CONCEPT NOTE ON CAPACITY BUILDING FOR DESIGN AND ENTREPRENEURSHIP

I Introduction:

National Education Policy 2020 aims at transforming the education system in the country. It also places a strong emphasis on fostering a culture of innovation; promote an entrepreneurial spirit and provide a conducive environment for students to develop innovative solutions to real-world problems within the education system.

Design thinking is a problem-solving approach that encourages creative and innovative solutions to complex challenges. It focuses on understanding the needs and perspectives of end-users and applying a user-centric, empathetic, and iterative approach to arrive at effective solutions. In the context of education, design thinking encourages educators to create learner-centered curricula, teaching methods, and assessments that cater to individual needs and foster critical thinking, problem-solving, and creativity.

Accordingly, a capacity building program for faculty and HEIs is being started on Design and Entrepreneurship under the aegis of Malaviya Mission Teacher Training Programme (MMTTP) to address the key elements of NEP with a specific focus on design and entrepreneurship development.

II Objective & Approach:

The objective of the Capacity Building for Design and Entrepreneurship program is to enhance the capacity of faculty and HEIs for creative transformation with a specific focus towards design and entrepreneurship development.

It will be achieved through 1-1 mentoring of faculty and promoting generative dialogue among faculty, student teams and HEI partners by a pool of expert mentors. Each participating HEI will be assigned a maximum of three mentors for a period of two years. Each mentor will devote about 40 person days to mentor 8-10 faculty members and an equivalent number of student teams from 3rd and 4th year UG, 2nd year PG and advanced years of PhD for one year. The nodal center for the program (Malaviya Mission Teacher Training Centre, IIITDM Kancheepuram) will manage the selection of HEIs and mentors, allocate mentors to HEIs, conduct curated webinars to share best practices and resource material, monitor progress, and disburse honorarium to the mentors. There will be no separate non-recurring or recurring grant given to the HEIs. The first phase of the program will target 50 promising HEIs for a period of two years (2024-26).

III Eligibility Criteria:

The eligibility criteria for Public funded HEIs to apply for this program are as follows:

(1) The public funded HEI must be in the top 200 in the NIRF ranking 2022 & 2023 in any of the NIRF categories
(2) The HEI must be enrolled in the National Innovation & Startup Policy and allocated funds to the tune of atleast 1% of their annual operating expenditure towards student innovation
(3) The HEI must have atleast three academic departments offering UG, PG and PhD programs, with potential for developing a multidisciplinary foundation for UG programs

IV Scope of Work:

The participating HEIs are expected to leverage the program to intensify their design and entrepreneurship initiatives as enshrined in NEP, 2020 by making the following key interventions:

(1) Create common slots in the curriculum and academic calendar for UG, PG and PhD programs in atleast three departments (3 hrs per week + 3 days per semester for a hackathon + 3 weeks in a year for field work) from the academic year 2024-25

(2) The common slot of 3 hrs per week may be used to

    a) Introduce a sequence of service learning or product design courses, one in each semester for the first and second year UG students, and 1st year PG and PhD students. The HEIs may redesign existing courses or create new ones. The courses must strictly follow the pedagogy of learning-by-doing (individual and group), continuous assessment of activities, and promote empathy and discovery of real-world problems

    b) Introduce open electives focused on specific domains to encourage promising teams of students in their 3rd and 4th year UG or 2nd year PG or advanced years in PhD to pursue detailed design, prototyping and entrepreneurial activities. Involving PG and PhD students in the initiative is intended to not only help sharpen research, but also encourage commercialisation and prepare the next generation of faculty

(3) Identify and nominate 25-30 faculty members each year for the mentoring program. This cohort of faculty may be motivated and incentivised to

    a) Participate in 1-1 mentoring sessions and conversations with expert mentors to enhance capacity for creative transformation

    b) Identify and co-mentor 15-20 promising student teams (average size 4) in the 3rd/4th year UG or 2nd year PG or advanced years of PhD (item 1.b). The teams may be encouraged to have a mix of students from different years and branches of study depending on the topic of interest

    c) Handle courses in the common slot and facilitate learning-by-doing for approximately 1400 students from 1st and 2nd year UG, 1st year PG and PhD [IV (2) (a) above]

(4) Allocate appropriate amount of innovation fund to support the 18-20 promising student teams to pursue product design and entrepreneurship each year [IV (2) (b) above], and create the infrastructure to support learning-by-doing [IV (2) (a) above]

(5) Identify local partners - industry, government organizations and NGOs - to mobilize additional resources and create learning opportunities for faculty and students [IV (2) (a) & (b) above] Create a governance structure with adequate leadership oversight to fast-track implementation of the program and monitor the progress

If done in the right spirit, the above interventions can improve learning outcomes for students, research outcomes for faculty, and realization of NEP vision in the HEI.

V. Submission Guidelines:

Interested HEIs may submit a clear and concise proposal addressing the objectives and scope of work outlined above. The proposals must clearly articulate:

    a) Why the HEI wants to participate in the program and how it fits with its NEP, 2020 implementation plans?

    b) What specific goals it intends to achieve over 3-5 years through this program?

    c) How it intends to integrate and institutionalize this program in its everyday routine?

d) What is the level of readiness of the HEI to implement the key interventions of the program including approvals from governing bodies like senate or board and infra to support requirement in para IV (2) (a) above ?

e) How much funds will be allocated by the HEI to support teams [Para IV (2) (b)] and the sources of funding?

f) Which local industry partners have committed to support this program & nature of support?

g) Who will be coordinating the program in the HEI? (PI/Co-PI must preferably be in leadership positions and able to implement the desired institutional changes)

h) Provide a list of five mentors from local industry partners, startup community or retired professionals from industry or senior faculty from other academic institutions. Their consent may be taken and their profiles and contact details may be attached. Mentors must have strong inter-disciplinary expertise, experience in product development and entrepreneurial initiatives, listening skills, ability to mentor faculty and willing to commit 40 days per year (1 day per week during the semester).

VI Selection Criteria:

Proposals will be evaluated based on the vision, readiness, commitment and credentials of the HEIs and PIs/Co-PIs to leverage the program and deliver outcomes in terms of number of faculty mentored, entrepreneurial teams supported and pipeline of students nurtured. The selected institutions will need to sign a contract with the nodal centre to execute the program.

VII Deadlines: **25.04.2024**

A briefing session will be organized in mid-January for all HEIs that have pre-registered and expressed an interest to participate in the program.

VIII Programme Advisory Council

There shall be Program Advisory Council to guide the Nodal Center. The Programme Advisory Council will comprise of the following:

a) Shri Manoj Kohli, Chairperson
b) Prof. M V Karthikeyan, Director, IIITDM Kancheepuram (Host Institute), Member
c) Prof. V Kamakoti, Director, IIT Madras or his nominee, Member
d) Shri Gopal Srinivasan, CMD, TVS capital, Member
e) Shri V Shankar, Founder of CAMS, Member
f) Smt Debjani Ghosh, President, NASSCOM, Member
g) Shri G Gurumoorthy, Director, ARM Embedded Systems, Member
h) Dr M J Shankar Raman, CEO, IITM Pravartak, Member
i) Dr Sudhir Varadarajan, Program Director, Convener

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