SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)
Chennai, Tamilnadu

INSTITUTIONAL DISTINCTIVENESS

Sathyabama Institute of Science and Technology is one of the academic Institutions that emphasizes research as it is aware of the significance of research for sustainable growth and development. Teaching and research are inseparable components of education, and quality research is the most important characteristic of a world-class university.

The Institution has the following Research Centres, which are carrying out research on almost all the major areas of Science and Technology:

Centre for Nanoscience and Nanotechnology
Centre of Excellence for Energy Research
Centre for Ocean Research
Centre for Earth and Atmospheric Sciences
Centre for Remote Sensing and Geoinformatics
Centre for Non-Destructive and Evaluation
Centre for Waste Management
Centre for Molecular and Nanomedical Sciences
Centre for Laboratory Animal Technology and Research
Centre for Climate Change Studies
Centre for Drug Discovery and Development
Centre of Excellence for Additive Manufacturing
Centre for Aquaculture
Centre for Space technology
Centre for Innovation and Technology Transfer

Research addressing the Sustainable Development Goals

Research at Sathyabama addresses the Sustainable Development Goals of Agenda 2030, which requires the participation of individuals, institutions, countries and Governments in creating a better world free from poverty, hunger, health issues, inequalities, and providing access to quality education, access to clean water and sanitation, access to affordable and clean energy.

The Research Centres are focusing on the following SDGs:

The Centre for Drug Discovery and Development and the Centre for Molecular and Nano medical Sciences are working towards **SDG-3 Good Health and Well-being**. They are focusing on research to discover novel drugs to fight against life-threatening infectious diseases, including tuberculosis (TB), Acquired Immuno Deficiency syndrome (AIDS), Dengue and non-infectious diseases including, Alzheimer's disease, cancer and diabetes.

The Centre of Excellence for Energy Research and the Centre for Waste Management are involved in research projects and initiatives that address SDG 7- Affordable and Clean Energy. The MHRD-funded Center of Excellence in Energy Research is working to find sustainable solutions to the need for energy while minimising environmental impact and reducing carbon footprint. Centre for waste management is involved in finding alternative energy through biosources. It has come out with biodiesel from waste cooking oil and bio fertilizers from food waste

The Centre for Waste Management is working towards achieving **SDG 12- Responsible Consumption and Production.** The Centre carries out research in the area of waste management and promotes the 3 R concepts Reduce, Reuse and Recycle to minimize waste generation. This Centre organizes programmes to create awareness about the consequences of consuming more and more products without considering the concepts of repair, reuse and recycling

The Centre for Climate Change Studies and the Centre for Ocean Research are involved in research addressing **SDG 13- Climate Action.** The Centre monitors marine organisms associated with various ecosystems such as coral reefs, seagrass meadows, intertidal zones and mangrove ecosystem in selected coastal sites to study the impact of global climate change on aquatic ecosystems

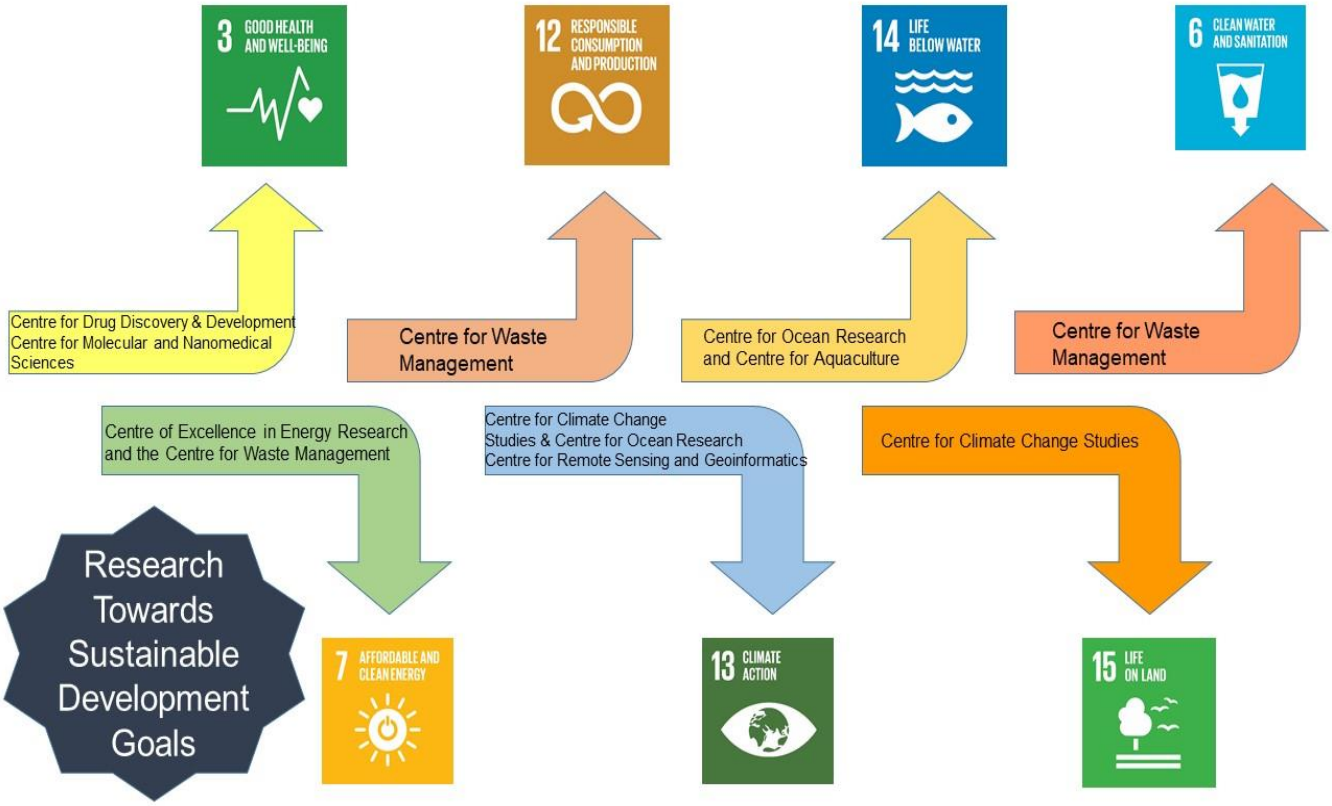
The Centre for Remote Sensing and Geoinformatics is involved in research facilitating resilience and adaptive capacity to climate-related hazards, disaster preparedness against flood related disasters, **addressing SDG 13**

The Centre for Ocean Research and **Centre for Aquaculture** are working towards **SDG 14- Life Below Water** which addresses issues on conservation and sustainable use of oceans, seas and marine resources for sustainable development. Research in Mariculture, Marine Technology and Engineering, Marine Ecology, Marine Nanotechnology, Marine Biotechnology, and Marine

education are the focus areas of research of this Centre. The Centre is involved in research in areas including resilience and adaptive capacity to climate-related hazards, disaster preparedness against flood-related disasters through Remote Sensing and Geo informatics

The Centre for Climate Change Studies is working towards SDG 15 - Life on Land, which addresses issues related to the management of land and water resources and biodiversity conservation

Marine Research Station- Apart from the Research Centres within the campus, Sathyabama Institute of Science and Technology has established a new Marine Research Station at Rameswaram to encourage research on conservation of marine ecosystems, marine ecology and climate change. The research station is helpful in research related to coastal and marine biodiversity conservation and in understanding the impact of anthropogenic stressors on marine ecosystems



Sponsored Research

The Institution has undertaken various sponsored and collaborative research and development projects worth 59 crores in the last 5 years funded by international organizations and national organisations such as ISRO, DST, DBT, IGCAR, DRDO, DAE, MoEF etc,.

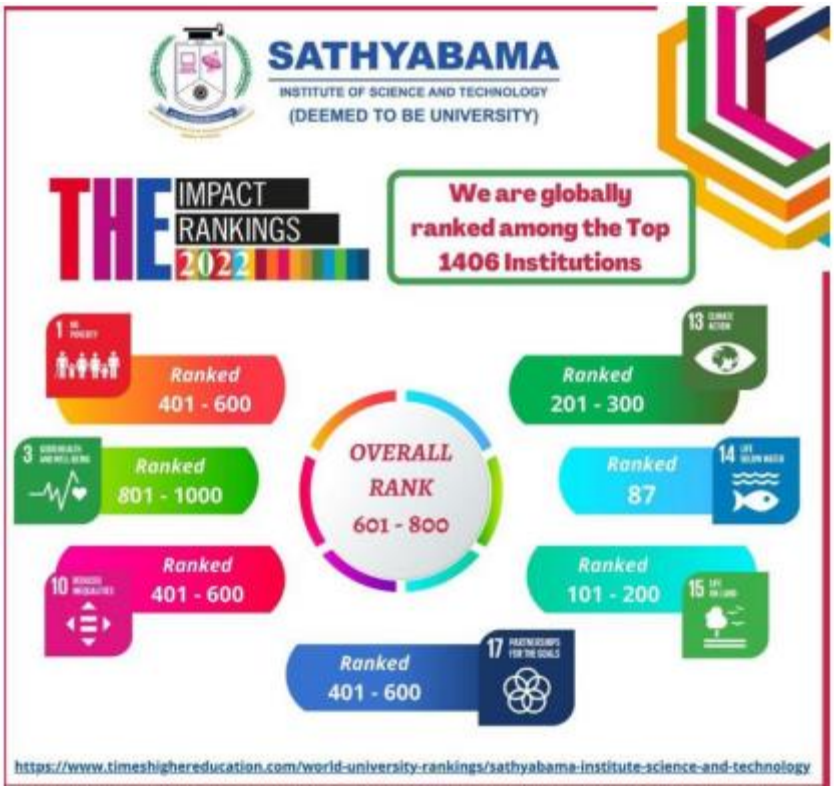
New sponsored research projects, including STI Hubs and Agri Innovation Hubs worth 15 crores, were sanctioned by various agencies in the academic year 2021-2022

Major Research Facilities

Sathyabama Institute of Science and Technology has world-class research facilities that complement and augment the research strength of the Institution. Research facilities include laboratories and equipment with advanced technologies. Advanced characterization facility with HRSTEM, FESEM and XRD,Makerspace with 3D printers, scanners and replicators, AFM and Raman spectroscopy are available in the Institution, which facilitates high quality research.

Research Outcomes

- The Institution has shown remarkable performance with respect to publications by bringing out internationally acclaimed research publications. Overall, the Institution has around 12,000 Research publications indexed in Scopus with a H index of 84 and around 6000 publications indexed in Web of Science databases with a H index of 74. More than 1600 Joint Publications are made as the outcome of joint research with International Research Organizations and Universities. In the year 2021-2022, the Institution had around 250 publications with high impact factor.
- Sathyabama's commitment to research can also be well understood by the number of patents granted for innovative products and designs. Sathyabama is highly active in applied research with 474 patents filed and 227 patents granted which includes 11 German patents and 19 Australian . 24 patents have been successfully converted into products this year.
- The outcomes of the research activities are propagated to society and industry by way of publications, symposiums and other academic forums
- Participated in bilateral research calls such as SPARC, DST-OVDF Fellowship, Fulbright Fellowship, ASEAN Fellowship, HPSR Fellowship, Marie Curie Fellowship and Korean Research Fellowship
- Centres of Excellence are established in association with leading Industries



THE IMPACT RANKINGS
2021 **TOP 800**

THE IMPACT RANKINGS
SDG1 NO POVERTY
2021 **TOP 400**

THE IMPACT RANKINGS
SDG10 REDUCED INEQUALITIES
2021 **TOP 300**

THE IMPACT RANKINGS
SDG17 PARTNERSHIPS FOR THE GOALS
2021 **TOP 300**

THE IMPACT RANKINGS
SDG13 CLIMATE ACTION
2021 **TOP 300**

Institution's Sustainability Reports

2020-21 : file:///C:/Users/Admin/Downloads/Sustainability%20report%202020-2021.pdf

2019-20 : https://www.sathyabama.ac.in/sites/default/files/2022-12/2019-20_Sustainability%20Report.pdf

Policy On Preventing And Reducing Marine Pollution

https://sist.sathyabama.ac.in/download/iqac/POLICYONPREVENTINGANDREDUCINGMARINEPOLLUTION.pdf

Policy on Waste Management

https://sist.sathyabama.ac.in/download/iqac/POLICYONWASTEMANAGEMENT.pdf

Policy to Ensure the Conservation, Restoration and Sustainable use of Terrestrial Ecosystems

https://sist.sathyabama.ac.in/download/iqac/PolicytoEnsureTheConservation.pdf

Sustainable Investment

https://sist.sathyabama.ac.in/download/iqac/SustaibableInvestment.pdf