Application Process for PhD for December 2021 is open till November 8th, 2021

Academic Brochure

Admission to PhD in Sustainable Polymers

(December 2021 Session)
About the Centre...

The Centre for Sustainable Polymers aims to provide quality graduate-level education and multidisciplinary research in the field of sustainable polymers and to become an internationally recognized centre for development of innovative low-cost sustainable polymer based technologies and products for an eco-friendly society. The centre is focusing on utilization of biopolymers such as cellulose, chitosan proteins, various protein-grafted polysaccharides for high performance product development. Further, under this umbrella, consortium of technical experts available at IIT Guwahati in the area of synthetic biodegradable polymers, biopolymers, bio-process engineering, polymer processing, degradation, migration of toxic substances from processed polymer products, nanotechnology, process optimization, nanotechnology, polymer modelling and simulation will make significant contribution to develop biodegradable polymers and their derivatives.

Vision

The Centre will strive to provide quality graduate-level education and multidisciplinary research in the field of sustainable polymers, and to become an internationally recognized hub for the development of innovative low-cost sustainable polymer-based technologies and products for engineering, commodity and biomedical applications.

Mission

➔ To foster the development of research and education in the multi-disciplinary area of Sustainable Polymers at the Indian Institute of Technology Guwahati.
➔ To create and nurture an environment conducive to collaborative research and teaching by providing appropriate facilities and expertise.
➔ To provide faculty, staff and students with state-of-the-art facilities for carrying out research and education in areas fundamentally important to the Centre.
➔ To cater to the training and research needs of the Indian polymer sector giving a special emphasis on creating a pollution-free environment using sustainable polymers.
➔ To provide scientific expertise on sustainable polymers to various research institutions and industrial partners on one platform.
➔ To train the industrial workforce and create awareness on the benefits of sustainable polymers in society.
➔ To emerge as a leading international research centre in Sustainable Polymers.
Why PhD in Sustainable Polymers at CSP...

- The Centre for Sustainable Polymers is the first of its kind centre which aims to actively address the aspect of sustainability in polymers.

- The Centre for Sustainable Polymers is a true transdisciplinary centre with the driving motivation of performing cutting edge cross-domain research related to sustainability of polymers.

- The presence of diverse pool of faculties across 7 different disciplines, thereby upholding the spirit of interdisciplinary inclusive research.

- State-of-the-art Equipment, Laboratories and other necessary Infrastructure for performing research across a broad spectrum, starting from the nanoscale to industry scale, throughout the life cycle of a polymer and beyond.

- Academic collaborations with Universities, Institutes and Centres of global repute worldwide to provide the best exposure and scope of nurturing the talents to their full potential, aimed at their professional growth and holistic development. More than 50% of the research scholars have visited foreign universities as a part of student exchange programs.

- Significant industrial collaborations through result oriented R&D projects for skill development of the mutually available human resource and sustainability through social upliftment at large.

- Customized research projects and curriculum design based on industrial demands, for making the students market ready and readily employable at the end of their academic accomplishments.

- Dedicated infrastructure and conducive environment for dissemination of evolved technology and product by mentoring students towards entrepreneurship.

- 3 Research Scholars have been awarded the prestigious Prime Minister’s Research Fellowship

- A culture of open research based on the principles of Communication, Co-operation and Camaraderie.

- A multi-cultural dynamic research team with representation of many states of India and other foreign nationalities through the unique student exchange program.
Focal Areas of Research

Faculties from 7 Departments with diverse expertise in sustainable polymers
[Chemical, Chemistry, Civil, Mechanical, Biosciences and Bioengineering, Design, HSS]

Centre for Sustainable Polymers

PhD in Sustainable Polymers

Monomer Synthesis

Polymer Synthesis

Polymer Processing

Polymer Composites & Nanomaterials

Polymer Toxicology & Risk Assessment

Polymer Rheology

Socio-economics of polymer synthesis & degradation

Computational Polymer Science & Structure

Bioprocess Modelling & Optimization

Polymer degradation & Recycling

Knowledge disseminated on Sustainable Polymers

300+ Publications
125+ Book Chapters
25+ Patents Underway
Faculty Members

Prof. A.K. Dasmanapatra
Polymer Physics

Prof. Amit Kumar
Polymer Physics

Prof. G. Pugazhenthi
Polymer Composites

Prof. Vimal Katiyar
Polymer Synthesis & Processing

Prof. Animesh Das
Sustainable Catalysis

Prof. P.K. Kancharla
Carbohydrate Chemistry

Prof. A.S. Achalkumar
Polymeric Materials & LC

Prof. Raghvendra Gupta
Polymer Rheology
Doctor of Philosophy in Sustainable Polymers

Minimum Eligibility Criteria:

Master’s degree with a minimum CPI of 6.0 or 60% of marks in Engineering/Technology/Science/Design in a relevant area

4-year Bachelor’s degree with a minimum CPI of 7.0 or 70% of marks in Engineering/Technology

A candidate with medical qualification viz., MBBS/BDS/MD/MS/BVSc/MVSc having 60% marks OR Masters in allied health care professional degrees having 60% marks in both bachelor degree and master degree is eligible for PhD program.

A regular student of the Centre for Sustainable Polymers, IIT Guwahati who is continuing his/her MS(R) studies and having a minimum CPI of 8.0 at the end of second semester may be enrolled in the PhD program of the Centre in the beginning of his/her third semester of study. Such students can receive only PhD Degree.

Requirement of GATE/NET qualification for institute fellowship is as per the existing norms of IIT Guwahati

Masters of Science by Research in Polymer Science and Technology

(Proposed to Commence from July 2022)

Minimum Eligibility Criteria

Full Time (Regular):
B.E./B.Tech./M.Sc./MBBS/BDS/BVSc or equivalent degree
60% marks or 6.0 CGPA on a 10-point scale in the qualifying degree
Valid GATE score/NET(JRF) score/INSPIRE Fellowship
GATE score NOT required for B.Tech. from IITs with CGPA >= 8.0

Full Time (Sponsored):
B.E./B.Tech./M.Sc./MBBS/BDS/BVSc or equivalent degree
60% marks or 6.0 CGPA on a 10-point scale in the qualifying degree
GATE/NET score is NOT mandatory

Part time:
B.E./B.Tech./M.Sc./MBBS/BDS/BVSc or equivalent degree
60% marks or 6.0 CGPA on a 10-point scale in the qualifying degree
GATE/NET score is NOT mandatory
State-of-the-Art
Equipment, Labs & Facilities

Fermentation Laboratory Facility

Analytical Laboratory Facility
Wet Laboratory Facility

Translational Research Facility
Green House Facility

Biopolymer Based Agro Cultivation Facility

Composting Facility
A Few Fond Memories...

National Award for Heat Stable PLA by Ministry of Chemicals and Fertilizers 2019

A visit by the Ambassador of France to India and other honoured delegates of the French Embassy

A visit of Shri Sanjay Dhotre, MoS HRD, Communication, Electronics and IT

A visit of Shri Jagdish Mukhi, Governor of Assam

A visit of Shri Ramesh Pokhriyal, Minister of Education, Govt. of India
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Click here to Know More:

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