One Week Self-Financed Offline Workshop on
"Hands-on Innovation: Mastering Arduino and VHDL with Biomedical Sensors"
21st -25th October 2024

REGISTRATION FORM

Name: ……

Designation: ……...……..…

Organization: ……..…

Qualification: ……

Correspondence Address: ……..……

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Tel. (O) …… (R) ..…….....

(M) …….…….....

E-Mail: ……...……

Amount …….....

NEFT/DD/Transaction No.....

Date of payment……

Name of the Bank…….……

Date:
Place:

Signature

Participants must send scanned copy of the filled registration form along with proof of payment through email to the coordinators.

Payment should be made to the following.

Account No.: 38027633250
Name: Director, NIT Raipur
IFSC: SBIN0002852

Registration Fee should be paid in the form of Cash/DD/NEFT in favor of Director, NIT Raipur.

Last Date for registration: 20-10-2024

Chief Patron

Dr. N V Ramana Rao
Director
National Institute of Technology Raipur, India, 492010

Patron

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National Institute of Technology Raipur, India

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One Week Self-Financed Offline Workshop on

Hands-on Innovation: Mastering Arduino and VHDL with Biomedical Sensors

21st -25th October 2024

Organized by

Department of Biomedical Engineering
National Institute of Technology
Raipur-492 010 (Chhattisgarh)

Address for Correspondence

Dr. Neelam Shobha Nirala
Contact No. +91-6232089917

Dr. Shivangi Giri
Contact No. +919450666459

About the Institute:

National Institute of Technology (NIT) Raipur, formerly known as Government Engineering College (GEC) Raipur, is established in 1956. The institute has established its unique identity for the development of high-quality human and knowledge resources. It was declared as 'National Institute of Technology' by the Government of India on 1st December 2005 and then an 'Institute of National Importance' in May 2007 vide the National Institute of Technology Act 2007. With over six decades of glorious history as a premier technical education institution in India, NIT Raipur now offers 12 UG and 11 PG programs. In addition to the UG and PG programs, NIT Raipur also offers Ph.D. in 18 disciplines of science and technology.

About Department:

The Biomedical department started in the year 2003 and it offers undergraduate course in Biomedical Engineering and Ph.D. program. The department has well-equipped laboratories including the Biomedical Instrumentation lab, Microbiology and Biochemistry lab, Tissue Engineering lab, Biomedical Equipment lab, Computational biology, and Bio-signal processing lab to enable the students and the scholars to pursue research in-house.

Venue:

Department Biomedical Engineering
NIT Raipur (CG) – 492 010, INDIA

Objectives:

The objective of this workshop is to equip participants with practical skills and knowledge in integrating Arduino microcontrollers with biomedical sensors. Through hands-on exercises and guided projects, attendees will learn how to design, build, and program a system that collects and analyses sensor data. This workshop aims to provide a comprehensive overview of biomedical sensors, including their operational principles and applications in healthcare and research. Participants will learn to interface Arduino boards with various sensors, such as strain gauges, temperature sensors, and piezo sensors. The workshop will also cover methods for collecting, processing, and visualizing sensor data using Arduino and related software tools. Participant will also learn how the digital systems make circuit in industrial level work using Xilinx. Additionally, the workshop will equip participants with techniques for troubleshooting common issues and optimizing sensor performance to ensure accurate and reliable results.

Targeted at UG, Ph.D. students in biomedical engineering, young faculty members/researchers.

Theme/Scope of workshop:

The theme of this workshop is integrating biomedical sensors with Arduino along with getting knowledge of VHDL using Xilinx. This will mainly focus on exploring how Arduino technology can be effectively combined with various biomedical sensors to enhance healthcare and research applications. Participants will delve into the principles of sensor technology, learn to interface these sensors with Arduino, and gain hands-on experience in collecting and analyzing physiological data. Application of Xilinx for VHDL. By bridging the gap between technology and practical health monitoring, the workshop aims to empower attendees with the skills to develop innovative solutions that improve health outcomes and research capabilities.

Topics to be covered:

- Introduction of Arduino and Biomedical Sensors
- Hands-on session on integrating Arduino with the Biomedical Sensors.
- Data collection and processing.
- Troubleshooting and optimizing sensor performance
- Introduction of digital systems
- Introduction and application of VHDL
- Introduction of Xilinx
- Execution of project using Xilinx
- Future studies and applications.

Targeted Participants:

Undergraduate from various departments, Postgraduate and Ph.D. students, young faculty members/researchers from academia

Registration Fee Details (in INR):

Seats are limited and selection will be done on first-come-first-serve basis. Participants must fill the registration form with payment details. Fee is non- refundable. Selected participants will be notified through email as per the schedule.

Registration Fees (INR)

NITRR students: 500

External students: 750

PhD scholar/ NITRR faculty/ staff: 1000

Industry/Faculty: 1500

Additional 18% GST will be applicable in each category of registration fees

Important Dates

Last Date of Registration: 20-10-2024

Link for google form:
https://docs.google.com/forms/d/1oYjm2gxbYozETPBv1mE2PXc78vyrfItxGiMQP4KqHXc/edit