



# Academic Programs

## Centre for Interdisciplinary Sciences (CIDs)

JIS INSTITUTE OF ADVANCED STUDIES & RESEARCH KOLKATA  
Arch Waterfront, 17<sup>th</sup> Floor, Sector V, Kolkata 700 091, West Bengal, India  
[www.jisiasr.org](http://www.jisiasr.org)

**Centre for Interdisciplinary Sciences (CIDs)** offers an advanced scope of educational curriculum and research where the basic sciences meet with the technology to address the real challenges and pertinent issues for present society.

### ACADEMIC PROGRAMS

Realising the urgent need to fulfil the gap between academic curriculum and industry's demand, CIDs is offering a number of quality programs at post-graduate levels:

#### **MTech in Sensor Technology and IoT**

##### *Eligibility:*

BE / BTech (with minimum 60% marks or equivalent CGPA) / MSc (with minimum 50% marks or equivalent CGPA) in Computer Science / Electronics / Instrumentation / Optoelectronics / Materials Science / any other relevant subjects

#### **MSc / MTech in Polymer Science and Technology with specialization in Paint and Coating**

##### *Eligibility:*

BSc (with minimum 50% marks or equivalent CGPA) in Chemistry / Physics / Biochemistry / Life Sciences (for MSc) or

BTech (with minimum 60% marks or equivalent CGPA) in Metallurgy / Chemical Engg. / Mechanical Engg. (for MTech)

### Program Highlights

- ✓ Scholarships for meritorious students with good academic profile
- ✓ Research/industrial training in leading National and International institutes
- ✓ Unique curriculum designed for need based academic and industrial demand
- ✓ Cutting edge research with in-house laboratory facilities
- ✓ Excellent placement support

### Scope of Placements

- ✓ Sensor Technology and IoT: Immense job opportunities in the industries dealing with medical electronics, consumer electronics, bio & environmental monitoring, automotive, building automation, aerospace & defence, machine control, and many others. Students will be guided and prepared for industry as well as for startups.
- ✓ Polymer Science and Technology: Possible scopes to be absorbed in the industries / sectors such as - plastic industry, fiber / textile industry, tyre industry, rubber based industry, automotive part sector, drug manufacturing industry, paint / coating industry, analytical laboratories, medical implant manufacturing, composite industry, and others.

*In addition to the above academic programs, CIDs also offers-*

**A six months certificate program in 3D printing:** Any Science / Engineering graduate student can apply.



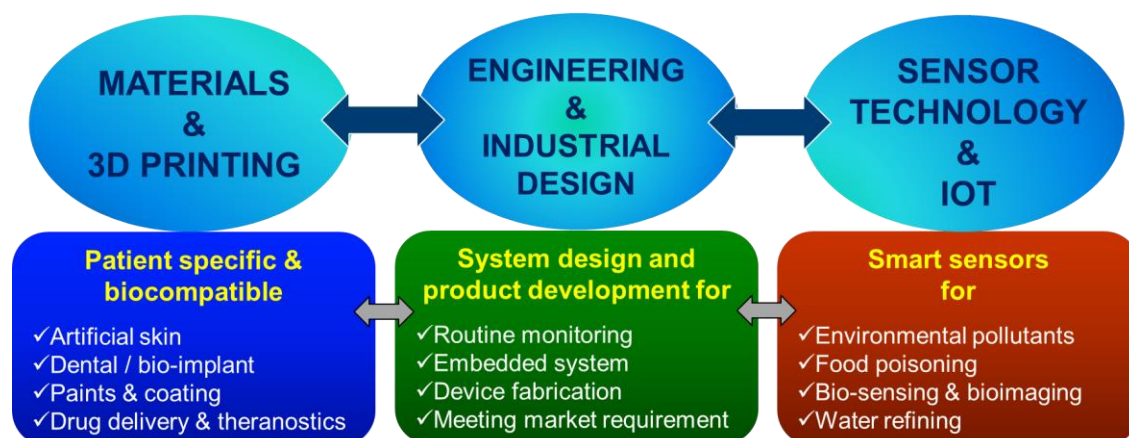
# Research Programs

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### RESEARCH PROGRAMS

**Centre for Interdisciplinary Sciences (CIDs)** is committed to emerge as a research group of global reach in the design and development of novel bio-materials including polymeric and nanomaterials along with sensor technology and IOT adhering to the norms of industries with green and sustainable alternatives to existing materials for cutting edge applications. The centre is also focusing in innovation and design science with the concept of integration of interdisciplinary technologies resulting in hi-tech complex embedded industrial products.



### Ongoing research areas for PhD program

- ✓ Biomaterials
- ✓ Nanoscale materials
- ✓ Polymer science and technology
- ✓ 3D printing
- ✓ Sensing materials
- ✓ Sensor devices
- ✓ Biosensing and bioimaging
- ✓ Drug delivery and theranostics

\* *Highly motivated and bright students are requested to communicate directly with the faculty members of this centre for possible **PhD position** in the relevant areas.*

### PhD Program Highlights

- ✓ Scholarships for meritorious students with good academic profile.
- ✓ Guidance for entrepreneurship with *in-house* startup incubation facilities.
- ✓ Research collaborations with several leading national and international institutes and industries, likes- IIT Kharagpur, MGU Kerala, NIPER Kolkata, SNBNCBS Kolkata, IPF-Dresden Germany, POSTECH South Korea, Indian Paint Association (IPA), Confederation of Indian Industry (CII), and many others.
- ✓ Scope for Post-Doctoral Research at leading National / International institutes.

### Research Grants

*Several research grants have been awarded to the faculties of CIDs from different governmental funding agencies (DST, Inspire, etc.).*



# In-house Core Facilities

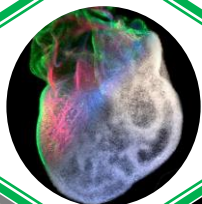
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### Biopolymers Lab

### Sensors Lab

**3D-printer**



**Spectrophotometer**



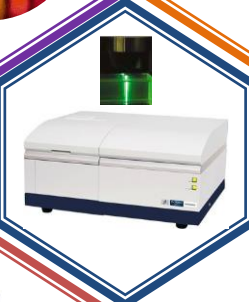
**Electro-spinning Setup**



**Centre for Interdisciplinary Sciences (CIS)**



**Fluorometer**



**Rotary Evaporator**



**Limiting O<sub>2</sub> index meter**



## FACULTY MEMBERS



### Dr. Prosenjit Saha

PhD: IIT Kharagpur, India

Post-Doc: GNU, South Korea, & MG University, Kerala, India

**Research interest:** Electrospun and 3D printed biomaterials; Polymeric bio-inks; Composites



### Dr. Subhankar Singha

PhD: POSTECH, South Korea

Post-Doc & Research Professorship: POSTECH, South Korea

**Research interest:** Biomaterials for sensing & imaging; Chemical- & bio-sensors; Drug delivery and theranostics



### Dr. S. P. Bhattacharya

Former Executive Director (Engg., R&D), HAL

**Research interest:** Engineering and industrial designs