



Innovation & Entrepreneurship Policy

(16th April 2024)

1. OBJECTIVES

The Innovation & Entrepreneurship (I&E) Policy is meant to encourage and enable the faculty, staff, students and alumni of NITK to: (1) translate their innovative ideas and research work into commercially viable products; (2) protect their intellectual property (IP) by filing patents, copyrights, design registrations and trademarks; (3) license the IP/technology to industry partners; (4) incubate IP-based technology-driven business ventures; and (5) strengthen & streamline the overall ecosystem leading to economic development and social impact.

The Policy outlines relevant guidelines, roles & responsibilities, important steps and how to avoid conflict of interest. It is aligned with the National Education Policy, 2020, National Innovation & Startup Policy, 2019, and relevant rules and regulations of the Ministry of Education, Government of India. The NITK I&E Policy may be amended as and when required by the competent authorities of the Institute.

2. ADVISORY COMMITTEE

The Advisory Committee for implementing the I&E Policy comprises the following members:

1. Dean (Research & Consulting) – Chair
2. PIC (S&T Entrepreneurs Park) – Co-Chair
3. PIC (Institute Innovation Council) – Convenor
4. FIC (E-Cell) – Member
5. Domain Expert (Technical)
6. Domain Expert (Commercial)

The domain experts can be invited from NITK or other institutes / industry / alumni / NGOs, on a case-by-case basis. Additional members (Institute faculty or outsiders) can be co-opted or invited as and when needed.

The Committee will: (1) Evaluate invention disclosures and recommend whether the IP (patent, copyright, design registration, etc.) could be protected; (2) Evaluate proposals for NITK's technology licensing to third parties, and recommend appropriate terms and conditions; and (3) Evaluate applications for business startups, and recommend whether they can be incubated in NITK-STEP.

The Committee will also periodically inform the NITK community (faculty, staff, students and alumni) about the I&E Policy, and invite applications from them for IPR filing, technology licensing or business incubation. The Committee may evolve suitable application templates, evaluation criteria and best practices.

3. INNOVATION AND IPR

New ideas can emerge from class discussions, field visits, student projects, sponsored research work, industrial consultancy, student club activities, community service and other triggers. Scientific insights ('know-why') are freely shared with others through publications and conference presentations. On the other hand, engineering innovations ('know-how') that represent intellectual property (IP) can be protected by filing a patent, copyright or design registration. This gives innovators exclusive rights to commercialize the IP by incubating their own business start-up, or by licensing the IP to industry partners.

The pathway from idea to market is mapped in terms of Technology Readiness Level (TRL): concept (TRL-1), proof-of-concept (TRL-2), basic prototype (TRL-3), functional prototype (TRL-4), minimum viable product (TRL-5), lab testing (TRL-6), field testing (TRL-7), batch production (TRL-8), and product launch in market (TRL-9).

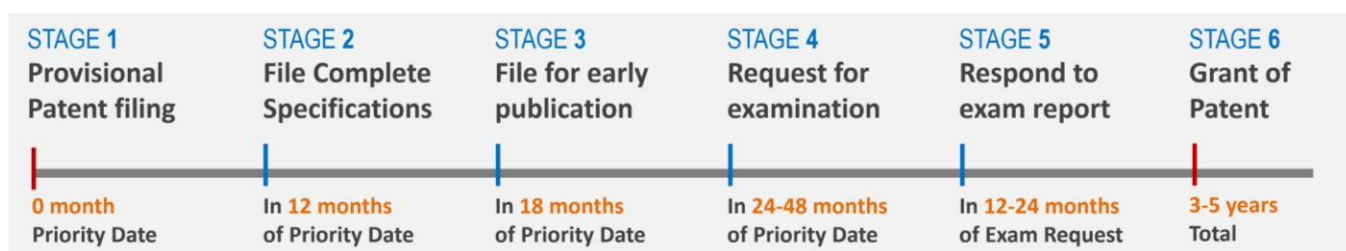
Researchers wishing to both protect and publish their innovative work should file the IP prior to publishing in journals or presenting in conferences. Otherwise, their publication will defeat the criterion of 'novelty' (that the invention has not been publicly described, used or sold). The novelty can be checked by searching for prior art at these sites:

India - <https://ipindiaservices.gov.in/PublicSearch> | Europe - <https://worldwide.espacenet.com>
USA - <https://ppubs.uspto.gov/pubwebapp/> | Google: <https://patents.google.com/advanced>

Other criteria for patentability include 'inventive step' (not obvious to those working in the same field), 'industrial utility' (practically useful application in the form of product or process), 'enablement' (possible for others to reproduce) and 'definiteness' (clearly articulated claims and boundaries). The 'freedom to operate' also needs to be established by searching for other patents that can potentially block the commercialization of the idea, even if patented.

Patent applications and rights are specific to a country. In India, they are processed in accordance with the Indian Patent Act, 1972, by the Office of the Controller General of Patents, Designs & Trade Marks, an agency under the Department for Promotion of Industry & Internal Trade, Government of India.

There are several stages from patent filing to granting, which can take 3 to 5 years. The first step is to file a provisional patent application, especially if the idea is not fully developed and still being evolved. The application includes the names of inventors, title of invention, its field and background, objective, and description. Within one year of the provisional patent filing (or skipping this stage altogether), the complete specifications can be filed. This comprises detailed description (knowledge), abstract (technical information), claims (boundaries of invention) and drawings. Only the true inventors, who have contributed to the idea, must be named in the patent.



NITK owns the IP of all R&D work carried out in the Institute by full-time faculty, staff and students during their tenure. Faculty have full copyrights of books and teaching content authored by them. The IP of sponsored or collaborative projects may be jointly owned with other organizations, and clearly defined in a mutually signed agreement. The Institute will file the patent and pay relevant fees to the Patent Office and the attorney, as well as maintain the patent over its life (usually 20 years) by paying additional fees.

As and when an IPR is licensed by NITK to a third party, a portion of the revenue is shared with the inventor as per prevailing policies. In case of multiple inventors, the proportion of revenue to be shared among the inventors should be defined in advance. When the invention involves faculty as well as students, then the faculty (by prior agreement) can take the lead and coordinate all activities involved in patent filing (and later licensing).

The following steps are involved in patenting, facilitated by the I&E Advisory Committee (IEAC).

1. Inventor checks for all patentability criteria and freedom to operate (using CPDA or project funds)
2. If the checks are satisfactory, the inventor drafts the provisional or complete patent and drawings.
3. Inventor fills the Invention Disclosure Form (IDF), and gets it signed by co-inventors, if any.
4. Inventor submits the IDF along with draft patent document and drawings to IEAC.
5. IEAC will check and forward the documents to the empaneled patent attorney of the Institute.
6. Inventor may improve the draft patent, drawings and claims based on the advice of the patent attorney.
7. IEAC will forward its recommendation to the Competent Authority for approval.
8. After approval, NITK will file the patent through the attorney and pay required processing fees.
9. Patent application processing can be expedited, in case a potential licensee is already identified.
10. Inventor and IEAC will follow up with the patent attorney till the patent is granted.
11. Inventor, IEAC and Institute will publicize the patent for licensing it to potential partners.

4. TECHNOLOGY LICENSING

The value of an IP is realized only when it is commercialized and reaches the intended customers. For this purpose, NITK (licensor) can enter into an agreement with a suitable partner (licensee), who can use the IP to manufacture, market and sell the invention, in exchange for an initial fee and/or royalty. The inventors will have the first right of refusal to license the IP for their own startup, else allow the Institute to seek suitable partners by publicizing the IP.

NITK being a public-funded Institute, the preferred mode of technology licensing is non-exclusive and given to multiple partners (usually limited by territory). Exclusive licensing of IP arising out of an R&D project fully funded by an industry partner can be considered, but limited by time, within which the partner must commence production and sales. In any case, NITK retains the right to use the IP for its own academic and research purposes.

The value of the IP depends on the type of technology, its readiness level (TRL), and the associated documentation (show-how) for manufacturing the product with the required quality. The extent of documentation depends on the technology readiness level (TRL) achieved by the inventor. It enhances the value of the technology, and speeds up its introduction in the market.

The associated documents can include market research report, product drawings, bill of materials, bought-out items (specifications and vendors), manufacturing process flow, inspection & testing procedures, instructions for marking, labelling & packing, list of relevant equipment (specifications and vendors), applicable quality standards, approvals received from regulatory authorities, and testimonials from initial customers (if any).

The IP value can be determined in four ways: (1) total R&D cost incurred ('looking back'); (2) estimated income from product sales ('looking ahead'); (3) current value of market served by similar product ('looking alike') and (4) value of similar technology licensed elsewhere ('looking around'). While the average value can provide a starting point, the final value is what is agreeable to both parties.

The mutually agreed value of technology licensing can be split into two portions: (1) technology fee to be paid at the time of agreement signing, and (2) royalty from product sales over the tenure of agreement. The royalty is paid quarterly or annually, along with an audited statement of the sales figures.

The licensing agreement includes a brief description of the technology to be licensed (as is where is basis, by default), obligations of the parties, intellectual property ownership, confidentiality obligation, payment terms (initial fee and royalty), territory of operation, tenure of the agreement, other standard terms and conditions (notices, force majeure, use of trademarks, assignment, indemnity, governing laws and dispute resolution), and an appendix listing the documents (mentioned earlier) to be shared with the licensee.

Inventors can also choose to make the IP open-source and share it free of cost with social organizations, NGOs and not-for-profit companies for wider impact and benefit.

The following steps are involved in licensing an IP/technology to an industry partner, facilitated by the I&E Advisory Committee (IEAC).

1. NITK publicizes the IP/technology and seeks expression of interest from interested industry partners.
2. NITK and potential industry partner sign mutual non-disclosure agreement to facilitate further discussions.
3. Inventor shares basic details of the IP/technology with the interested industry partner(s), allowing them to ascertain if the technology is worth licensing.
4. Inventor also carries out due diligence to ascertain that the industry partner is capable as well as committed to commercializing the technology within a reasonable timeframe.
5. Based on the due diligence and comparative evaluation, IEAC determines the most suitable industry partner and further negotiates the terms of payment (initial fee, royalty, tenure, territory, etc.).
6. The agreement is signed between the industry partner and NITK, and the initial fee is transferred to the Institute, marking the formal beginning of the partnership.
7. Inventor and Institute maintain regular contact with the industry partner to ensure that the commercialization progresses as envisaged, and the royalty payments are made to the Institute at regular intervals.

5. START-UP INCUBATION

The Institute encourages incubation of technology startup companies in NITK Science & Technology Entrepreneurs' Park (STEP) by faculty, staff, students and alumni, preferably based on the IP generated within the Institute.

Faculty and staff members on the regular payroll of the Institute can associate with a startup company as mentor, consultant or co-founder (but not as sole founder), subject to approval of Competent Authority. Part-time faculty/staff, alumni and outsiders (not belonging to the Institute) can incubate their startups in STEP by licensing relevant technology from NITK and/or having regular faculty, staff or students of the Institute as co-founders.

Regular faculty or staff associated with a startup (as consultant or co-founder) must not compromise their normal work. They should limit their time spent for the startup to one day per week on average, ideally on weekends, else apply for appropriate leave as per rules. In exchange for their time, effort and expertise, they can take equity holding and/or a portion of income of the startup, as per the prevailing policy and approval from Competent Authority.

Institute students are welcome to develop innovative products, file patents, prepare business models, and incubate startup companies, preferably in the year before or after graduation. Policies for seed funding and deferred placement will be established to provide cushion against the risk involved.

The preferred form of startups for incubation in NITK STEP is 'Private Limited Company'. The founders need to submit a memorandum of association, articles of association, unique name for the company, directors' identification numbers (DIN), and a few other documents to the Registrar of Companies, to obtain the certificate of incorporation. The company has to maintain regular records of board meetings, financial transactions and audited annual reports.

Startup founders will execute an agreement specifying the percentage equity and monthly rent to be given to STEP as per prevailing policies. They will get furnished office space with utilities and access to common facilities in STEP. They can also access other facilities of the Institute (Main Library, Central Research Facility, Guest House and various labs), at charges lower than those for the regular industry. The rents will increase significantly in subsequent years to encourage successful startups to move out and unsuccessful ones to shut down.

The following steps are involved in incubating a startup at NITK STEP, facilitated by the I&E Advisory Committee.

1. Startup founder prepares a business plan mentioning their team members, advisors, product offering, target customers, go-to-market strategy, supply chain, and financial sustainability.
2. Founders submit their business plan and application to incubate the startup, to IEAC through proper channel (faculty/student: head of department; staff: administrative head of section).
3. IEAC will evaluate the application, invite the founder(s) to present their business plan, and assess the feasibility and viability of the business venture.
4. IEAC will forward its recommendation to the Competent Authority to approve the startup incubation.
5. Founder(s) will execute an agreement with NITK STEP, set up their office and start the operations.
6. Startup founder will provide annual progress reports and audited financial statements to STEP, based on which the agreement could be renewed annually.
7. Startups are expected to graduate and move out of STEP within 3 years after incubation.

6. CONFLICT OF INTEREST

A situation of conflict of interest arises when an individual holds two positions in different roles, and tries to use one position for personal benefits in another position. For example, a faculty or staff may share confidential information of the Institute with third parties for personal gain. Another example is the free use of an Institute facility under the jurisdiction of a faculty or staff for their own startup. Yet another example is the procurement of products or services from startups incubated by faculty or staff, who are in a position to influence the decision of the purchase committee. All conflicts of interest must be avoided, and when in doubt, recorded and declared in advance to I&E Advisory Committee. Any conflicts, if already committed inadvertently, must be informed to IEAC for early resolution.

In any other relevant matter not covered by this Policy, the I&E Advisory Committee will discuss and communicate their resolution to the Director, whose decision will be final and binding on the parties involved.

INVENTION DISCLOSURE FORM

1. Inventor details (add rows if more than one):

#1 Full Name:	Mobile No:	Email:
Department:	Institute, Location:	
Permanent Address:		

2. Title of invention (5-10 words):

3. Field of invention (5-10 words):

4. Current technology readiness level (1-9):

5. Brief description (50-100 words):

6. Novel features (50-100 words):

7. Key words (10-20):

8. Industrial application (50-100 words):

9. Similar IP / competing products (list):

10. Disadvantages of competing products (50-100 words):

11. Advantages of the invention over competition (50-100 words):

12. Funding amount and source (if any):

13. Estimated value of IP/technology (for licensing):

14. Potential industry partners/licensees:

#1 Name, Location, website:

15. Revenue sharing % among inventors (when IP is licensed):

Inventor #1 = ___ % | Inventor #2 = ___ %

16. Signatures of all inventors:

Enclosures:

- (a) Report of prior art search
- (b) Report of patentability criteria checking
- (c) Report of freedom to operate
- (d) Draft patent with drawings

APPLICATION FOR TECHNOLOGY LICENSING

1. Applicant's full name: | Mobile No: | Email:
Department: | Institute, Location:

2. List of people who contributed to the IP/technology:

#1 Full Name: | Mobile No: | Email:
Organization, location:

3. Title of IP/technology (5-10 words):

4. Field of IP/technology (5-10 words):

5. Current technology readiness level (1-9):

6. Brief description (50-100 words):

7. Target customers (50-100 words):

8. Tangible benefits to customers (50-100 words):

9. Competing technology (list):

10. Disadvantages of competing technology (50-100 words):

11. Advantages of IP/technology over competition (50-100 words):

17. R&D funding amount and source:

12. Estimated value of technology (for licensing):

13. Potential industry partners/licensees:

#1 Name, Location, website:

14. Signature of the applicant:

Enclosures:

(a) Patent and publication(s)

(b) List of documents associated with the IP/technology

APPLICATION FOR STARTUP INCUBATION

1. Founder details (add rows as needed):

#1 Full Name:	Mobile No:	Email:
Organization, Location:		

2. Mentor/consultant details (add rows as needed):

#1 Full Name:	Mobile No:	Email:
Organization, Location:		

3. Name of the startup company:

4. Registration date (if incorporated):

5. Full address of registered office:

6. General field of business (5-10 words):

7. Number of full-time employees:

8. Seed fund secured, if any (amount, source):

9. Company income in the previous 12 months:

10. Office space required in STEP (sq.ft.):

11. List other facilities required in NITK:

12. Signatures of all founders:

Enclosures:

(a) Product brochure

(b) Business model