About the course

Rivers provide a wide range of ecosystem services - regulating, provisioning, supporting and cultural services. Maintenance of appropriate flow and sediment regimes and related river morphology are of utmost importance for rivers to be able to provide these services. Flow alteration is one of the most serious threats to riverine ecosystems. The term “environmental flows” refers to the water needed to support important ecological processes and resulting human well-being within such river systems. This course addresses the background of the problem, methods for assessment of environmental flows and ecosystem services, the concept of river health, and models/ tools used in studies pertaining to these.

About TU Delft

The Delft University of Technology (TU Delft) is the oldest and largest Dutch public technical university, located in Delft, the Netherlands. Established in 1842, it has a rich history of innovation and academic excellence. TU Delft is particularly well-known for its emphasis on engineering, technology, and applied sciences, offering a wide range of programs at the undergraduate and postgraduate levels. As of 2022, it is ranked among the top 10 engineering and technology universities in the world by the QS World University Rankings. In 2023, it was ranked 2nd in the world in Civil Engineering, 3rd in the world in Mechanical and Aerospace Engineering, and 3rd in the world in Architecture.

About SPARC

The Scheme for Promotion of Academic and Research Collaboration (SPARC) aims at improving the research ecosystem of India’s Higher Educational Institutions by facilitating academic and research collaborations between Indian Institutions and the best institutions in the world from 28 selected nations to jointly solve problems of national and/or international relevance.

About NITC

National Institute of Technology Calicut (NITC) is one of the 31 institutions of national importance set up by an Act of Parliament, the “National Institutes of Technology Act 2007”, and is fully funded by the Government of India. The mandate of the Institute is to provide high quality technical education and conduct research in the various domains of Engineering, Science, Technology and Management. Established in 1961 as a Regional Engineering College (REC), it was transformed into a National Institute of Technology in 2002. The Institute offers Bachelors, Masters and Doctoral degree programs in Engineering, Science, Technology and Management. With its proactive collaborations with a multitude of research organizations, academic institutions and industries, the Institute has set a new style of functioning under the NIT regime.

SHORT COURSE ON

ENVIRONMENTAL FLOW ASSESSMENT OF RIVERS THROUGH THE LENS OF ECOSYSTEM SERVICES

11.03.2024 - 15.03.2024

DEPARTMENT OF CIVIL ENGINEERING
NIT CALICUT
KOZHIKODE - 673 601

Who can attend?

Research Scholars, Masters Students, Faculty, Persons working in Govt. and Semi Govt. Departments, PSUs, Research & Consultancy Organisations and NGOs who are interested/ working in the domain covered in the course. Participants will be selected based on first come first serve basis.

Registration Fee

Masters Students/ Research Scholars : Rs. 2500/-
Faculty: Rs. 3000/-
Persons working in Govt. and Semi Govt. Departments, PSUs, Research & Consultancy Organisations and NGOs: Rs. 4000/-

Accommodation

Accommodation will be arranged by the host Institute on payment basis.

Course Faculty

The lectures will be delivered by experts from NITC, TU Delft and other prestigious academic and research institutions.

Course Coordinator

Dr. Santosh G. Thampi
Professor (HAG),
Department of Civil Engineering,
NIT Calicut

Registration link

Course Content

- Introduction to environmental flow
- Assessment of environmental flow
- Introduction to River Health Assessment (RHA) methods
- Hydrological modelling using FLEX-Topo model
- Trade-off analysis based assessment of ecosystem services
- Surface water-groundwater interaction and its impacts on the streamflow
- Comparison of highly exploited and pristine catchments
- Guidelines for maintaining environmental flow