



भारतीय प्रौद्योगिकी संस्थान भुवनेश्वर
Indian Institute of Technology Bhubaneswar

Press Release

IIT Bhubaneswar is ready with new Programs and several new Courses for Fall 2024

- **Interdisciplinary Blended-mode M.Tech. degree Program in ‘Advanced Maintenance Technology’ specially for engineers working in industry**
- **M.Tech. degree Program in Semiconductor Technology and Chip Design**

Bhubaneswar, 15th April 2024: Indian Institute of Technology (IIT) Bhubaneswar has launched, in line with the emerging technology trends and industry needs, two new Programs and several new courses for the upcoming Fall 2024 session. The two new Programs include (a) an Interdisciplinary Blended-mode M.Tech. Degree in “Advanced Maintenance Technology”, meant especially for engineers working in the industry and (b) a M.Tech. Degree in “Semiconductor Technology and Chip Design”, meant for regular students.

Blended-mode M.Tech. Degree in ‘Advanced Maintenance Technology’:

Timely maintenance of equipment and systems in industry is key to sustainability of operations, productivity and quality. The new M.Tech. Program aims to educate and train engineers working in industries so as to enhance the sustainability and productivity of industries and increase industry-academia interaction. The interdisciplinary Program offers a modern mix of relevant and advanced courses from mechanical, civil, electrical, metallurgical and materials engineering, with a special focus on maintenance issues related to corrosion, welding, vibration, structures, and also development of digital twins for diagnosing failures. The registration details are available at: https://webapps.iitbbs.ac.in/mtech_blended-app/. This Program also includes the study and application of “Chaos in dynamical systems”. One research group has already discovered a new chaotic attractor, which has been successfully tested in some industrial systems for failure detection. This attractor is proving vital for failure prediction/detection in dynamical systems.

M.Tech. Degree Program in Semiconductor Technology and Chip Design:

India's Semiconductor Mission (ISM) is propelling the country as a global electronics manufacturing and design hub. Recent milestones include a new semiconductor fab and two Outsourced Assembly and Testing (OSAT) facilities, with a total investment of INR 1.25 Lakh Crore. The related projects will create thousands of technology jobs and start-up opportunities, producing chips with 28 nm, 40 nm, and 90 nm transistors. ISM's focus on compound semiconductors like Gallium Nitride and Silicon Carbide will cater to India's defense, space, and Electric Vehicle transportation needs. To support this growth by creating skilled professionals, the School of Electrical Sciences at IIT Bhubaneswar has launched an M.Tech. program in Semiconductor Technology and Chip Design, covering design, fabrication, assembly, testing, packaging, and development of IPs/ASICs/SoCs/Systems for targeted applications. Admission related details are available at <https://webapps.iitbbs.ac.in/mtech-application/index.php>.

In addition to above, with a view to modernize the curricula, IIT Bhubaneswar has introduced several new courses, like Minor in Economics, Micro-specialization in Software Engineering, courses on entrepreneurship, plus a host of new open electives in modern areas of studies for undergraduate as well as research students.

A new Ph.D. Fellowship titled 'Professor R.H. Tupkary Fellowship' has been created at IIT Bhubaneswar by the donation of Rs. 1 crore by Prof. Brahma Deo, MGM Chair Professor at the Institute, as a token of respect for his erstwhile professor at Banaras Hindu University in 1967. On this fellowship, a Ph.D. student is presently working in the area of Physiology, jointly with AIIMS, on mental health disorders, which is a compelling problem in India with the largest number of patients in the world. Again, the studies on "Chaotic Dynamical Systems" have helped to find a special chaotic attractor which can greatly help in disease analysis.

With these new development in the curriculum and pedagogy, with added outreach to industry, IIT Bhubaneswar is all set to enhance industry-academia collaboration, bring innovation in the field of technical education and research, as well as support the professional development of the students.
