



UNLOCKING BRAINWAVES: AN INTRODUCTORY EEG WORKSHOP

**27 MAY 2025,
SHSS&M, IITBBS**

ORGANISED BY

School of Humanities, Social
Sciences and Management,
IIT Bhubaneswar

CHIEF PATRON

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PROGRAM COORDINATOR

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About IIT Bhubaneswar

Indian Institute of Technology (IIT) Bhubaneswar was established in 2008 by the Government of India as one of the eight second-generation IITs. IIT Bhubaneswar's lush green campus at Argul, Khorda is spreading over 936 acres in the foothills of magnificent Barunei, which is famous for its rich history. The campus provides a unique, serene, and pollution-free academic environment. IIT Bhubaneswar offers UG, PG, and PhD courses through seven schools of study. It has an academic area, a residential complex, an area for training centers, and a research park. IIT Bhubaneswar has made rapid strides towards becoming one of the elite technology institutes of India spurred by the sustained creation of knowledge and innovation, through high-quality research and development activities and commitment to holistic education. The Institute aims to develop and pursue dynamic and flexible curricula designed to facilitate creativity and cognitive thinking among students through productive partnerships with industries.

About SHSS&M

The School of Humanities, Social Sciences & Management at Indian Institute of Technology, Bhubaneswar corroborates many humanistic disciplines through teaching and research across Economics, Planning, Language, Literature, Culture, Social Policy, Technological Development, Psychological Behaviors, Public and Private Values.. The school's aim is to help students develop the requisite communicative, analytic, critical and cultural knowledge to thrive in all aspects of their lives. Currently the school offers courses for B. Tech. disciplines and doctoral programs in Economics, English, Psychology and Philosophy.

About the Workshop

The workshop "Unlocking Brainwaves: An Introductory EEG Workshop" is designed to provide participants with a hands-on introduction to the fascinating world of electroencephalography (EEG) and its applications in neuroscience, psychology, and other fields. This engaging event is ideal for students, researchers, educators, and professionals interested in exploring how brain activity can be measured and analyzed to uncover insights about cognition, emotion, and behavior.

Objectives

- Participants will learn the basic principles of EEG, including how brainwaves are generated, the different frequency bands (e.g., alpha, beta, theta, delta), and their significance in various cognitive states.
- The workshop will feature live demonstrations using EEG equipment, showing how brain activity is recorded in real-time.
- Explore how EEG is used in areas such as mental health research, cognitive psychology, neurofeedback therapy, brain-computer interfaces (BCIs), and educational studies.
- A beginner-friendly overview of EEG data processing and interpretation, including techniques for identifying patterns and artifacts in recordings.

Workshop Outline

1. INTRODUCTION TO EEG:

- Basic concepts and historical background
- Brainwave types and their significance

2. EQUIPMENT AND SETUP:

- Overview of EEG hardware
- Proper electrode placement and montage

3. EEG DATA ACQUISITION:

- Live demonstration of EEG recording
- Best practices and common challenges

4. DATA ANALYSIS AND INTERPRETATION:

- Basics of EEG signal processing
- Identifying artifacts and filtering techniques

5. APPLICATIONS OF EEG:

- Cognitive research
- Clinical diagnostics
- Brain-computer interfaces

6. HANDS-ON SESSION:

- Group practice with EEG equipment
- Guided data collection and basic analysis

Who Should Attend?

This workshop welcomes individuals from diverse backgrounds, including:

- Students in psychology, neuroscience, or biomedical engineering.
- Educators interested in using EEG for classroom engagement.
- Professionals exploring EEG's potential for clinical or research purposes.
- Enthusiasts with a curiosity about how the brain works.

Why Attend?

This workshop provides a unique opportunity to bridge theory and practice in a rapidly growing field. Whether you're looking to enrich your academic pursuits, expand your professional skill set, or simply satisfy your curiosity about the human brain, the workshop offers valuable insights and experiences.

Learning Outcomes

By the end of the workshop, participants will be able to:

- Describe the basics of EEG technology and its applications.
- Operate introductory-level EEG equipment and collect basic data.
- Understand ethical considerations related to EEG research.
- Identify potential areas for applying EEG in their own studies or professions.

For any query, contact:

eegworkshopiitbbs2025@gmail.com

Registration Information

Registration fees include course material, refreshments, breakfast, working lunch, dinner and accommodation at the IIT Bhubaneswar Campus.

Deadline for Application along with payment of requisite registration fee: March 31, 2025.

The participants who attend all the sessions and complete the assignments will be provided with a course completion certificate by IIT Bhubaneswar.

Course Fee: 2500/-

No fee applicable for participants from IIT Bhubaneswar

Bank Account Details

Institution Account Name:

CEP, IIT Bhubaneswar;

Account No.: 24282010001960

IFS Code: CNRB0017282

Bank Name and Branch: Canara Bank, IIT Bhubaneswar, Argul Branch

LIMITED SEATS ONLY ON A FIRST-COME FIRST-SERVE BASIS

Register here:

REGISTRATION LINK FOR NON- IIT BHUBANESWAR PARTICIPANTS

<https://forms.gle/awgcm4EYEVsi5QVF7>

REGISTRATION LINK FOR IIT BHUBANESWAR PARTICIPANTS

<https://forms.gle/UEb3e8sTumDhlggy6>