

NU/AC/AC-240323/11(F)/23 - 5
Date: 28.04.2023

NOTIFICATION

- Read: 1. Resolution No. 8 – Faculty of Doctoral Studies & Research meeting – 21.03.2023
2. Resolution No. 11(F) – Academic Council meeting – 24.03.2023

Sub: Introduction of Undergraduate Research Policy

It is hereby notified for information of all concerned that the Academic Council in its meeting held on 24.03.2023 under resolution No. 11(F) and taking into consideration the recommendations of the Faculty of Doctoral Studies & Research, has resolved to approve the introduction of **Undergraduate Research Policy** to be made applicable for the researchers studying at undergraduate level in various Institutes of the University, as per *Appendix-A* attached herewith.

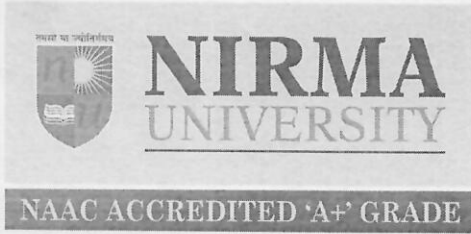
Executive Registrar

Encl.: Appendix-A [Pages 1 to 6]

To,
1. Dean, Faculty of Doctoral Studies & Research
2. All Deans of Faculty
3. Dy. Registrar (Exam & Ph.D.)

Copy to,
1. All Asst. Registrar/O.S.
2. Publication Officer
3. P.A. to ER

c.f.w.cs to Director General

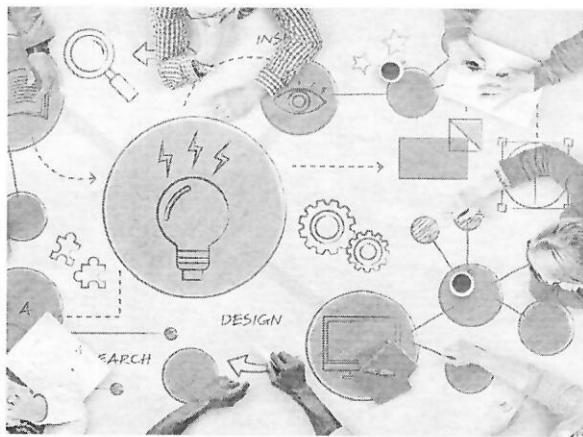
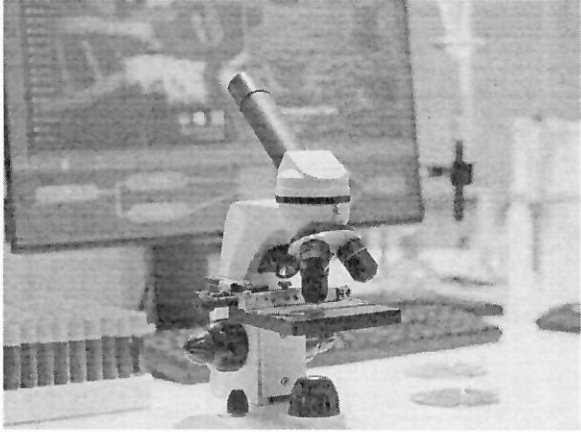


Appendix-D

Noti.No. NU- 17
Acad.Cou.mtg.-24.03.23

Undergraduate Research Policy

Nirma University, Ahmedabad
(Recognised as 'Centre of Excellence' by the Government of Gujarat)



Title of the Policy

Undergraduate Research Policy

Domain

Research and Innovation

Purpose of the Policy

To promote research aptitude among undergraduate students.

Version

1.0

Prepared by

University IQAC

Approved by

Academic Council in its meeting dated March 24, 2023

Notification date

NU-55, dated 28.04.2023

Review due

Four years from the date of notification

A handwritten signature in black ink, located at the bottom left of the page. The signature is stylized and appears to be a name, possibly 'Ravi' or similar, with a horizontal line underneath.

1. PREAMBLE

Research and Innovation are the keys for growth of the society and mankind. Looking at the concepts differently, reviewing methods in use and interpreting the existing knowledge helps to go beyond the mundane approaches. Besides, the university aims to promote excellence, nurture talent, enable students to recognise their potential and ensure that they receive the best preparation. The research at the undergraduate level shall help build the research ability of the students for their career progression in the corporate world and/or in their chosen field of higher studies. To drive the research aptitude and to actively engage interested undergraduate students in realistic, relevant and socially-relevant problem solving, this policy document shall act as a guideline.

2. CONTEXT

Research at the undergraduate level can become a habit if it is nurtured and groomed at the freshman level. Developing the process of thinking, honing critical thinking skills, enthusing inquisitiveness, supporting the translation of ideas and providing the right mentoring at each stage can transform students at the undergrad level. These students with changed outlook can create research transformation at the university, in research labs and/or during higher studies. The majority of the university students are undergraduates and a few inclined ones if provided with the right environment, can be the teammates of postgraduate and PhD scholars. They can be the motivated ones who can publish research, participate in conferences, patent the translated ideas and increase visibility.

3. OBJECTIVES

This undergraduate research policy at the university level is framed with the following objectives:

- To inculcate the spirit of research, student learning in team, and work on ideas.
- To increase research publications through the systematic efforts of undergraduate students independently and in collaboration with senior postgraduate and PhD scholars.
- To support teams consisting of Undergraduate - Postgraduate and PhD students across institutes/disciplines leading to meaningful outcome and a handholding system.
- To plan and execute workshops, events, talk shows, presentations, competitions, formal interactions with researchers etc. to help interested undergraduate students understand the nuances of research, develop attitude and skills for research, to understand the problem and write the correct problem definition/problem statement.

- To identify the right faculty mentor(s) across the university to support interdisciplinary groups and to act as the bridge for networking across disciplines.
- To nurture the ideas through support under the Idea lab/Tinkerers' lab/ student start-up and incubation/funded research projects.
- To develop and monitor an IT-enabled system/forum to post problem statements across disciplines.
- To promote students to compete in the state, national and international events organised by reputed institutions/organisations/forums and Government ministries.

4. UNDERGRADUATE STUDENT RESEARCH CELL AT EACH INSTITUTE/SCHOOL

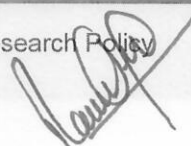
Each discipline has a specific way of observing, identifying and solving problems in the respective domains. At the same time, there may be a possibility to apply the solutions available in the other domains. To groom the students in their field and to meet the experts in the other domains, a bridge is required and that can be established through the institute/school level Undergraduate student research cell.

The structure of the cell will be as follows:

- Chairperson - Head of the Institute/School
- A faculty in-charge of the research cell at the respective institute/school
- A faculty from each department/area to act as the nodal person for the students (department coordinator)
- UG Student representatives from each department (01 from 3rd year per department/area) and/or PG/PhD scholars from each department, wherever applicable.
- Representative of Dean – Research, Nirma University

5. ROLES AND RESPONSIBILITIES

- Head, Research (Faculty in-charge) shall be responsible for coordination among the departments across the school/institute and reporting to the Director of the respective school. He/she shall be meeting the in-charges across the institutes for discussions on problems identified.
- Head, Research (Faculty in-charge) shall be responsible for planning and execution of the annual event calendar in consultation with department coordinators. Annual budget planning shall be done by him/her (This budget shall include an idea budget).



- iii. The department coordinator shall be responsible for motivating students, providing support for establishing handholding with faculty/mentor / PG – PhD students working in the domain of student's interest.
- iv. The department coordinator shall propose the annual activity plan of the department in consultation with the respective HoD/area in-charge.
- v. The department coordinator in consultation with HoD/area in-charge shall coordinate for fund sharing among department activities, and support students for conferences.
- vi. It is desired that a national-level research activity is planned at each institute/school once a year.
- vii. It is desired that three activities are done by each department and in turn at least eight activities per school/institute. To begin with about 5% to 10% of the student population is covered under Undergraduate Student Research Cell.

6. PROPOSED ACTIVITIES UNDER UNDERGRADUATE STUDENT RESEARCH CELL

The undergraduate students research cell shall function to promote student-level discussions – at the peer level, a PG-UG handholding and guidance by a PhD scholar and a faculty mentor. It shall conduct the following activities for interested students:

- i. Theme-based workshops e.g., Research methodology, literature survey, research paper writing, problem identification, time management and planning, the art of poster making and presentation etc.
- ii. Sessions on research tools like LaTeX, reference management software, statistical analysis and representation, flowchart making/drawing software, grammar tools, presentation tools, etc.
- iii. Plan and execute events like interaction with research leaders and scientists, research talks and symposiums, project competitions, seminars etc.
- iv. Organising working model demonstrations, technical presentations and poster symposiums.
- v. Planning research week for imparting research skills.
- vi. To facilitate the understanding of the nitty-gritty of research at the undergraduate level and involve interested candidates in research.

- vii. Maintaining IT based portal for students to post a problem and inviting solutions from interested students.
- viii. To act as a facilitator for resource management enabling students to utilise them across disciplines/institutes.
- ix. Teaching software and hardware tools, case studies, reading and interpreting standards.
- x. To facilitate research promotion by way of funding students for reputed conferences, and journal publications.
- xi. To establish student journals in relevant domains.
- xii. Identifying research-based projects at UG final semester under Major Project.

7. FOCUS OF UNDERGRADUATE MAJOR PROJECTS AS A PART OF STUDENT RESEARCH CELL

The university/institute involves students in research through multiple activities including offering UG-level major project/internship. Some of the students, well-groomed for research can bring a lot of ideas usually not thought of. This brings a possibility to make the undergraduate-level major project a great opportunity for students to mould themselves.

The final year UG major project may not be only academic research but a translational one. It is suggested that the students are provided with the research project titles from industries as well as by the faculty and they work on these leading to a meaningful outcome in terms of job/ patent or research papers.

Suggestions for the Department Student Research Cell:

- i. Invite research problem statement(s) from relevant industries in the domain.
- ii. Invite project abstracts from the faculty members' research domain.
- iii. Define the required infrastructure and plan the same. Possibly infrastructure of industry and institute together may be helpful and hence a meeting with industry guide is advised.
- iv. The targeted outcome and the time frame may help to devise a strategy to involve students from different years and carry work forward in a stepped manner.
- v. Plan for the budget if equipment, and components are required from the industry or the institute. If the facility created over the period is likely to help future students, the department may consider the budget in a phased manner over years.

Suggestions for the university/institute /school:

- i. Create an ecosystem, e.g. institute research board, research park, Central Instrumentation Centre.
- ii. Plan for infrastructure for research i.e. identify research space, extended library hours, and regularly upgraded infrastructure and equipment.
- iii. Industry support.
- iv. Faculty support, mentoring.

8. MODALITY AND REVIEW

- i. Meeting of the department coordinator with the department Student Research Cell students shall happen once a month and the meeting of department coordinators with the faculty in-charge at the school/institute level shall be once in three months.
- ii. Meeting of the department coordinator with students shall focus on students' expectations, problems in identifying the right mentor(s), support for tools, and planning of events based on students' inputs and requirements.
- iii. Meeting of department coordinators with faculty in-charge at school shall focus on activities to be planned, and their execution, identifying the needs of students across the disciplines, facilitating to manage the inter-disciplinary resources, inter-school and inter-institute challenges.
- iv. A review of institute/school level Undergraduate Student Research Cell activities shall be done by the Head of the Institute and representative of Dean – Research, Nirma University once in six months. This may be an agenda item of institute-level research committee meeting/s.

9. PROMOTION OF UNDERGRADUATE RESEARCH CELL AT THE INSTITUTE LEVEL

Developing a research culture among undergraduate students and promoting it for the societal good is an important task. The young talent has a lot of ideas, and often needs to be backed by a scientific and logical base. This age group if guided correctly, can lead to a good number of publications, patents and incubations. The cell shall put all the efforts, not limited to the following:

- Regular awareness sessions and posters.
- Sharing research problems/topics across disciplines within the institute and across the institutes through website.
- Inviting stalwarts to share their life/success stories, sharing inspirational biographies,
- Promoting the success of UG students through institute's website and social media platforms.
- Involving UG students from Semester II onwards in the activities like idea lab and funded projects.
- Informing students of activities happening around us and over the internet.

10. BUDGET AND RESOURCE UTILISATION

The institute/school shall prepare the annual plan of the tentative activities and accordingly the budget requirements for every financial year. The honorarium and logistic expenses for the external and internal experts shall be in line with Nirma University norms as prescribed from time to time. For all major activities, the approval of the respective Director/Director General will be required as per the regular practice/s. The budget specifically marked for the cell can be used for the following, but not limited to:

- Hosting national/state/institute-level research promotion activities.
- Research seminars - webinars, symposiums, talks, hosting leading researchers etc.
- Hosting national/state-level research related conferences.
- Research skill development activities e.g., software tools, model making, poster and project competitions.
- Industry collaboration/visit to research organisations etc.
- Any other item with the permission of respective authorities.

A separate document shall be shared by the university indicating the ceiling of budget to be made available to students from time to time for conference registration fees, expenses towards student travel, logistics and accommodation etc.



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