

PARTICIPATION CERTIFICATE

Dr / Mr / Ms / Mrs.
.....

is a student at our institute and his / her application is hereby nominated. The applicant will be permitted to attend the Karyashala (a high-end workshop) on **"Recent Advancements in Membrane-based Wastewater Treatment [RAMWT-2023]"** through physical mode in Mechanical Engineering Department at NIT Rourkela during July 17 - July 21, 2023, if selected.

Our institute is (tick one):

- ☐ CFTI
☐ State Govt. Funded Institution
☐ Other Institutions

Date..... Signature of Authority
Designation

Official Seal

Selected participants will be informed by E-mail. The duly nominated application form should be uploaded through registration link.

Registration link:

<https://forms.gle/S8nVBVZuUK7Y8jDL9>

Organized by

Dr. B. Kiran Naik & Dr. Kishore Singh Patel
Department of Mechanical Engineering
National Institute of Technology, Rourkela
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ABOUT NIT ROURKELA

National Institute of Technology Rourkela is an Institute of national importance created under the act of parliament. NIT Rourkela has been ranked as 225 and 31st position in QS Asia University and QS India University Ranking 2021, respectively. It has ranked 32nd, 15th, and 24th in NIRF Overall, Engineering and Research for the year 2022-23, respectively. It has also been ranked in 121st position in QS BRICS category, 2020. Times Higher Education has figured NIT Rourkela in the group of 801-1000 in World University Ranking 2022. The institute provides quality education in a diverse and multicultural environment. The mission of the institute is to become an internationally acclaimed institution of higher learning that will serve as a source of knowledge and expertise for the society and be a preferred destination for undergraduate and post graduate studies. The institute is offering undergraduate, postgraduate and PhD programme in 21 branches of Engineering. The institute research centers are engaged in consultancy and research activities of several government bodies and private industries.

DEPARTMENT OF MECHANICAL ENGINEERING

The Mechanical Engineering of NIT Rourkela comprises three divisions namely design, manufacturing and thermal engineering. The department is known for research in variety of fields that include mechanical vibration, robotics, heat transfer, CAD/CAM, precision engineering, metal forming, manufacturing, CFD, industrial refrigeration and cryogenics. The academic programmes of the department reflect not only the core areas of Mechanical Engineering; but also, the research specialization of the faculty. The department at present has over one hundred research scholars pursuing the research on diverse fields. All the groups are working in close co-operation while retaining individual identities. Many Research and Development projects being pursued by the faculty are sponsored by Government agencies and private industries.



A National Workshop on

Recent Advancements in Membrane-based Wastewater Treatment [RAMWT-2023]

**July 17 - July 21, 2023
(Through virtual Mode)**

Patron

**Prof. K. Umamaheshwar Rao,
Director, NIT Rourkela
Chairman**

Prof. S. K. Sahoo, HOD-ME Dept.

Conveners

Dr. B. Kiran Naik

Co-Convener

Dr. Kishore Singh Patel



**Department of Mechanical Engineering
National Institute of Technology
Rourkela**

Sponsored by



ISHRAE
Bhubaneswar Sub-Chapter

ISHRAE
Bhubaneswar Sub-Chapter



ABOUT THE COURSE

Water scarcity is one of the major issues faced by millions around the world. It affects both the eco-system and agriculture. The impact of shortage of fresh water has affected several cities directly as well as indirectly. One of the major reasons is the lack of proper infrastructure and unchecked water pollution. Certain models such as membrane-based technology can be used to convert the brackish water into freshwater and can be used for consumption by Industries and for the public. Not only seawater but this technology can be used to convert river water or wastewater to freshwater as approximately 80 percent of the water used domestically is drained out in water bodies as wastewater.

COURSE CONTENT

The course will cover the following major topics;

- Introduction to Membrane Technologies (MT)
- Membrane technologies for low-capacity wastewater treatment.
- Pressure driven membranes for saline wastewater treatment.
- Forward osmosis for membrane wastewater treatment.
- Membrane Technologies for high capacity wastewater treatment. .
- Membrane-based sorption technologies for wastewater treatment.
- Renewable energy driven membrane wastewater treatment.
- Maintenance issues in membrane wastewater treatment

TRAINING SESSION

The training session will cover the following topics;

- Cutting edge Research on AI/ML for membrane wastewater treatment
- CFD training on membrane energy exchanger design and analysis.

ELIGIBILITY

The course is open for PG and PhD students from universities, colleges, and research organizations. No course fee is charged for PhD and PG students.

IMPORTANT DATES

The last date for the receipt of registration form is 27/06/2023. Intimation of selection: through email by 07/07/2023.

TRAVEL AND ACCOMMODATION

Maximum number of applicants is limited to 25. The selected applicants will be provided a secured meeting code of the web platform one day before the commencement of course.

REGISTRATION LINK:

<https://forms.gle/S8nVEVZuUK7Y8jDL9>

ADDRESS FOR CORRESPONDENCE:

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REGISTRATION FORM

1. Name:
2. Designation:Department.....
3. Organisation:
4. Postal Address:
.....
E-mail:

Mobile No.:
WhatsApp No:
5. Specialisation:
6. Accommodation Required (Yes/No):

☐ CFTI ☐ State Govt ☐ Other

Date: Signature of Applicant

Place:

Certificate

This is to certify that _____
is a student at our institute/Organisation and is permitted to attend the workshop on “**Recent Advances in Membrane based Wastewater Treatment**” to be held at NIT Rourkela, during July 17 - July 21, 2023.

Signature with official seal
(Head of the Department)