Imagine etc.

Numerical Models:

WRF, WRFChem, ROMS, RegCM, Visual Modflow etc.



Achievement/Placement of Our Students

Our students have also secured the top ranks in national examinations like CSIR-NET and UPSC Geologist examinations. They have also secured the prestigious DAAD scholarship to visit Germany for their masters project. In addition, our students are also provided opportunity to visit abroad for training, conferences and workshops.

Over the years, many of our students are successful in securing research positions in reputed national and international institutions such as University of Melbourne, Australia, Hamburg University, Germany, Monash University, Australia, Victoria University Wellington, New Zealand, University of New Hampshire, USA, Max Planck Institute for Biogeochemistry, Germany, DLR, Germany, Indian National Centre for Ocean Information System (INCOIS) Hyderabad, NRSC (ISRO), Hyderabad, Indian Institute of Management Raipur, Indian Institute of Tropical Meteorology (IITM), Pune, National Geophysical Research Institute (NGRI), Coal India Ltd, Geological Survey of India etc. to name a few.

A glimpse of our research activities



Our MoU's and partners:



UNIVERSITY OF
Southampton

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