



IPS ACADEMY
INSTITUTE OF ENGINEERING & SCIENCE
(A UGC Autonomous Institute, Affiliated to RGPV Bhopal)

Institutional Distinctiveness

IPS Academy, Institute of Engineering & Science established in 1999 is one of the premier self financing autonomous institutes imparting quality technical education with the sole motto of “*Knowledge, Skill & Values*”.

The Institute is distinctive in its priority and thrust of establishing cutting-edge research laboratories with state-of-the-art facilities.

Microfluidics Research Laboratory:

Institute established the microfluidics research laboratory with articulated multidisciplinary objectives and flexibility to accommodate evolving research needs. The laboratory have prioritized the safety and compliance with biosafety level 2 standards. The lab always stays abreast of technological advancements to update equipment and methodologies with the institute support.

We have strived for continuous improvement with proper documentation practices to protect intellectual property by patenting the research outcomes. The proposals submitted to potential funding sources (SERB, DST, DBT, ICMR, AYUSH, Satyabhama and to many ministries in India) and many international bilateral science and technology proposals with experts from different countries regularly.

As the outcome of this constant collaborative works, we have obtained six grants to carryout various research activities.

1. Development of a biocompatible vehicle for sustained delivery of lactobacillus spores as a treatment modalities for bacterial vaginosis (India and Japan collaborative work)
2. Can Perio-pathogenic bacteria and candida spp act as biomarkers of saliva in oral cancer? A non-invasive diagnosis of oral cancer in a microfluidic platform (India and Sri Lanka Collaborative work)
3. Drug Diffusion studies on skin-on-a-chip devices. (India and Hungary collaborative work)
4. Early Diagnosis of oral cancer biomarkers of saliva in oral cancer – A non-invasive diagnosis of oral cancer in a microfluidic platform (07 days workshop)

5. Integrated microfluidic devices: Fabrication techniques, sensing devices for engineering & Biomedical applications(07 days workshop)
6. Microfluidics in Engineering & Biomedical Sciences: Training Program (One month Internship)

Institute has funded for three R&D project proposals:

1. Drug diffusion studies on skin-on-a-chip: Influence of shear stress
2. Effect of biofertilizer on different Rhizosphere microbes in a microfluidic platform
3. Adhesion studies of the pathogenic salivary microbes in a microfluidic platform

With the help of these grants, we have established strong research collaboration with Professors from IIT Madras, IIT Indore, IIT Guwahati, Pázmány Péter Catholic University-Hungary, University of Moratuwa-Sri Lanka, BITS Goa, BITS Hyderabad, NIPER-Hyderabad, University of Porto-Portugal, Université Paris Cité-France, Department of Radiation-Applied Biology Research, National Institutes for Quantum and Radiological Science & Technology (QST-Takasaki)-Japan, AIIMS Bhopal, AIIMS Delhi, CMC Vellore and more in pipeline to be included.

The Institute has organized two workshops and one internship programs with government funds from Accelerate vigyan-Karyashala and Vritika. Institute has signed MOUs with National Institute of Fundamental studies-Kandy, University of Peradeniya-SriLanka & Manipal University-Karnataka.

In this way we have invested in ongoing training and professional development of research staff by fostering a culture of **continuous learning and innovation**.

Heavy Structure Lab:

Heavy Structure Lab of the institute is a state-of-the-art facility incorporating seismic testing methodologies, and is engaged in basic and applied researches that resolve critical seismic engineering issues. We seek to build interdisciplinary knowledge and expertise to develop innovative strategies for increasing the safety and reliability of civil structures which are subjected to dynamic hazards such as earthquakes. Our research is focused on the areas of structural dynamics, evaluation of seismic performance of civil engineering structures, development of advanced seismic response control seismic resistant design strategies and vibration assessment of structures. The Lab continuously strives to be a focal point for earthquake engineering and vibration dynamics in and around Madhya Pradesh.

In the heavy structure lab facilities and Students are able to create specialized test fixtures, complex and large test setups, and a variety of detailed instrumentation networks. They will be able to fabricate prototype test specimens for structural components and systems made of steel, reinforced concrete, masonry, adobe, wood, composites, and other materials. Instrumentation available in the laboratory ranges from simple mechanical indicators to a high speed computer-controlled data acquisition systems. Will be able to apply lateral load and test various specimen against earthquake, which will be helpful in performing current research in the field of earthquake engineering.

Heavy Structure Lab encompasses a broad range of activities for research in seismic performance assessment and structural engineering.

HIGHLIGHTS OF THE STATE OF ART LAB ARE:-

- Received Grants of Rs 12, 86,000 for “Strengthening of RC Column using GFRP and CFRP under MODROBS scheme from AICTE, Govt. of India for the session 2018-19.
- Received Grant of Rs 14, 50,000/- for “Dynamic Analysis of SDOF Frame Structures” under MODROBS scheme from AICTE, Govt. of India for the session 2019-20.
- Received Grant of 3, 50,000/- for Earthquake Mitigation & Risk Analysis. (Six Days ATAL FDP)
- Working in collaboration with Dr. Vasily Golubev (Senior Researcher & Head Laboratory of Applied Numerical Geophysics, Moscow Institute of Physics and Technology, Russia) on “Experimental and Numerical Investigations of Dynamic Processes in Earthquake Resistance Problems”.
- Working in collaboration with Dr. Ilia Nikitin (Professor, Institute for Computer Aided Design of RAS Moscow, Russia) on “Seismic Performance Assessment of Existing Structures”.



Photograph For Inspection Of Instruments Procured under MODROBS I





Photograph For Inspection Of Instruments Procured under MODROBS II





AICTE Sponsored Two Day's MODROBS Training Program (19th -20th Jan, 2023)



AICTE Sponsored Two Day's MODROBS Training Program

PHOTOS









**“AICTE Sponsored Two Day’s
MODROBS Training Program ”
(19th -20th Jan,2023)**

Encl.4



NEWS (Published/Sent)

आईपीएस एकेडमी में भूकंप जागरूकता प्रशिक्षण कार्यक्रम



राजीव टाइम्स ■ इंदौर

आईपीएस एकेडमी, इंस्टीट्यूट ऑफ इंजीनियरिंग एंड साइंस के सिविल इंजीनियरिंग विभाग द्वारा एआईसीटीई मॉडरोब्स द्वारा प्रायोजित भूकंप अभ्यास एवं मूल्यांकन विषय पर प्रशिक्षण कार्यक्रम का आयोजन किया गया। कार्यक्रम में सिविल इंजीनियरिंग पृष्ठभूमि से संबंधित लगभग 60 प्रतिभागियों ने प्रशिक्षण प्राप्त किया। प्रशिक्षण कार्यक्रम का मुख्य उद्देश्य युवा व पेशेवर सिविल इंजीनियर्स को भूकंप जैसी आपदाओं का इमारतों पर आकलन व उचित समाधान बताना था। शासकीय इंजीनियरिंग कॉलेज मोदासा गुजरात के अप्लाइड मैकेनिक्स विभाग के विभागाध्यक्ष मेजर

डॉ. सीएस संघवी व गुजरात टेक्नीकल यूनिवर्सिटी के प्रो. गिरीशचंद्र मोधा उपस्थित हुए। संस्था प्रमुख डॉ. अर्चना कीर्ति चौधरी ने बताया संस्था का सिविल इंजीनियरिंग विभाग प्रदेश का एकमात्र विभाग है जहां इमारतों पर भूकंप संबंधित आकलन के लिए प्रयोगशाला स्थापित की जा रही है। अध्यक्ष अचल चौधरी ने कहा ये आज की आवश्यकता है तथा इस प्रयोगशाला को एआईसीटीई मॉडरोब्स से फंडिंग प्राप्त हुई है। मेजर डॉ. सीएस संघवी द्वारा भूकंप की जटिलताओं व समाज में उसके नकारात्मक प्रभाव पर प्रकाश डाला गया। उन्होंने यह भी कहा कि भूकंप व सुनामी जैसी विध्वंसकारी आपदाओं से पार पाने के लिए सिविल इंजीनियर्स का सबसे महत्वपूर्ण योगदान रहता है।



**“AICTE Sponsored Two Day’s
MODROBS Training Program ”
(19th -20th Jan,2023)**

Encl.4



भूकंप जागरूकता हेतु प्रशिक्षण कार्यक्रम



इन्दौर। आई पी एस एकेडमीए इंस्टीट्यूट ऑफ इंजीनियरिंग एंड साइन्स के सिविल इंजीनियरिंग विभाग द्वारा एआईसीटीई मॉडरोब्स द्वारा प्रायोजित भूकंप अभ्यास एवं मूल्यांकन विषय पर प्रशिक्षण कार्यक्रम का आयोजन किया गया।

इस कार्यक्रम में सिविल इंजीनियरिंग पृष्ठभूमि से संबन्धित लगभग 60 प्रतिभागियों द्वारा प्रशिक्षण प्राप्त किया गया। कार्यक्रम में विशेषज्ञ के रूप में शासकीय इंजीनियरिंग कॉलेज मोदासा गुजरात के अप्लाइड मेकेनिक्स विभाग के विभागाध्यक्ष मेजर डॉ. सी. एस. संघवी व गुजरात टेक्नीकल यूनिवर्सिटी के प्रो. गिरीशचन्द्र मोधा उपस्थित हुए। संस्थाप्रमुख डॉ. अर्चना कीर्ति चौधरी ने बताया कि संस्था का सिविल इंजीनियरिंग विभाग प्रदेश का एकमात्र विभाग है जहाँ इमारतों पर भूकंप संबन्धित आकलन हेतु प्रयोगशाला स्थापित की जा रही है। अध्यक्ष श्री अचल चौधरी जी ने कहा कि ये आज की आवश्यकता है तथा इस प्रयोगशाला को एआईसीटीई मॉडरोब्स से फंडिंग प्राप्त हुई है। मेजर डॉ. सी. एस. संघवी ने व्याख्यान के माध्यम से भूकंप की जटिलताओं व समाज में उसके नकारात्मक प्रभाव पर प्रकाश डाला गया।