National Institute of Technology Silchar, Assam, India

UGRC call for Project proposal 2022



The Under Graduate Research Council (UGRC) call for project proposal attempts to encourage under graduate students towards research, social benefit of the community, and creative activity of the institution. The mission of the Undergraduate Research Council is to support and promote high-quality undergraduate student-faculty collaborative research and innovation. Further, it will allow students to participate in research projects, undergo mentorship by the faculties of NIT Silchar.

**Eligibility**: Students of B.Tech final, prefinal year, 2nd year and Ist year students of Civil Engineering Dept., Mechanical Engineering Dept., Computer Science and Engineering Dept., Electronics and Communication Engineering Dept., Electrical Engineering Dept., Electronics and Instrumentation Engineering Dept. are eligible to apply.

**Duration of Project**:

Duration of 1 year between **Oct 10th, 2022 to Sept 30th, 2023.**

**Application Process:** Students may apply with the proposed research proposal.

The application form is available in the institute website [www.nits.ac.in](http://www.nits.ac.in/)

# Requirements:

* This will be under the mentorship of a faculty from NITS and collaboration in interdisciplinary area is highly appreciated.

# Applicants above CPI 6 and above

# The project will not be allotted to groups that consist of only final year student or only 1st year students.

# Final year students and Ist year students can submit proposal with the collaboration of 2nd year and 3rd year students

# Maximum 6 students will be allowed in a group.  Among these, maximum 2 final year students or 1 final year student can be allowed. This will help to give more focus on 2nd year or 3rd year students to undertake the project.

# Applicants are requested to contact the individual faculties of respective departments (www.nits.ac.in) and after getting consent from the respective faculty, they can apply for UGRC project.

# The following Broad area will be considered

## **Allied UAS Technologies (Data Analysis, AI/ML, IoT, Cloud Computing,)**

## **Cane and bamboo as sustainable product/material for future**

## **Medical Imaging and Health Care Technology**

## **Security and Block chain**

## **Quantum Computing**

## **Pollution Control**

## **Module development for online exam**

## **Dispensary Management**

## **Cyber security, improve G2C (Government to citizen) interaction etc.**

## **Blue economy: Life under water**

## **Electric Vehicle**

## **Beyond 5G**

## **Landslide detection**

## **Climate change**

## **Self-Sustainable Wireless Communication**

## **Women safety or women empowerment**

## **Any innovative technology towards benefit of common people/society**

## **3D printing**

## **Oil-water separation**

## **Green energy**

## **Materials for next generation**

## **Energy storage**

## **Innovative building/construction materials**

## **Sustainable water resources management**

## **Earthquake damage mitigation of structures using liquid dampers**

## **Machine learning technique based damage using acoustic signals**

## **Disaster management**

1. **Electromagnetic for Biomedical Applications**
2. **Indoor Wireless Technologies**

* Letter of consent from host faculty should be submitted along with application form.
* Applicants are to submit a report to the individual faculty/department after the end of project and prototype development will also be highly appreciated.
* At the successful completion of the URGC project, best group will receive award certificate.

# Selection procedure:

After the submission of applications, thorough review of the applications will take place. The students and mentors will be informed via email.

Call for Project proposal (Date): 13th Sept ’2022

Last date to Apply (Date): 26th Sept’2022

List of shortlisted candidates for UGRC project will be informed via email (Date): 6th October’2022

Application should be submitted to the respective Individual Department members via Email given below:

1. Dr. Arup Goswami, Professor (Electrical Engineering Dept.), Email: [arupgoswami@ee.nits.ac.in](mailto:arupgoswami@ee.nits.ac.in)
2. Dr. Koushik Guha, Associate Professor (Electronics and Communication Engineering Dept.), Email: [koushik@ece.nits.ac.in](mailto:koushik@ece.nits.ac.in)
3. Dr. Sukumar Pati, Associate Professor (Mechanical Engineering Dept.),

Email: [sukumar@mech.nits.ac.in](mailto:sukumar@mech.nits.ac.in)

1. Dr. Ranjay Hazra, Asstt. Professor (Electronics and Instrumentation Engineering Dept.) Email: [ranjay@ei.nits.ac.in](mailto:ranjay@ei.nits.ac.in)
2. Dr. Malaya Dutta Borah, Asstt. Professor ( Computer Science and Engineering Dept.) Email: [malayaduttaborah@cse.nits.ac.in](mailto:malayaduttaborah@cse.nits.ac.in)
3. Dr. Susmita Ghosh Asstt. Professor (Civil Engineering Dept.) Email: [susmita@civil.nits.ac.in](mailto:susmita@civil.nits.ac.in)

For any query contact Dr. Brinda Bhowmick, Professor ECE Dept. via Email ( Email: [b](mailto:brindabhowmick@gmail.com)bhowmick@ece.nits.ac.in)

# APPLICATION FORM “UGRC project 2022" at NIT Silchar.

**Department applied for:**

**Name of team leader:**

**Details of the team leader:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sem and Dept.** | **CPI upto last sem** | **Registration no.** | **Phone no.** | **Email Id** |
|  |  |  |  |  |

**Details of group members:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name of the students** | **Sem and Dept.** | **CPI upto last sem** | **Registration no.** | **Phone no.** | **Email Id** |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

**Broad area:**

**Summary of the proposal (within 500 words):**

**Innovative aspects of the proposal (150 words):**

**Importance of the proposed project in the context of current status (within 200 words):**

**Name of faculty under whom UGRC project to be carried out:**

**Signature of HOD of the department where the team leader belongs:**

**Signature of Faculty under whom UGRC project to be carried out:**