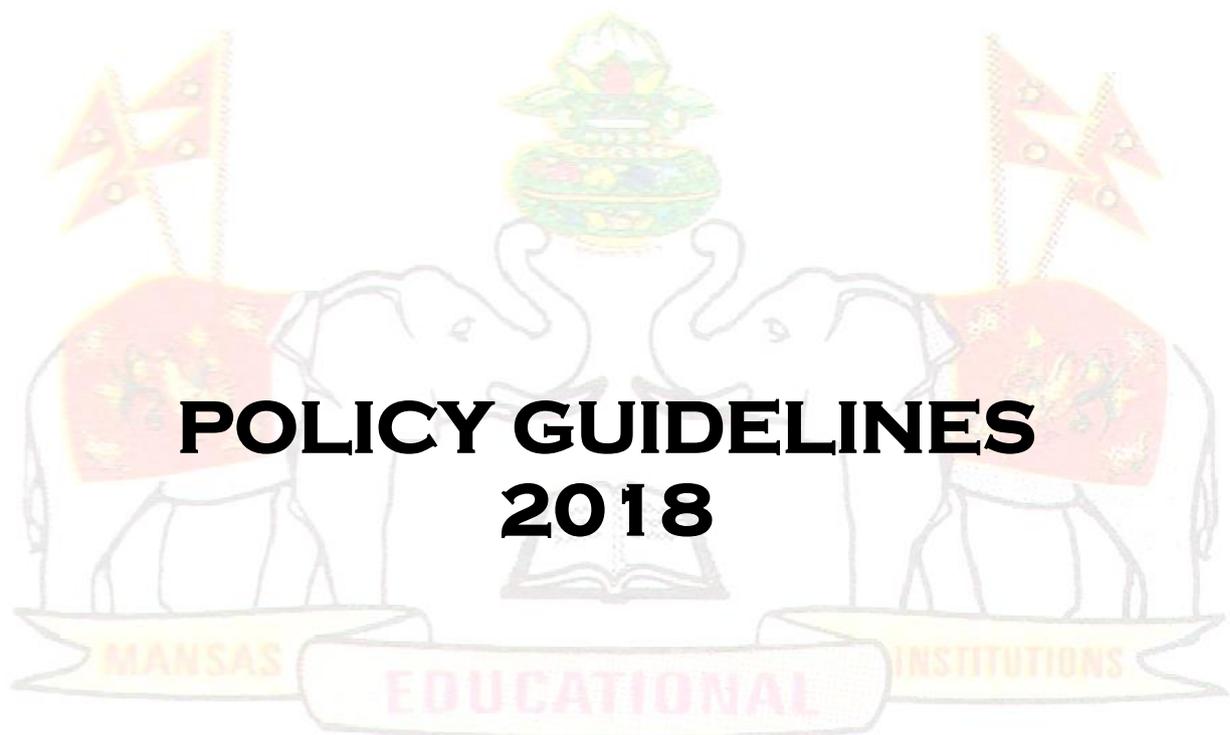


# **RESEARCH POLICY AND INCENTIVE SCHEME**



## **POLICY GUIDELINES 2018**

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## **1. PREAMBLE**

In the light of the changing economic scenario and increased thrust towards building design, manufacturing and support services capability within the country, the role of research and development is taking on greater significance. Research and development is eventually targeted towards developing new technologies meeting societal and global requirements. In addition to fundamental research in engineering and sciences, great emphasis is being given to the development of product and systems that meet these requirements.

The National Institutional Ranking Framework (NIRF), approved by the MHRD outlines a methodology to rank institutions across the country. Research is one of the major parameters outlined in the framework covering *publications* (in particular their quality), *patents* (filed, published, granted and licensed), *projects*, *professional practice* and *executive development programs*. A total of 100 marks are awarded for research alone out of the total of 500 with a 30% weightage. Even within the 100 marks, publications and their quality accounts for 75% of the marks. It is very important to gradually implement a strong foundation for research, development and innovation in the institution to address the requirements of the next decade.

MVGR College of Engineering is poised at the threshold of a major forward shift in terms of capabilities given the plethora of opportunities that have been thrown up following the bifurcation of the state. In this context, there is need for concerted R&D effort to better position the institution to meet these challenges.

Faculty of the institution play a vital role in making this transition from a 'teaching-only' institution to a world-class institution that fosters research and development inter-twined into teaching and learning. While faculty have to handle their regular requirements of teaching and learning, they are also increasingly being required to take up quality research and development work. Quality research and development work requires time, concerted effort and a focussed environment. The institution is committed on its part to provide the necessary environment to take up this task. This document puts forth the policy of the institution towards research and development activities. In order to enthuse and motivate faculty to spend quality time in a concerted manner, the institution also feels it necessary to incentivise all such R&D efforts as most often the time and effort spent in research extends way beyond the confines or the operating hours of the institute.

## **2. OBJECTIVES**

The following are the objectives of the institution in the arena of research and development:

1. To create an environment that fosters a culture of innovation and research leading to development of processes, tools, products or services

2. To enthruse faculty to pursue and complete their PhD thereby enhancing the total number of doctorates in the institution
3. To motivate faculty to carry out quality research leading to publication in reputed journals
4. To motivate faculty and staff to continue learning further through live/on-line courses/skill training programs and thereby significantly enhance their capabilities and exposure
5. To motivate faculty to actively guide scholars towards their PhD work
6. To motivate faculty to build strong industry-institute partnerships
7. To motivate faculty to become a sought-after resource in the country

### **3. OUTCOMES**

With the above objectives in place, the institute aims at focussed efforts on the part of the administration and faculty to achieve significant and quantifiable results in the area of research and development over the next 3 years. The following outcomes are envisaged:

1. Establishment of at least **5** centres of research through facilities established as a result of extra-mural funding
2. Development of at least **5** products/processes/services/tools as a result of facilities created through extra-mural funding
3. Award of at least **2** patents preferably at the international level
4. Increasing the number of faculty members in the institution with PhD to a total of **80** (approximately **1/3<sup>rd</sup>** the strength)
5. Ensuring that at least **50%** of the publications made by faculty are in reputed international journals with valid Thomson Reuters impact factor and all publications are at least in journals listed in the journal citation report
6. Ensuring that at least **50%** of the faculty (around **125** faculty members) actively pursue courses or certification courses leading to significant enhancement in subject knowledge and course content development
7. Ensuring that at least **20%** of the non-teaching staff take up additional skill development training and certification
8. Ensuring that at least **20%** of the faculty (around **50** faculty members) are actively guiding scholars (internal or external) towards their PhD
9. Ensuring that at least **20%** of the faculty (around **50** faculty members) build strong networking with industry as demonstrated through joint projects/case studies/consultancy etc.
10. Ensuring that at least **10%** (around **25** faculty members) of the faculty build strong connectivity leading to their being invited as resource persons

## **4. RESEARCH POLICY**

With the above mission in perspective, the policy of the institution with regard to conduct of research and development activities is presented herein.

### **4.1 Publications**

Although there are several different outlets for publication of one's research work, there are a few avenues that are internationally recognised as being benchmarks for quality of publication. One of these is the Web of Science, which through the Science Citation Index, gives a list of journals under its umbrella. Several of these journals also carry a Clarivate Analytics Impact Factor that represents high quality of research work.

- All faculty who have been awarded PhD shall publish at least 1 paper per year in a journal with a Clarivate Analytics Impact Factor.
- All faculty who are currently pursuing their PhD shall publish at least 2 papers per year in journals listed in the Science Citation Index. At least 1 of these papers should be in a journal with a Clarivate Analytics Impact Factor.
- All faculty guiding M.Tech dissertations shall ensure that their students publish at least 1 paper in a journal listed in the Science Citation Index and carrying a Clarivate Analytics Impact Factor.

### **4.2 Projects**

In order to ensure qualitative publications, there is need for creating a favourable ambience primarily in terms of equipment and facilities for carrying out cutting edge research. Extra-mural funded projects are a major source of funding for establishment of such research infrastructure.

- All faculty who have been awarded PhD shall handle at least one extra-mural funded project at any point of time.
- Faculty who are pursuing their PhD or those interested in research can apply for institutional funding under FORAY (Faculty On-going Research and Analysis) which carries a nominal grant for equipment and consumables. Faculty who are already PhD holders are not eligible for this grant.
- In addition to the above, heads of department shall put up proposals for purchase of specialised research equipment for their respective departments. Such equipment shall be versatile to carry out effective research leading to good publications. The institution will review the proposals received and approve them on a merit basis. Heads of department shall put forward detailed research vision document identifying the following:
  - Research objectives envisioned by the department
  - The areas of research pursued by the department
  - Available research infrastructure in these areas
  - Utilisation of these equipment and outcomes achieved

- Proposed additional equipment requirement and its justification in the light of the research objectives of the department

### **4.3 Patents**

One of the key metrics being adopted for ranking institutions is the number of patents published and granted. The institution has been actively collaborating with Novel IPR Academy, a private organisation, in its efforts to provide patenting service. In order to ensure that a steady stream of ideas are generated and developed upon possible leading to patentable technologies, the following approach shall be adopted:

- The institution shall establish an Innovation Centre. This centre will serve as a central facility for all innovation related activities
- Sensitisation programs will be conducted in all the departments in collaboration with Novel IPR Academy
- Students will innovative ideas and project works that can possibly lead to patenting opportunities will be short-listed
- Active support and mentoring shall be provided to the short-listed students or student group to convert their ideas into patentable products
- Heads of department shall nominate one faculty member to coordinate the innovation activities from each department. The faculty member, along with the student coordinators shall identify potential projects and coordinate with the innovation centre for achieving successful outcomes.

### **4.4 Consultancy Work**

Yet another metric for assessing institutional performance is the level of consultancy undertaken. Consultancy can range from routine testing or certification works to technical design and project implementation work. In order to initiate efforts in the direction of consultancy, each department shall undertake a minimum level of consultancy work in terms of testing or job works etc. Such work shall be executed primarily with the help of non-teaching staff under the direction of a faculty team. The following approach shall be adopted:

- The heads of department shall put forward a consultancy vision document identifying the following:
  - Objectives envisioned by the department
  - The areas of consultancy being pursued by the department or proposed to be pursued
  - Available research infrastructure in these areas and/or the need for additional support
  - Competence of the non-teaching staff in taking up the research
  - Action plan for skill enhancement of the non-teaching staff to meet the requirements of the consultancy work

## 5. INCENTIVE SCHEMES

### **RPI – 1:** Incentive on Extra-mural Funding Received

- Any faculty who submits and is sanctioned a funded project as Principal Investigator from any central funding agency will be eligible for a cash award amounting to **2%** of the total project sanction.
- Any faculty who submits and is sanctioned a funded project as Principal Investigator for any private agency shall include a head for remuneration to the PI in the project proposal itself after due approval by the Principal.
- The award will consist of a medal of honour, a citation and the above cash incentive.

**Note:** Faculty claiming incentive under the above scheme shall submit the following documents:

- a. Form 08A duly filled
- b. Copy of Sanction Order

### **RPI – 2:** Incentive on Patents/Copyrights Awarded

- Any faculty who files for and is awarded a patent will be eligible for the following incentive:
  - Rs. 50,000 for a National Patent
  - Rs. 1,00,000 for an International Patent
  - In addition to the above, all patenting charges will be reimbursed/borne by the institution
- Any faculty who files for and is awarded a copyright will be eligible for the following incentive:
  - Rs. 25,000 for a National Copyright
  - Rs. 50,000 for an International Copyright
  - In addition to the above, all copyright filing and search charges will be reimbursed/borne by the institution
- The award will consist of a medal of honour, a citation and the above cash incentive.

**Conditions:** The following terms and conditions shall apply for the above:

- a. Any patent that demonstrates application of technology leading to the development of an innovative product or enhanced functionality of an existing product alone shall be considered for the scheme
- b. Non-technology based product patents shall not be eligible for the above scheme
- c. Products/processes/specific software etc. developed and copyrighted shall be considered for the above scheme if they significantly demonstrate technology development
- d. Books/manuals/lecture notes/monographs will not be eligible under the above scheme

**Note:** Faculty claiming incentive under the above scheme shall submit the following documents:

- a. Form 08B duly filled
- b. Copy of the Patent/Copyright
- c. Copy of documents filed for claim of patent/copyright

### **RPI – 3:**     Incentive on Being Awarded PhD

- Any faculty who is awarded PhD in the academic year of the incentive scheme will be eligible for an award in recognition of his/her receiving PhD.
- The award will consist of a medal of honour and a citation.

**Note:** Faculty claiming incentive under the above scheme shall submit the following documents:

- a. Form 08C duly filled
- b. Copy of the Provisional Certificate
- c. Copy of Proceedings leading to award of PhD
- d. Copy of Original Degree (if issued already)

### **RPI – 4:**     Incentive on Publications

- On publishing a research paper in refereed **INTERNATIONAL JOURNAL** with a valid Thomson Reuters (TR) impact factor (as listed in the latest version of the Journal Scitation Report), faculty (not pursuing PhD) will be eligible for an incentive of **Rs. 10,000/-** for each publication.
- In pursuance of the above, for each publication in a journal with TR impact factor greater than 1.0 (for engineering related journals) and 2.0 (for science related journals), the same faculty will be eligible for an **additional** special incentive of **Rs. 10,000/-**
- For all publications that do not carry TR impact factor but which are published in journals listed in the latest Science Citation Index issued by Clarivate Analytics, the same faculty will be eligible for an incentive of **Rs. 5000/-** for each publication.
- For publication in reputed peer-reviewed journals that are neither listed in the JCR nor carry a TR impact factor but have been in existence for more than 75 years, the same faculty shall be eligible for an incentive of **Rs. 16,000/-** (being treated on par with a paper having TR impact factor in excess of 1.0 for engineering journals and 2.0 for science-related journal). The Board of Studies for each stream shall shortlist and ratify all such journals. The collated list will be available with Dean (R&D). Only publications in these listed journals will be considered for the above incentive.
- For publication in reputed **INTERNATIONAL CONFERENCE**, the same faculty will be eligible for an incentive of **Rs. 5,000/-** in addition to full registration fees and partial travel support (to be decided on case-to-case basis). All such support and incentives shall only be valid for well-established and reputed conferences as listed in the International Council of Scientific Unions (ICSU). No international conference held in India will be considered for the incentive. The concerned faculty should have attended and presented the paper at the conference for being eligible for the incentive.
- Faculty who are pursuing PhD shall be eligible for incentive only for publications beyond the mandatory 2 papers.
- Faculty who have been awarded PhD only for publications beyond the mandatory 1 paper.

- Mandatory publication by M.Tech student under guidance of faculty is not eligible for incentive. However, any additional publication arising out of the M.Tech work shall be eligible for incentive as above.
- Mere listing in any other database such as Scopus/EBSCO etc. as well as being published by popular publishing houses such as Elsevier/Springer/Taylor & Francis etc. will not constitute eligibility for consideration of incentive.
- Articles in press will not be considered for incentive. The same can be submitted for consideration once the article is published.
- The amount of cash award will vary according to the order of authorship (First Author – 100%, Second Author – 75%, Third Author – 50% and Fourth Author – 25%). Beyond fourth authorship, no consideration will be given for award of incentive.
- The award will consist of a citation and the corresponding cash incentive.

**Note:** Faculty claiming incentive under the above scheme shall submit the following documents:

- a. Form 08D duly filled for Journal publications and Form 08E for Conference publications
- b. Copy of the publication
- c. Proof of listing in the latest Journal Scitation Report
- d. Proof of TR Impact Factor
- e. Proof of registration fees paid (for conference publication)
- f. Proof of presentation at conference (for conference publication)

#### **RPI – 5:**     Incentive on Continuing Education

- Faculty who register, complete and get certified for in any continuing education program (either online or in person) at the national or international level will be eligible for an incentive of **Rs. 2,000/-**. In addition to the above, the registration and certification fees incurred by the faculty will be reimbursed by the institution.
- The duration of the course (national or international) shall not be less than 40 hours to be considered for incentive.
- The assessment for the course should have been carried out through a formal examination system prior to certification and the faculty must score a minimum of 75% to be eligible for claiming incentive.
- Any faculty shall be eligible for incentive for only **ONE** course per semester directly in-line with the subject being taught in that semester or the following semester.
- Following the completion of the course, the faculty should have developed qualitative study material that can supplement student learning as well as form the basis for compilation into a book in future. The learning outcomes of the course should reflect in enhanced course structure and content development.
- A detailed report shall be submitted by the faculty along with the application addressing all of the above in order to be considered for the incentive along with the course material developed.
- For all **non-teaching staff** who undertake skill development training leading to significant up gradation of their skills enabling them to take up external

fabrication or consultancy works will be eligible for an incentive of **Rs. 5,000/-** for each such course. In addition to the above, the registration and certification fees incurred by the staff member will be reimbursed by the institution.

- The duration of the skill development program shall not be less than 60 hours to be considered for incentive. In addition, the staff member should also submit a draft proposal in collaboration with an external agency or industry or other such body seeking to take up jointly some fabrication or development work. An expression of interest to this effect needs to be submitted from the external agency. The staff member will be considered for the incentive only subject to fulfilling the above.
- For all **non-teaching staff** who undertake skill enhancement training in tools vital for the functioning of the institution such as Tally, ERP, MS Office, Oracle Database etc. leading to demonstrated competence in the same will be eligible for an incentive of **Rs. 2,000/-** for each such skill. In addition to the above, the registration and certification fees incurred (if any) by the staff member will be reimbursed by the institution.
- The duration of such training shall not be less than 60 hours to be considered for incentive
- The award will consist of a citation and the corresponding cash incentive.

**Note:** Faculty/staff claiming incentive under the above scheme shall submit the following documents:

- a. Form 08F duly filled for Faculty and Form 08G for Non-teaching staff
- b. Proof of course registration
- c. Proof of course and certification fees paid (if any)
- d. Proof of course completion and award of certification
- e. Details of course content covered and duration
- f. Draft proposal for implementation of skills and Expression of Interest by external agency (for non-teaching staff)

#### **RPI – 6:** Incentive on Research Guidance

- Faculty who serve as guides (main supervisor or co-supervisor) for any candidate registered for PhD in a state or central university will be eligible for an incentive of **Rs. 10,000/-** and **Rs. 20,000/-** for a candidate registered for PhD in a university of repute such as NIT, IIT, IIIT or BITS for every candidate who completes and is awarded PhD under his/her guidance.
- The award will consist of a citation and corresponding cash incentive

**Note:** Faculty claiming incentive under the above scheme shall submit the following documents:

- a. Form 08H duly filled
- b. Proof of registration as main or co-supervisor
- c. Proof of award of degree

#### **RPI – 7:** Incentive on Industry Networking

- Faculty who take up internship at any industry relevant to their field of teaching or research will be sponsored by the institution for the entire period of their internship in terms of travel, accommodation and other expenses.

- In addition, they will be eligible for an incentive of **Rs. 20,000/-** if they are able to demonstrate serious level of interaction with members of that industry in terms of joint projects or consultancy discussions or collaborative training programs organisation.
- In order to be considered for the incentive, a detailed report to this effect shall be submitted by the faculty giving details of the concerned point of contact in the industry and the nature and extent of the collaboration work undertaken.
- All such efforts should have reflected in significant collaborative works that further the mutual interests of the institution and the concerned industry. The incentive will be granted only subject to approval by a committee.
- The award will consist of a medal of honour, a citation and the corresponding cash incentive

**Note:** Faculty claiming incentive under the above scheme shall submit the following documents:

- a. Form 08I duly filled
- b. Proof of completion of internship
- c. Details of industry point of contact
- d. Proof of collaborative work executed

#### **RPI – 8:**     Incentive on External Recognition

- Faculty who render services as resource persons at other organisations will be eligible for incentive according to the nature of expertise.
- Faculty presented invited lectures (one-time) at any premier institution (such as NIT, IIT etc.) will be eligible for an incentive of **Rs. 10,000/-**. These lectures may either be part of a workshop or just a generic lecture.
- Faculty who plan and conduct workshops as the key resource person and invited speaker at any premier institution (such as NIT, IIT etc.) will be eligible for an incentive of **Rs. 20,000/-**.
- All such workshops shall be of a minimum duration of 5 days.
- Faculty who are invited as a keynote speaker at a reputed international conference as mentioned earlier will be eligible for an incentive of **Rs. 20,000/-** subject to all expenses (travel, accommodation etc.) being borne by the concerned conference organising committee. The faculty member shall not be eligible for any financial support from the institution for attending the event. Invitation as session chair will not be eligible for the above incentive.
- Faculty who are on the editorial board of any journal listed in the Journal Scitation Report will be eligible for an incentive of **Rs. 20,000/-** for being appointed to the board. This incentive shall not apply to faculty who act as reviewers even for the above mentioned journals.
- Faculty who receive recognition from any reputed national or international organisation will be eligible for an incentive of **Rs. 10,000/-** for each such award.
- Only awards that are in recognition of overall teaching or research or professional achievements will be considered for the above incentive.

- The award will carry a medal of honour, a citation and the corresponding cash incentive.

**Note:** Faculty claiming incentive under the above scheme shall submit the following documents:

- a. Form 08J duly filled
- b. Invitation letter from external agency
- c. Proof of presentation at external event
- d. Proof of recognition or award received

## 6. TERMS AND CONDITIONS

- In order to be considered for incentive, faculty and staff are requested to fill in the corresponding application form and submit all required documents.
- Incomplete applications will strictly not be processed and will be returned.
- Faculty/staff submitting applications for incentive shall carefully check and ensure that the same has not been awarded incentive earlier.
- The decision of the scrutinising committee chaired by Principal will be final and binding on all claims for incentives. No correspondence for consideration of rejected applications will be entertained.

