INNOVATION PRACTICUM

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Executive Summary

Innovation Practicum is an Institution’s open Innovation program to enable them to execute the methodology, processes and frameworks designed and developed by Forge to manage and drive innovation outcomes.

Now more than ever, with rigorous policy changes being effected to implement the vision and agenda of achieving a globally competitive innovation landscape, it’s crucial for institutions to bring about a transformation in the conventional pattern of academic curriculum and launch outcome-driven, industry-centric innovation programs for students & educators.

The latest National Innovation and Startup policy put forth by MHRD has mandated that about 1 percent of the institutions budget should be spent on innovation programs. To account for this spending, educational institutions partner with various organisations and diversify their spendings, say designing innovation programs, building internal capacity, or erecting centres of innovation excellence, etc. over a time span.

Whether it is about creating innovation programs, capacity building for students and educators, building innovation centres of excellence, institutions today have an overwhelming variety of strategic and tactical choices to try and test in their respective institutions. This has been accelerated with the MHRD IIC, that mandates a series of activities & programs to be executed continuously and evaluated periodically for outcomes and performance based on the ARIIA ranking framework.

Given the broad, disparate innovation requirements, institutions put all their focus, time and energy towards understanding and defining programs without considering the real-time impact and tend to proceed without a broad, outcomes-driven, strategic plan creating innovation theatres.

A strong foundational framework, process and methodology to kickstart programs that are capable of delivering technologically-advanced, innovative solutions beyond innovation theatres is the need of the hour. The emphasis is on the need to promote a holistic, comprehensive platform with programs that synchronise with the core purpose and vision of the institution is important to successfully leverage the combined strength of the internal and external opportunities in the rapidly burgeoning tech ecosystem.

Innovation Practicum provides a comprehensive innovation process for institutions to impact students right from the very first year with opportunities to identify and harness the real power of technology to solve industrial problems and challenges. It essentially encompasses a comprehensive model with programs, courses, and framework offering infra, resources, tools, equipment, etc. that are required across the entire spectrum of innovation process.

Having designed and executed various initiatives in the past 5 years, Forge has put together its experience and exposure into crafting a detailed plan for a broader time frame spanning 4 years, within the purview of academic regulations as well as in line with the vision and strategic plans of the institution.
# Program Advantage

The Innovation Practicum implementation shall be duly supported by Forge by providing the following beyond the required resources & handholding,

#1 Access to a proven model with milestone-driven frameworks and a structured project management approach to champion the implementation of National Innovation and Startup policy 2019 for students and faculties to enhance the institutions ranking in ARIIA.

#2 Enhanced innovation, employability and entrepreneurial outcomes while also implementing the policy at a cost much less than 1% spending (of the total budget of the institution) on innovation & entrepreneurship programs as mandated by the latest National Innovation and Startup policy for students and faculty.

#3 A comprehensive framework to carry out relentless execution of the calendar of activities scheduled by MHRD's Institution Innovation Cell with access to all the means (tools, equipment, resources, etc.), methods (process and frameworks), market (access to early adopters), and mentoring support(at the level of technology, innovation design, product business design, marketing/sales) to ensure that students win competitions of national significance and potential grants to take forward their ideas and prototypes.

#4 A platform that fosters deeper engagement and collaboration with industry to bridge the gap between the two and enable students work on industry-sponsored, real-time challenges while ensuring enhanced employability outcomes on one hand and to provide them an opportunity to accelerate their innovation and entrepreneurship pursuits on the other hand.

#5 A platform to enable students acquire interdisciplinary skills through an experiential learning process designed and managed by industry experts imparting a right blend of conceptual learning reinforced by practical application with a curriculum covering an array of future-proofed skills in disruptive industrial technologies like IoT, Data science, Robotics, Drones, Additive manufacturing, AI, Advanced materials, Future mobility, BioTech, NanoTech, and Advanced Computing.

#6 An opportunity to empower students beyond classrooms by offering them a platform to hone skills and competencies that are critical to achieve success in innovation and entrepreneurship.

#7 Access to an exhaustive suite of tools and methods (from iTOOLS) under a well-structured, step-by-step approach to enable rapid design and development of prototypes, undertake testing and validation with the beneficiary, and to enhance the odds of success in innovation.

#8 Access to innovation expertise and mentoring from startup veterans, technical executives, and industry professionals.

#9 An opportunity to up-skill the educators, equip them with tools of innovation, technology and design to enable their transformation into Innovation mentoring capable of guiding the student innovators in their pursuit of building innovative solutions to real-time problems, thus upgrading and strengthening the overall internal capacity of institution.

#10 Access to state-of-the-art industrial innovation, product innovation, and rapid prototyping labs, covering tools, infrastructure, equipment and other resources apart from access to technical training, support and expertise.

*The program should become a self sustainable model with utilisation of minimum resources with an approach to get students facilitate the sessions for juniors/peers supported by educators.*
Program Framework

The program essentially consists of 7 different courses specifically designed to help us achieve the desired outcome. The courses can be mapped to the learning & development of the student across a 4 year undergraduate program in science, engineering, design and technology. Understanding the challenges of an Academic Institutions, this curriculum integrated model for innovation & entrepreneurship has been designed and shall be led by a qualified team to steward the innovation process for the institution.

#0 ONBOARDING EDUCATORS | INNOVATION MENTORS

Qualified mentors are the agents of change who motivate, guide and facilitate young minds to embrace a spirit of problem solving and innovation to develop solutions for real-world challenges.

The program helps to transform educators into ‘Innovation Mentors’ through capacity building, competency development and career development. With substantial skills and competencies in innovation, and the approach to teaching & learning, developed through this program, educators will be able to guide the students in their pursuits of developing innovative solutions to real-world challenges in a flipped classroom, very different from the conventional method adopted for class room teaching.

The educators shall understand the processes of ideation, design, prototyping, customer validation, through case-studies, group activities, and team exercises. The insights gained from this program can enhance the odds of success of innovations (tech/ commercial) and startup/business outcomes of the research and innovation pursued by the students.
**Implementation Roadmap**

*Step 1: Strategic Assessment & Alignment*

Define the opportunity, ascertain internal resources, capabilities & core strengths. Map the innovation ecosystem around the institution & plan an execution roadmap. Forge shall work with the key stakeholders to create the innovation roadmap for the institution.

Build innovation capacity for educators and identify a set of core members who shall in future lead and manage the innovation practicum trained by Forge on proven innovation best practices.

*Step 2: Capacity Planning*

Innovation Practicum curriculum, methodology and assessment tailored for the institution should be formally approved by the Departments through the Board of Studies, and the institution shall get the necessary approval in the academic council.

*Step 3: Academic Integration*

Core members shall work with Forge team to plan and allocate necessary resources, infrastructure, & budget required for the effective execution of the innovation practicum using the playbook offered by Forge.

*Step 4: Resource Allocation*

Core Team shall be supported by Forge with necessary resources, frameworks, playbook to effectively implement the innovation practicum. Playbook gives the complete know how to activate, manage and grow the innovation ecosystem.

*Step 5: Program Launch*

A systematic model for evaluation of the program with defined metrics, milestones, deliverables and outcomes to measure performance and plan for continuous improvement. This evaluation correlates to institutional accreditation and innovation ranking system like ARIIA.

*Step 6: Institutionalisation*