

Research & Development Policy



Version 3.0
With Effect from July 2018

**University of Petroleum & Energy
Studies (UPES)**

1. PREAMBLE

Research is an integral and important part of any higher education system. The primary purpose of Institute research is to advance knowledge and further the educational program. University of Petroleum & Energy Studies (UPES) facilitates its students, staff members and faculty:

1.1 To emphasize a research ethos among staff:

Promoting a positive environment for research activity needs to be addressed thereby ensuring that research is seen as a central pillar of faculty workload.

1.2 To increase research capacity of the faculty and the students:

Building research capacity in terms of human capital and physical infrastructure / facilities.

1.3 To support the efforts of faculty for external research funding for the faculty and the students:

Funding is essential for expanding our research activities. The Indian government has prioritized the development of a knowledge driven economy. UPES will be positioned to compete for and attract an appropriate percentage of this funding to underpin our research strategy.

1.4 To increase the level of collaborative research of faculty and students:

As with capacity building, the need for a collaborative approach to research is stressed at all strategic levels. Interdisciplinary teams are more favorably placed to respond to complex societal needs and problems and also to attract funding and achieve sustainability.

1.5 To maximize the research outputs from the faculty and Students:

Measuring research through the identification and tracking of outputs is important as it allows the success of the UPES research strategy to be determined and, where necessary, adjustments are made to ensure that the outputs are in-line with the UPES strategic requirements shows the organizational structure to steer these R&D activities.

2.0. Initiatives for Promotion of Research at UPES

2.1. Research Development Program

UPES has the vision to be an Institution of Global standing for developing professionally competent talent contributing to nation building. One of the missions of UPES is to create global knowledge eco-system through training, research & development and consultancy. As also, practice and promote high standards of professional ethics and develop harmonious relationship with environment and society. Along the same lines department of R&D at UPES has the vision to enable UPES become a leading institution of global repute known for its sustainable research excellence.

Administration at UPES is committed to realizing the vision and accomplish the mission and has taken a number of initiatives to encourage maximum participation in research activities from both faculty and student. In order to

equip the researchers (faculty and student) R&D department conducts workshops viz a viz Research Paper Writing, Patent Filing, Research Proposal Writing and Research Collaboration.

2.2. SEED

UPES encourage all the faculty members to test the feasibility of their research ideas without fear of failure. SEED funding is an in-house financial support that is available for consumables, mini equipment, travel grant, fees for characterization, software purchase and other operational expenses. The intent of this initiative is to support the growth of the researchers' by providing them flexible working capital and to leverage these limited funds in substantial external funding, industrial support or creative scholarship projects.

2.3. SODH

UPES is committed to instilling research favour in all the students. The objective of SODH is to inculcate a culture of innovation-driven entrepreneurship that can address emerging local and global challenges and provide opportunities related to the development of sustainable product/technology. This initiative provides testing ground for students' to validate their ideas, develop new technology or design products that would lead to technology or product development, research papers, patents and/or startups that can be taken up by the UPES Centre for Innovation and Incubation to help the student become an entrepreneur.

2.4. Anusandhan

UPES understand the importance of capacity building for faculty and student. Potential work force associate with greater capacities, the right tools and infrastructure can perform cutting edge research. Faculties are constantly updated and enriched with the latest developments in the field of interest through seminars, interactions and brainstorming sessions. Also to equip them with methods, tools and techniques to conduct innovative research, UPES conducts workshops, invited talks on diverse state-of-the-art research topics.

2.5. Patents

UPES has dedicated IPR cell as per the recommendations of UGC to address awareness and importance of intellectual property along with preserving and safeguarding of such intellectual property through patents and copyrights. Standard operating procedures for intellectual property creation to formulation and filling for granting is established. The smoothness in the process enables the faculty to work on strengthening the idea both technically and economically.

2.6. Learning with Leaders

Public funding is a stronger source for strengthening the research potential locally and globally for UPES. To enable young and seasoned researchers embark into the world of public funded research projects within or cross discipline, experiential support sessions with pioneers of the respective domain and funding agencies are provided. The open quarters sessions enable the faculty to learn from experts and empowers them to independently ideate, formulate and frame a research proposal that can have potential to grab funding opportunities.

2.7. Grant for Travel

Faculty and students are encouraged to participate in and present their research at various international and national forums (conferences/workshops/seminars, etc). UPES provides travel grant for the same.

2.8. Research Database

Access to the authentic citation database is paramount to doing credible research. In order to equip the researchers with authentic research UPES has subscribed to the two leading citation databases – SCOPUS and Web of Science. The researcher can build their literature review using the two citation databases backed by subscription to leading research journals in various disciplines of science and engineering.

2.9. Invited Talks

We at UPES understand the importance of equipping the faculty and student with the right tool to perform cutting edge research. In order to update the faculty and student with the latest developments in the field, as also to equip them with the tools and techniques to do innovative research, UPES conducts workshops, seminars, invited talks on diverse state-of-the-art research topics.

2.10. Training on Equipment

UPES also supports hands on training on sophisticated instruments. This aims to provide the support to establish their research findings and correlate with data through various instruments

2.11. Centralized Instrumentation Center

In addition to providing access to world's leading citation databases and subscription to high quality peer reviewed journals. UPES has a central Instrumentation Centre (CIC) which has state-of-the-art experimentation facility.

List of equipment at CIC:

1. FT-IR (Frontier FT-IR/FIR, Perkin Elmer)
2. XRD (D8 Advance ECO – Bruker)
3. Spectro Photo Meter UV-Vis (LAMDA 35, Perkin Elmer)

4. Atomic Force Microscope (NANOSURF AG)
5. CHNS-O Analyzer (Flash 2000 Series, Thermo Scientific)
6. ICP-OES (Plasma Quant 9000 – Analytikjena)
7. Contact Angle Goniometer/Drop Shape Analyzer (DSA25, Kruss)
8. Nano Fluid Interferometer (Mittal Enterprises – NF10)
9. Particle Size Analyzer (Zen1690, Malvern Instruments Ltd, 2013)
10. Photoluminescence Spectrophotometer (LAMBDA 45, Perkin Elmer, 2013)
11. Photostat-Galvanostat (CHI660E, CH Instruments, USA, 2013)
12. Rheometer (Model C-LTD80/QC, Anton Paar GMBH, Austria, 2013)
13. Thermo mechanical Analyzer (TA Instruments – TMAQ400EM)
14. GC-MS (CLARUS SQ8S, Perkin Elmer)
15. ISE Measurements (Orion Dual Star, Thermofisher)
16. pH/ORP, DO, CD/TDS, Turbidity Meter (YK-2005WA, TU-2016, Lutron)
17. BOD Incubator (213, Evian)
18. HPLC (Prominence I series, Shimadzu)
19. Colony Counter (SCAN 4000, interscience)

2.12. Academic Integrity awareness (ethics and plagiarism)

UPES is committed to maintain high academic standards in its programs and expects faculty, students and staff to conduct themselves in a manner that is fair, honest and consistent with the principles of academic integrity, during the entire process of teaching, learning and research. Students and faculty are initiated into ways of upholding academic integrity with the help of academic integrity awareness (AIA) drive. The university has also subscribed to Turnitin, URKUND (provided by MHRD, GoI) and Blackboard, which has inbuilt mechanism to do a similarity check for all the content submitted by students as term paper, assignments, etc.

2.13. Support for organizing conferences /workshops etc.

UPES understand the importance of providing a platform where bright minds research scholars, students, industry experts, policy makers, academicians etc. come together to discuss and address the state-of-the-art in diverse fields present the latest development in various fields of science, technology, etc and deliberate to provide solution to various problems that have challenged us. In order to cater to this need UPES provides support (financial and technical) to organize conferences/workshops, etc.

2.14. Research Rewards

We at UPES understand the importance of work done by active researchers, who contribute to the overall development of UPES in the form of project funding, patent, papers in peer reviewed high impact journals, etc. UPES recognizes and acknowledge such contributions in bi-annual award event established since September 5, 2014.