



AMITY UNIVERSITY MAHARASHTRA

Established vide Maharashtra Act No.13 of 2014, of Government of Maharashtra, and recognized under Section 2 (f) of UGC Act 1956.

Ref. No. : AUM/RO/1533

Date: 21.07.2023

Research Centre on Environmental Sustainability

The Research Centre with a specific focus on environmental sustainability is established under the chairmanship of the Honourable Vice Chancellor of the university, at the Amity University Maharashtra.

Centre Establishment Date: 01 July 2023

Statement about Research Centre focusing on the Environment Sustainability:

- The aim of establishing the centre is to focus on the environmental Sustainability.
- Organizing and maintaining Records about Sustainability events in coordination with the Dean Student Welfare.
- Maintaining records about research work carried out at the different school of the Amity university Maharashtra toward the Environment Sustainability and in large about the UN SDGs.
- Providing Recommendations to the University Academic Council to include the recent topics of research in the curriculum of the UG, PG and PhD Courses.
- Encouraging the students to participate into the Environmental Sustainability activities and contribute into the net zero target of the Amity University Maharashtra.
- This Research Centre contributes (through curriculum, teaching, and supervision) to the teaching of undergraduate programmes and/or postgraduate programmes.
- Finding and maintaining the record of the recent research work and technological advancements going on all over the world towards the net zero target and contributing towards the net zero target of the Amity University Maharashtra.
- Conducting the bi-monthly meeting to monitor and record the net-zero targets.
- Recommending the technological advanced renewable energy solutions to the University.

Dedicated Full-time staff for the Research Centre

Sr. No.	Staff Name	Responsibility
1	Prof. (Dr.) A W Santhosh Kumar Hon. Vice Chancellor	Chairman
2	Dr. Penna Suprasanna Dean Research	Head of Research Centre
3	Dr. Geeta Malbhage	Faculty
4	Dr. Abhishek Guldhe	Faculty
5	Mr. Sandesh Thakur	Office Assistant



Authority Signature and Seal

Date: 21 July 2023.



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This Research Centre contributes (through curriculum, teaching and supervision) to the teaching of undergraduate and/or postgraduate programmes.

1. Microalgae Cultivation Facility at Amity University Maharashtra
2. Fully Functional Sewage Treatment Plant
3. Green and Clean Amity University Maharashtra Campus
4. Solar Panels



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Microalgae Cultivation Facility at Amity University Maharashtra

Amity University Mumbai Hon'ble Vice Chancellor inaugurates a new facility in June 2023 for the Cultivation of Microalgae developed by Dr. Abhishek Guldhe, Associate Professor, under the prestigious Ramalinga Swami Fellowship project funded by Dept. of Biotechnology, Govt. of India. The facility will treat wastewater and generate microalgal biomass for biofuel, biofertilizer, and bioproduct applications. It will also serve as a hub for interdisciplinary collaboration and research enabling in sustainable development for the researchers and students to explore multifaceted applications.

Microalgae has emerged as a powerful platform for various applications such as biofuel, feed, fertilizer, nutraceuticals, CO₂ sequestration and wastewater treatment. At Amity University Maharashtra (AUM) campus under an integrated biorefinery approach a microalgae cultivation facility is developed by Dr. Abhishek Guldhe through his Ramalingaswami fellowship project funded by the Department of Biotechnology, Govt. of India. The facility was inaugurated by Hon'ble Vice Chancellor Prof. (Dr.) A W Santhosh Kumar sir.

Microalgae are considered as promising feedstock for biofuels production; however, the cultivation is still unfeasible due to input cost of chemical nutrients and freshwater requirement. Wastewater is comprised of nutrients such as ammonia, nitrates, phosphates, organic carbon etc. which can support microalgal growth. Use of wastewater can improve the economics of microalgae cultivation and reduces the freshwater footprint of the process. During cultivation microalgae also sequester CO₂ for photosynthesis process. The biomass generated can be used for production of biofuels, biofertilizer and various bioproducts.

The facility developed at AUM simultaneously treats wastewater and generates microalgal biomass for biofuel, biofertilizer and bioproducts application. In this facility two open raceway ponds of 200L each are set up for cultivation of microalgae using synthetic media as well as wastewater. The open raceway pond cultivation systems are considered as efficient, cost effective and easy for operation to generate microalgal biomass. In these systems no external light is provided, cultivation is based on natural sunlight. For efficient mixing and aeration paddle wheels are used in open raceway ponds.



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The facility is used for student's research projects. In these ponds experiments are conducted for evaluating the feasibility of using raw wastewater and final effluent after treatment for cultivation of microalgae. The wastewater cultivation is also compared with cultivation in synthetic medium. Experiments are also conducted to develop strategy to improve the microalgal biomass yield while using wastewater as nutrient medium.

This facility will serve as a hub for interdisciplinary collaborations, enabling researchers and students to explore the multifaceted applications of algae and contribute to a more sustainable and circular economy.





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Latitude: 18.9306
Longitude: 73.162183
Elevation: 48.51±15 m
Accuracy: 4.0 m
Time: 18-07-2023 15:06

Powered by NoteCam



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2. Fully Functional Sewage Treatment Plant





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Latitude: 18.93057
Longitude: 73.162162
Elevation: 49.01±5 m
Accuracy: 3.9 m
Time: 18-07-2023 15:02

Powered by NoteCam



Latitude: 18.930554
Longitude: 73.162136
Elevation: 48.51±13 m
Accuracy: 9.5 m
Time: 18-07-2023 15:03

Powered by NoteCam



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Latitude: 18.930612
Longitude: 73.16225
Elevation: 48.51±13 m
Accuracy: 11.0 m
Time: 18-07-2023 15:03



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Green and Clean Amity University Maharashtra Campus





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Solar Panel

